

Plant Risk Evaluator -- PRE Evaluation Report

Enchylaena tomentosa -- Arizona

The University of Arizona

PRE Score: 11 -- Low Potential Risk

Confidence: 68 / 100

Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Public Status: Completed

Evaluation Date: September 13, 2021

This PDF was created on September 06, 2024

This project was funded in part by the USDA National Institute of Food and Agriculture through the Western Integrated Pest Management Center, grant number 2018-70006-28881.

Plant Evaluated

 $Enchylaena\ tomentos a$



Image by Fagg.M - Australian National Botanic Gardens

Evaluation Overview

A PRE[™] screener conducted a literature review for this plant (*Enchylaena tomentosa*) in an effort to understand the invasive history, reproductive strategies, and the impact, if any, on the region's native plants and animals. This research reflects the data available at the time this evaluation was conducted.

Summary

Enchylaena tomentosa has been recorded as a spontaneous weed in California, Arizona, Hawaii and Israel, presumably introduced in each case as a cultivated, drought-tolerant groundcover. The plant has an "A" Weed Pest Rating from the California Department of Food and Agriculture, though this is not based on an abundance of infestations. Herbarium records of escaped Enchylaena tomentosa in Arizona are few, and localized in urban areas. These urban sites are under-collected for herbaria. The plant can be inconspicuous when not in fruit. The invasive potential for ruby saltbush is a factor of its drought tolerance, ability to germinate in disturbed sites without irrigation, and its brightly colored berries. The berries are reported to be eaten and the seed dispersed in the plant's native range in Australia by birds and possibly other animals. The plant was presumably introduced as drought-tolerant low semi-succulent shrub with pretty berries. When under-maintained it assumes a scraggly unattractive appearance. The plant does not appear to be offered in the horticulture trade any more.

General Information

Status: Completed

Screener: Michael Chamberland **Evaluation Date:** September 13, 2021

Plant Information

Plant: Enchylaena tomentosa

Regional Information

Region Name: Arizona

Climate Matching Map

To answer four of the PRE questions for a regional evaluation, a climate map with three climate data layers (Precipitation, UN EcoZones, and Plant Hardiness) is needed. These maps were built using a toolkit created in collaboration with GreenInfo Network, USDA, PlantRight, California Invasive Plant Council, and The Information Center for the Environment at UC Davis.

Evaluation Questions

These questions are based on an article published by PLOS One, which can be found here: https://doi.org/10.1371/journal.pone.0121053.

Invasive History and Climate Matching (Questions 1 - 6)

- 1. Has the species (or cultivar or variety, if applicable; applies to subsequent "species" questions) become naturalized where it is not native?
 - Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
 - The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

Enchylaena tomentosa has an "A" Weed Pest Rating from the California Department of Food and Agriculture (CDFA) (Serrano, 2016). The California distribution is known from a single infestation in Central San Diego County, likely of horticultural origin (Kelch, 2015). It has naturalized in Maui, where it has apparently been successfully eradicated (Kraus & Duffy, 2010). The Maui infestation was small and local (Penniman et al. 2011). The plant is reported as naturalized in New Caledonia (Kelch, 2015). Herbarium records on SEINet document naturalized occurrences in Phoenix and Tucson, Arizona, within urban settings (SEINet, 2021). In recent years, the species has also been recorded as a spontaneous weed in California, Arizona, Hawaii and Israel, presumably introduced in each case as a cultivated, drought-tolerant groundcover (Weeds of Melbourne, 2019).

Reference(s):

- Serrano, L. (2016). Pest Rating Proposals and Final Ratings. Weeds: Pest Ratings Proposals.
- Kelch, D. (2015). California Pest Rating for Enchylaena tomentosa R. Br.; Ruby saltbush.
- Kraus, F., & Duffy D. C. (2010). A successful model from Hawaii for rapid response to invasive species. Journal for Nature Conservation. 18, 135–141.
- Penniman, T. M., Buchanan L., & Loope L. L. (2011). Recent plant eradications on the islands of Maui County, Hawai'i. 7.
- Anonymous (2021). SEINet; Enchylaena tomentosa.
- Melbourne, W. of (2019). Ruby Saltbush.

2. Is the species (or cultivar or variety) noted as being naturalized in the US or world in a similar climate?

- Answer: **Yes**, which contributes **2** point(s) to the total PRE score.
- The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

The Arizona PRE Combined map corresponds with the native distribution of Enchylaena tomentosa across the southern half of Australia (GBIF, 2021). In recent years, the species has also been recorded as a spontaneous weed in California, Arizona, Hawaii and Israel (Weeds of Melbourne, 2019). All of these sites are climate matches for the natural Australian range of the plant, except Hawaii, and this may be a shortcoming of the resolution of the climate match tool. The climate match tool may have difficulty indicating climate matches for oceanic islands which are quite small on the global mapping scale. These islands often have great disparity in climates on different sides of the islands.

Reference(s):

- GBIF (2021). Enchylaena tomentosa.
- Melbourne, W. of (2019). Ruby Saltbush.

3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Reports indicate naturalization outside the plant's native range, but these reports document small-scale occurrences (Kelch, 2015). Some of these populations have been small enough to be successfully eradicated (Kraus & Duffy, 2010). These reports do not show significant economic or environmental damage.

Reference(s):

- Kelch, D. (2015). California Pest Rating for Enchylaena tomentosa R. Br.; Ruby saltbush.
- Kraus, F., & Duffy D. C. (2010). A successful model from Hawaii for rapid response to invasive species. Journal for Nature Conservation. 18, 135–141.

4. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

In addition to Arizona, Enchylaena tomentosa is reported to be naturalized in Israel and California, in regions which match the PRE Combined data map. It is not shown as a match for the Hawaiian Islands, where a small population has naturalized (GBIF, 2021), (Kraus & Duffy, 2010). The extent of naturalization does not approach the scale of invasiveness.

Reference(s):

- GBIF (2021). Enchylaena tomentosa.
- Kraus, F., & Duffy D. C. (2010). A successful model from Hawaii for rapid response to invasive species. Journal for Nature Conservation. 18, 135–141.

5. Are other species of the same genus (or closely related genera) invasive in a similar climate?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Enchylaena tomentosa is the only species of Enchylaena listed in the Global Compendium of Weeds (Randall, 2007).

Reference(s):

• Randall, R. (2007). Enchylaena tomentosa; Global Compendium of Weeds.

6. Is the species (or cultivar or variety) found predominately in a climate matching the region of concern?

- Answer: Yes, which contributes 2 point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

The map of occurrences shown in GBIF show climate matches to the PRE Combined Climate Match Map for Enchylaena occurances in California, Arizona, and Israel. Matches are not shown for southern France, Hawaii, or New Caledonia (GBIF, 2021). This is approximately a 50/50 comparison. However it may be likely the climate match tool has difficulty indicating climate matches for oceanic islands which are quite small on the global mapping scale. These islands often have great disparity in climates on different sides of the islands.

Reference(s):

• GBIF (2021). Enchylaena tomentosa.

Impact on Native Plants and Animals (Questions 7 - 10)

- 7. Does this plant displace native plants and dominate (overtop or smother) the plant community in areas where it has established?
 - Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
 - The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Ruby saltbush is overgrowing adjacent vegetation; it is dense and its sprawling stems can smother other plants (Kelch, 2015).

Reference(s):

• Kelch, D. (2015). California Pest Rating for Enchylaena tomentosa R. Br.; Ruby saltbush.

8. Is the plant noted as promoting fire and/or changing fire regimes?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Enchaelaena tomentosa has succulent leaves (Kelch, 2015), which by inference are unlikely to support fire.

Reference(s):

• Kelch, D. (2015). California Pest Rating for Enchylaena tomentosa R. Br.; Ruby saltbush.

9. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

Ruby saltbush ripe fruit can be picked and eaten raw, being described as salty-sweet. It is picked by the desert Aboriginal people as a snack food, although mainly eaten by children. The indigenous groups in Central Australia have been recorded as soaking the fruit in water to make a sweetened tea (Ausemade, 2022). The plant has been examined for its potential as a forage crop, suggesting it is not poisonous to grazers (Durmic et al. 2010).

Reference(s):

- Ausemade (2022). Ruby Saltbush.
- Durmic, Z., Hutton P., Revell D. K., Emms J., Hughes S., & Vercoe P. E. (2010). In vitro fermentative traits of Australian woody perennial plant species that may be considered as potential sources of feed for grazing ruminants. Animal Feed Science and Technology. 160, 98–109.

10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Ruby saltbush is described as open, straggling shrub native to Australia that can grow up to 2 m tall and wide, but is usually much shorter (Kelch, 2015). Also described as a sub-shrub, its low growth habit suggests it is unlikely to become massive enough to constitute an impenetrable thicket for people or large animals. No mention of the plant forming thickets has been found.

Reference(s):

• Kelch, D. (2015). California Pest Rating for Enchylaena tomentosa R. Br.; Ruby saltbush.

Reproductive Strategies (Questions 11 - 17)

11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Ruby saltbush is described as having a procumbent form, and some forms are prostrate (Hadlow, 1986). Plants of this form are prone to ground-layering of stems. However this habit has not been mentioned in descriptions of the plant. So if it does sometimes occur, it would appear to not happen to an extent that is notable.

Reference(s):

• Hadlow, B. (1986). Growing Native Plants - Enchylaena toimentosa.

12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Ruby saltbush is successfully propagated by cuttings (Hadlow, 1986). However descriptions of the plant do not mention a habit of natural spread by detached fragments.

Reference(s):

• Hadlow, B. (1986). Growing Native Plants - Enchylaena toimentosa.

13. Does the species (or cultivar or variety) commonly produce viable seed?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The screener has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

The species is propagated successfully from seed (Hadlow, 1986).

Reference(s):

• Hadlow, B. (1986). Growing Native Plants - Enchylaena toimentosa.

14. Does this plant produce copious viable seeds each year (> 1000)?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

There is no direct evidence for the number of seeds produced, but based on the small size of the plants, and the coverage of berries seen in photos of the plant, it appears unlikely to reach 1000 seeds per year.

Reference(s):

•	[Anonymous]	
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15. Is there significant germination (>25%) of seeds the next growing season, with no requirement of an infrequent environmental condition for seeds to germinate (i.e. fire) or long dormancy period?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Several studies have been conducted to ascertain potential allelopathic effects of Enchylaena, and of other shrubs on Enchylaena. In these studies the germination of Enchylaena seeds has proceeded without difficulty and without need of special treatments such as fire (Jefferson & Pennacchio, 2003).

Reference(s):

• Jefferson, L. V., & Pennacchio M. (2003). Allelopathic effects of foliage extracts from four Chenopodiaceae species on seed germination. Journal of Arid Environments. 55, 275–285.

16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

I have answered this as "yes" by infrequence. Considering this as a woody shrub and allowing five years for maturation, it has the potential to fruit on small plants, as seen in photos illustrating some articles (Hadlow, 1986), (Weeds of Melbourne, 2019). Growth rate of seedlings is fast enough for seedlings to be grown and used in ecological studies (Jefferson & Pennacchio, 2003).

Reference(s):

- Hadlow, B. (1986). Growing Native Plants Enchylaena toimentosa.
- Melbourne, W. of (2019). Ruby Saltbush.
- Jefferson, L. V., & Pennacchio M. (2003). Allelopathic effects of foliage extracts from four Chenopodiaceae species on seed germination. Journal of Arid Environments. 55, 275–285.

17. Does this plant continuously produce seed for >3 months each year or does seed production occur more than once a year?

- Answer: **Yes**, which contributes **1** point(s) to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Flowers May to September (Spooner, 1999), suggesting fruit and seed production may be similarly prologued.

Reference(s):

• Spooner, A. (1999). Florabase - Enchylaena tomentosa.

Dispersal (Questions 18 - 20)

18. Are the plant's propagules frequently dispersed long distance (>100 m) by mammals or birds or via domestic animals?

- Answer: Yes, which contributes 1 point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

The seeds are dispersed by birds (Hastwell & Facelli, 2003). The plant produces numerous red, fleshy fruits typical of bird-dispersed woody plants (Kelch, 2015). Spread by ingestion by birds and other animals (Weeds of Melbourne, 2019). Ruby saltbush was found to be one of the predominant seeds in the gut of emus (Dustan, 2013). In Western Australia, emus show nomadic behavior in periods of food shortage, and can move >600km to areas where food is available (Calviño-Cancela, 2006).

Reference(s):

- Hastwell, G. T., & Facelli J. M. (2003). Differing effects of shade-induced facilitation on growth and survival during the establishment of a chenopod shrub: \textit{Facilitation, growth and survival. Journal of Ecology. 91, 941–950.
- Kelch, D. (2015). California Pest Rating for Enchylaena tomentosa R. Br.; Ruby saltbush.
- Melbourne, W. of (2019). Ruby Saltbush.
- Dunstan, H., Florentine S., Calviño-Cancela M., Westbrooke M., & Palmer G. (2013). Dietary characteristics of Emus (Dromaius novaehollandiae) in semi-arid New South Wales, Australia, and dispersal and germination of ingested seeds. The Emu: official organ of the Australasian Ornithologists' Union.
- Calviño-Cancela, M., Dunn R., van Etten E., & Lamont B. (2006). Emus as non-standard seed dispersers and their potential for long-distance dispersal. Ecography. 29, 632-640.

19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

- Answer: No, which contributes 0 point(s) to the total PRE score.
- The screener has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

The plant is noted as dispersed by seeds within berries (Wikipedia, 2021). These berries do not appear to have any adaptation for dispersal by wind or water.

Reference(s):

• Anonymous (2021). Wikipedia; Enchylaena tomentosa.

20. Are the plant's propagules frequently dispersed via contaminated seed (agriculture or wildflower packets), equipment, vehicles, boats or clothing/shoes?

- Answer: **No**, which contributes **0** point(s) to the total PRE score.
- The *screener* has a **Low** confidence in this answer based on the available literature.

Answer / Justification:

No evidence supporting dispersal of propagules by human activity.

Reference(s):

• [Anonymous] .

Total PRE Score

PRE Score: 11 -- Low Potential Risk

Confidence: 68 / **100**

Questions answered: 20 of 20 -- Valid (80% or more questions answered)

PRE Score Legend

The PRE Score is calculated by adding the point totals for each (answered) question.

< 13 : Low Potential Risk

13 - 15 : Moderate Potential Risk

> 15 : High Potential Risk

Questions Answered Legend

It is important to answer at least 16 questions to consider a PRE Score as "valid".

>= 16 : valid (80% or more questions answered)

<= 15 : invalid (not enough questions answered)

Organization Ownership and Content Privacy

Organization: The University of Arizona

Content Privacy: Public

Evaluation Reviewers

The PRE approach is to base decisions on science and make decisions by consensus of diverse horticultural stakeholders. The literature review and process of answering PRE's questions are based on science; the decisions of which plants to prioritize are based on consensus. To ensure this process is in place and that PRE is collaborative, volunteer stakeholders are recruited from each region to review evaluations. The following experts in their profession (plant science, conservation, or horticultural trade) have participated as volunteer PRE reviewers for this evaluation:

• Michael Chamberland

• Rebecca Senior

• Jutta Burger

• Lynn Sweet

March 9, 2022

January 4, 2022

November 16, 2021

October 20, 2021

This evaluation has a total of 4 reviewer(s).

Evaluation Issues

The following section lists all public issues for this evaluation. Issues provide a way for stakeholder reviewers to communicate any concerns or suggestions they might have with the plant or evaluation. Please email info@plantright.org if additional action is required to resolve open issues.

Issue ID # 7830

Date Created: January 4, 2022 - 2:58pm **Date Updated:** March 9, 2022 - 4:50pm

Submitted by: Rebecca Senior

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q18. Are the plant's propagules dispersed long distance (>100 m) by mammals or birds or via

domestic animals?

Issue Description

A comment: I found it interesting that in Australia Emu birds are considered seed spreaders of greater than 600 km. Having obvious and sweet bright red fruit plants growing in other countries could be dispersed a long distance by birds with flight.

from iNaturalist: https://www.inaturalist.org/taxa/369256-Enchylaena-tomentosa#cite_note-emu_scat-9

A study of <u>emu</u> scat and its seed composition found that *E. tomentosa* made up 8.5% of the near 20,000 seeds identified, second highest only to nitre bush (<u>Nitraria billardierei</u>) which made up 80% of identified seed.[9] This is significant as emus are known to travel over 600 km in search of more food and water, acting as a potential vector for long-distance seed dispersal and germination.[11] Long-distance speed dispersal can improve a species genetic variation, dispersal range, increase diversity and complexity in meta-population structure.[9] These factors can increase a species resilience to future risk of changing climate conditions and potential habitat loss[11]

Issue Resolution (Screener's Response to Issue)

I don't know the size of Nitraria seed or how many are present per fruit. That could make a difference in the comparison. Enchylaena seed may be second-most common in Emu guts, but that jump from 80% Nitraria seed to 8.5% Enchylaena seed is a distant second-place. I suppose the vivid-colored fruit can appeal to birds regardless of their ability to fly. Emu have been suggested to disperse the seeds of

Eremophila shrubs as well. However those I have observed do not have conspicuous fruits. - Michael Chamberland

Issue ID # 7829

Date Created: January 4, 2022 - 2:58pm **Date Updated:** March 9, 2022 - 4:51pm

Submitted by: Rebecca Senior

Status: Fixed
Type: Suggestion
Severity: Minor

Scope: Q18. Are the plant's propagules dispersed long distance (>100 m) by mammals or birds or via

domestic animals?

Issue Description

A comment: I found it interesting that in Australia Emu birds are considered seed spreaders of greater than 600 km. Having obvious and sweet bright red fruit plants growing in other countries could be dispersed a long distance by birds with flight .

from iNaturalist: https://www.inaturalist.org/taxa/369256-Enchylaena-tomentosa#cite_note-emu_scat-9

A study of <u>emu</u> scat and its seed composition found that *E. tomentosa* made up 8.5% of the near 20,000 seeds identified, second highest only to nitre bush (<u>Nitraria billardierei</u>) which made up 80% of identified seed.[9] This is significant as emus are known to travel over 600 km in search of more food and water, acting as a potential vector for long-distance seed dispersal and germination.[11] Long-distance speed dispersal can improve a species genetic variation, dispersal range, increase diversity and complexity in meta-population structure.[9] These factors can increase a species resilience to future risk of changing climate conditions and potential habitat loss[11]

Issue Resolution (Screener's Response to Issue)

I don't know the size of Nitraria seed or how many are present per fruit. That could make a difference in the comparison. Enchylaena seed may be second-most common in Emu guts, but that jump from 80% Nitraria seed to 8.5% Enchylaena seed is a distant second-place. I suppose the vivid-colored fruit can appeal to birds regardless of their ability to fly. Emu have been suggested to disperse the seeds of Eremophila shrubs as well. However those I have observed do not have conspicuous fruits. - Michael Chamberland

Issue ID #7588

Date Created: November 16, 2021 - 8:06am **Date Updated:** March 9, 2022 - 6:36pm

Submitted by: Jutta Burger

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q18. Are the plant's propagules dispersed long distance (>100 m) by mammals or birds or via

domestic animals?

Issue Description

If you have peer-reviewed articles describing consumption and dispersal of fruits/seeds by birds and other mobile verts, then it's safe to up the confidence to high or even very high. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

I've tracked down such articles and added them, increasing confidence level. - Michael Chamberland

Issue ID #7587

Date Created: November 16, 2021 - 8:03am **Date Updated:** March 9, 2022 - 4:41pm

Submitted by: Jutta Burger

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q16. Does this plant produce viable seed within the first three years (for an herbaceous species) to

five years (for a woody species) after germination?

Issue Description

I too might increase the confidence for this question to medium based on inference because at least one reference refers to it as a "short-lived" shrub and it does not seem to have any other way of reproducing. But go w what you feel comfortable with. -- Jutta Burger

Issue Resolution (Screener's Response to Issue)

I am comfortable with a Low confidence rating. - Michael Chamberland

Issue ID #7586

Date Created: November 16, 2021 - 7:57am **Date Updated:** March 9, 2022 - 4:35pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor

Scope: Q12. If naturally detached fragments from this plant are capable of producing new plants, is this a

common method of reproduction for the plant?

Issue Description

You are probably safe to go to at least Medium confidence here. Even though it is propagated from cuttings, no reference refers to it as reproducing vegetatively -- only reference to natural establishment by seed. -- Jutta Burger

Issue Resolution (Screener's Response to Issue)

I have adjusted to Medium confidence. - Michael Chamberland

Issue ID #7585

Date Created: November 16, 2021 - 7:56am **Date Updated:** March 9, 2022 - 4:30pm

Submitted by: Jutta Burger

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

Issue Description

You are probably safe to go to at least Medium confidence here. Even though it is propagated from cuttings, no reference refers to it as reproducing vegetatively. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

I have adjusted to Medium confidence. - Michael Chamberland

Issue ID # 7441

Date Created: October 20, 2021 - 9:41am **Date Updated:** March 9, 2022 - 4:40pm

Submitted by: Lynn Sweet

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q16. Does this plant produce viable seed within the first three years (for an herbaceous species) to

five years (for a woody species) after germination?

Issue Description

This is a tough call and this information is always difficult to find. Definitely this confidence should be Very Low or Low. I'm trying to see what differentiates this shrub from any shrub based on the description-- it grows quickly but many do. The strongest suggestion is the fruit on very small plants and the general life history. I'm still on the fence though. --Lynn Sweet

Issue Resolution (Screener's Response to Issue)

I am comfortable with a Low confidence rating. - Michael Chamberland

Issue ID #7439

Date Created: October 20, 2021 - 9:33am **Date Updated:** March 9, 2022 - 4:29pm

Submitted by: Lynn Sweet

Status: Fixed **Type:** Suggestion **Severity:** Minor

Scope: Q10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals,

livestock, or humans?

Issue Description

If you found no mention of the answer to this also, I'd state that too. (It's implied but best stated). -- Lynn Sweet

Issue Resolution (Screener's Response to Issue)

I've added that no direct mention of the plant forming thickets has been found. - Michael Chamberland

Issue ID #7438

Date Created: October 20, 2021 - 9:32am **Date Updated:** March 9, 2022 - 6:38pm

Submitted by: Lynn Sweet

Status: Fixed

Type: Suggestion **Severity:** Minor

Scope: Q09. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting

grazing systems?

Issue Description

I would group the animal effects separately from the human effects just to be sure they are distinct. Also, I'd cite the primary source cited in the wikipedia article instead of wikipedia. When entering a web article as a new Source, be sure to click "locator" tab on the left side and paste in the URL. --Lynn Sweet

1. Low, Tim (1991). *Australian Nature Field Guide: Wild Food Plants of Australia*(2nd ed.). Sydney, NSW: Angus&Robertson. p. 167. <u>ISBN 978-0207169304</u>.?

Issue Resolution (Screener's Response to Issue)

I don't have access to this book. A copy does not seem to be available online. Am I to cite the primary source when I have not seen it, and cannot verify the interpretation of the primary source which is offered in the secondary source? Fortunately I did find another citation to replace Wikipedia regarding edibility, though this one appears to be citing Wikipedia itself. - Michael Chamberland

Issue ID # 7437

Date Created: October 19, 2021 - 10:08pm **Date Updated:** March 9, 2022 - 6:39pm

Submitted by: Lynn Sweet

Status: Fixed
Type: Suggestion
Severity: Minor

Scope: General Information

Issue Description

Please fill out just a brief summary for the top. -Lynn Sweet

Issue Resolution (Screener's Response to Issue)

Yes I will fill out a summary. - Michael Chamberland

About PRE and this Plant Evaluation Report

The Plant Risk Evaluator (PRE) is an online database and platform designed to assess the risk of a plant becoming invasive in a given region. This tool offers many benefits, and we encourage you to visit the PRE website (https://pretool.org) for more information.

If you would like to learn more about PRE, please email us at info@plantright.org, requesting a PRE Account.

PRE beta funding was provided by Sustainable Conservation (https://www.suscon.org/) and a USDA Farm Bill grant. Additional funding has been provided by the Western Integrated Pest Management Center.