

California Pest Rating Proposal

Icosium tomentosum Ganglbauer: a longhorn beetle

Coleoptera: Cerambycidae

Current Rating: Q

Proposed Rating: B

Comment Period: **10/28/2020 – 12/12/2020**

Initiating Event:

Three individuals of *Icosium tomentosum* were caught in a Lindgren funnel trap with ethanol lure at a greenwaste site in Orange County, California in 2006 (California Department of Food and Agriculture). There are reports of this species in Los Angeles, Orange, and Riverside counties on the web site iNaturalist. This species has not been rated. Therefore, a pest rating proposal is needed.

History & Status:

Background: *Icosium tomentosum* is a slender, dark longhorn beetle that reaches 16 mm in length (Cerambycidae of the Palearctic). The larvae are reported to feed on trees in the genera *Cupressus*, *Juniperus*, *Tetraclinis*, *Callitris*, and *Thuja*; all of these are in the family Cupressaceae. They apparently tend to attack dead or dying branches. The larvae reportedly feed under the bark at first and then tunnel into the heartwood. The life cycle is reported to last two years. Although this species is reported to impact live trees by first becoming established on dead branches, no clear examples of this were found in the literature (Ali et al., 2015; Ambrus et al., 2014; Doychev et al., 2006; Mifsud, 2002; Sama, 2002).

Icosium tomentosum is attracted to light and ethanol (Ali et al., 2015). It was collected by Rastegar et al. (2013) with traps baited with a mixture of wine, vinegar, sugar, and water. A Lindgren funnel trap

with ethanol lure captured the specimens for the Orange County records in 2006 (California Department of Food and Agriculture). No pheromone lures are known.

Worldwide Distribution: *Icosium tomentosum* is widespread in the Mediterranean and is reported from Bulgaria, Cyprus, Iran, Israel, Italy, Libya, Morocco, Spain, Syria, and Turkey (Ali et al., 2015; Ambrus et al., 2014; Doychev et al., 2006; Özdikmen and Demir, 2006; Rastegar et al., 2013; Sama, 2002; Sama et al., 2005; Sama et al., 2010; Vives, 1984). In the United States, it is only known from California.

Official Control: *Icosium tomentosum* does not appear to be regulated anywhere in the world. It is not considered reportable by the United States Department of Agriculture (USDA-APHIS).

California Distribution: *Icosium tomentosum* was trapped at a greenwaste site in Orange County in 2006. A visual survey within ¼ mile of the find site was conducted and failed to produce any more specimens (Forest pest highlights). However, records on the web site iNaturalist suggest *I. tomentosum* is present in Los Angeles, Orange, and Riverside counties (iNaturalist).

California Interceptions: *Icosium tomentosum* has not been intercepted in California (California Department of Food and Agriculture).

The risk *Icosium tomentosum* poses to California is evaluated below.

Consequences of Introduction:

- 1) **Climate/Host Interaction:** *Icosium tomentosum* is widespread in the Mediterranean and the climate of much of California is presumed to be suitable for this species. There are native species of *Juniperus* and one of *Thuja* (the Western red cedar, *T. plicata*) in California and these are widespread in the state. There are also introduced species of *Juniperus* in California, and the

Italian cypress, *Cupressus sempervirens* (a reported host; see Ambrus et al., 2014), is a widely-planted ornamental (Calflora). Therefore, much of California is presumed to offer suitable climate and host. Therefore, it receives a **High (3)** in this category.

- 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:** *Icosium tomentosum* is reported to feed on trees in one family, the Cupressaceae. Therefore, it receives a **Low (1)** in this category.

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

3) **Pest Reproductive and Dispersal Potential:** *Icosium tomentosum* presumably fly, as this species is trapped with Lindgren funnels. It has been intercepted at least five times in wood packing material at United States ports of entry, and this is almost certainly an underestimate, as many interceptions of wood-boring larvae are probably identified to higher taxonomic levels than species (Eyre and Haack, 2017). This demonstrates that this species can be moved with infested wood. Therefore, it receives a **Medium (2)** in this category.

- 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.** Although *I. tomentosum* was reported by Sama (2002) to impact living trees, no specific reports of tree death or economic impact were found in the literature. There have been no reports of damage caused by *I. tomentosum* in California. Therefore, it receives a **Low (1)** in this category.

Economic Impact:

- 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.

Economic Impact Score: Low

- **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.** The reports of *I. tomentosum* in California are so far limited to mainly urban areas. It is possible that if and when this beetle spreads in the state that it could impact native *Juniperus* species and Western red cedar. Therefore, *I. tomentosum* receives a **Medium (2)** in this category.

Environmental Impact: A

- 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.

Environmental Impact Score: Medium (2)

- 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 *Icosium tomentosum*: Medium (9)

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:** *Icosium tomentosum* is reported from Los Angeles, Orange, and Riverside counties. It receives a **Low (-1)** in this category.

- 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:

7) The final score is the consequences of introduction score minus the post entry distribution and survey information score: Low (8)

Uncertainty:

It is possible that this beetle may not be able to attack living trees to a significant degree and it may not pose a threat to trees (native or ornamental) in California. The records of this species in California used in this proposal, besides the 2006 trapping in Orange County, are all from the web site iNaturalist. Although they appear legitimate, these identifications were made by various people based on photographs and the state does not have specimens in hand to verify them. Therefore, there is uncertainty regarding the presence and distribution of this species in California. The state has conducted exotic wood borer trapping with ethanol lure (known to attract this species) in Los Angeles and Orange counties from 2007 to 2014 (six to 36 traps total, varying by year) and to a more sporadic degree in Riverside, San Bernardino, and San Diego counties from 2007 to 2019 (M. Kaiser, pers. comm.). This level of trapping with no resulting finds, suggests that *I. tomentosum* was not an abundant species across Los Angeles and Orange counties up to 2014. The iNaturalist records are all from the past three years (after trapping in Los Angeles and Orange counties ceased) and were submitted by many different people, suggesting that the species is reasonably common now. It is not known if the current population is a carry-over from an undetected infestation related to the 2006 find or is the result of a later introduction.

Conclusion and Rating Justification:

Icosium tomentosum is currently present in three adjacent counties in southern California, primarily in urban areas. There are no detailed reports of it impacting living trees. However, there is one vague report of such behavior, and wood boring beetles can behave unpredictably in new environments. It may have some impact on naïve trees if it spreads further in the state. For these reasons, a “B” rating is justified.

References:

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Responsible Party:

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***Comment Period: 10/28/2020 – 12/12/2020**

***NOTE:**

You must be registered and logged in to post a comment. If you have registered and have not received the registration confirmation, please contact us at permits[@]cdfa.ca.gov.

Comment Format:

- ❖ Comments should refer to the appropriate California Pest Rating Proposal Form subsection(s) being commented on, as shown below.

Example Comment:

Consequences of Introduction: 1. Climate/Host Interaction: [Your comment that relates to “Climate/Host Interaction” here.]

- ❖ Posted comments will not be able to be viewed immediately.

- ❖ Comments may not be posted if they:

Contain inappropriate language which is not germane to the pest rating proposal;

Contains defamatory, false, inaccurate, abusive, obscene, pornographic, sexually oriented, threatening, racially offensive, discriminatory or illegal material;

Violates agency regulations prohibiting sexual harassment or other forms of discrimination;

Violates agency regulations prohibiting workplace violence, including threats.

- ❖ Comments may be edited prior to posting to ensure they are entirely germane.
- ❖ Posted comments shall be those which have been approved in content and posted to the website to be viewed, not just submitted.

Proposed Pest Rating: B