Plant Risk Evaluator -- PRE™
Evaluation Report

Asparagus aethiopicus -- California

2021 Western IPM Grant Project

PRE Score: 17 -- High Potential Risk
Confidence: 82 / 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 November 13, 2023

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

Asparagus aethiopicus

Image by Wikimedia Commons

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Asparagus aethiopicus*) 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

This perennial is native to South Africa, and is used in the horticulture industry as an ornamental plant (aka Asparagus fern, which is not a true fern). It has been distributed throughout many parts of the world through the horticulture industry as its distinctive branching and leafing pattern can be attractive to gardeners. This species has been listed as invasive in several areas of the globe, mostly in wetter areas than California, but also in Coastal areas that are similar to California. This species is also spreading in some natural areas in Southern California. Synonyms for this species include Asparagus densiflorus, and Protaspargus densiflorus, which is a separate species but was mis-ascribed to this species and is sometimes called this incorrect name by organizations especially in Australia. A. densiflorus is currently not found in Australia, but publications mistakenly call A. aethiopicus, A. densiflorus or P. densiflorus. See Asparagus Weeds Management Manual (page 11) in citations for more details.

General Information

Status: Completed
Screener: Chris McDonald
Evaluation Date: September 13, 2021

Plant Information

Plant: *Asparagus aethiopicus*

Regional Information

Region Name: California

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.

Click here to see the generated climate matching map for this region. This climate match database is hosted by GreenInfo Network and publicly accessible.

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:

It is invasive and naturalized in Florida, Hawaii, Australia and also found in South America.

Reference(s):

- Center for Aquatic and Invasive Plants UF/IFAS (0). Asparagus aethiopicus: Species Overview.
- GBIF—the Global Biodiversity Information Facility (0). GBIF Map for Asparagus aethiopicus.
- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.

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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:

This species is currently naturalized in California and is also naturalized in eastern Australia in New South Wales, and Spain, where the climate matches California

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.
- Calflora (0). CalFlora Taxon Report: Asparagus aethiopicus.
- GBIF—the Global Biodiversity Information Facility (0). GBIF Map for Asparagus aethiopicus.
- Aymerich, P., & Sáez L. (2019). Checklist of the vascular alien flora of Catalonia (northeastern Iberian Peninsula, Spain). Mediterranean Botany. 40, 215-242.

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

- 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:

Yes it is noted as being invasive (spreading and causing harm) in Australia, Florida and Hawaii.

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.
- Center for Aquatic and Invasive Plants UF/IFAS (0). Asparagus aethiopicus: Species Overview.
- [Anonymous] (0). Asparagus aethiopicus: Big Island Invasive Species Committee.
- Cussan, J. (2006). Eradication of invasive alien plants on Lord Howe Island, NSW using three Asparagus species (Asparagus asparagoides (L.) Druce, A. plumosus Baker and A. aethiopicus L.) as a case study. 21, 117-121.

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

- Answer: **Yes**, which contributes **3** point(s) to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Noted as being invasive and in Australia, NSW, where the climate matches California. It is also found in Coastal Southern California in natural areas. In coastal Southern California most current locations are found near the wildland urban interface.

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.
- Calflora (0). CalFlora Taxon Report: Asparagus aethiopicus.
- GBIF—the Global Biodiversity Information Facility (0). GBIF Map for Asparagus aethiopicus.

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

- 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:

Asparagus asparagoides is invasive in California. Other Asparagus species are also invasive and/or naturalized in Australia.

Reference(s):

- Cussan, J. (2006). Eradication of invasive alien plants on Lord Howe Island, NSW using three Asparagus species (Asparagus asparagoides (L.) Druce, A. plumosus Baker and A. aethiopicus L.) as a case study. 21, 117-121.
- Cal-IPC Invasive Species Report (0). Asparagus asparagoides.
- CABI, Invasive Species Compendium (0). Asparagus asparagoides.

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

- 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:

Most of the locations for Asparagus aethiopicus are in more tropical areas, such as the southeastern US, Hawaii, Central America, and north eastern Australia (Queensland).

Reference(s):

- GBIF—the Global Biodiversity Information Facility (0). GBIF Map for Asparagus aethiopicus.

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:

From the NSW Weed Wise website: "Ground asparagus forms dense blankets of growth above ground and a profusion of roots and tubers below ground which suppresses other ground flora and reduces available soil moisture and nutrients." The Weeds of Australia website says "Ground asparagus (Asparagus aethiopicus 'Sprengeri') forms a thick mat of tuberous roots and grows particularly well in shaded areas and in sandy soils." "The dense growth of this species may form impenetrable thickets that smother native understorey plants and inhibit their regeneration, thereby transforming the ground layer of native plant communities."

Reference(s):

- Weeds of Australia (0). Asparagus aethiopicus: Weeds of Australia.
- NSW Dept. of Primary Industries (2018). NSW Weed Wise: Asparagus aethiopicus.

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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:

This plant does not contain a lot of leaves and does not create a lot of fuel. The branches are thin, the leaves are small and long. It is also a perennial of mostly shady locations, often near the coast, and does not dry out completely to create highly flammable fuels with low fuel moisture.

Reference(s):

- [Anonymous] .

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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 **Medium** confidence in this answer based on the available literature.

Answer / Justification:

This species appears only toxic to dogs and cats. If it is toxic to livestock, it does not appear to invade grasslands and the likelihood is that few livestock would eat it. It is not likely that livestock eat this species, although one source (Lusigi et. al 1984) show that this species can be a minor (20% or less) component of goat forage in the wet season in Kenya.

Reference(s):

- ASPCA (0). Toxic and Non-Toxic plants: Asparagus fern.
- LUSIGI, W.J., NKURUNZIZA E.R., & MASHETI S. (1984). Forage Preferences of Livestock in the Arid Lands of Northern Kenya. Journal of Range Management. 37(6),

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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:

This species spreads and can form mats along the ground and can suppress other plants from growing or establishing. It is difficult to determine if these mats suppress the spread of animals. The plant is low growing or grows inside other plants using them as support so it is unlikely they would slow the movement of livestock or humans. It is unknown if it could inhibit movements of smaller animals. From the NSW Weed Wise website: "Ground asparagus forms dense blankets of growth above ground and a profusion of roots and tubers below ground which suppresses other ground flora and reduces available soil moisture and nutrients." From Asparagus Weeds Management Manual "Asparagus aethiopicus creates vigorous thickets of foliage that forms dense spiny mats. It can quickly invade disturbed sites in open sun or partial shade. Plants can form monocultures that smother and displace native herbs and shrubs, and can form impenetrable root mats below the ground that may impede the growth of native seedlings. The above ground biomass can dominate the native ground and shrub layer."

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.
- NSW Dept. of Primary Industries (2018). NSW Weed Wise: Asparagus aethiopicus.

Reproductive Strategies (Questions 11 - 17)

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

- 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:

Main mode of reproduction is by seeds and to a lesser extent by vegetative spread. It can spread if rhizomes are transported, such as by gardeners or infected poorly processed compost or following disturbance that separates rhizomes from the plant. The plant can also be propagated by dividing the central crowns (rhizomes), but the underground tubers are storage organs are do not promote vegetative spread. Most spread is not by vegetative plant parts, but by the spread of seeds.

Reference(s):

- Center for Aquatic and Invasive Plants UF/IFAS (0). Asparagus aethiopicus: Species Overview.
- NSW Dept. of Primary Industries (2018). NSW Weed Wise: Asparagus aethiopicus.

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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 **High** confidence in this answer based on the available literature.

Answer / Justification:

It does not appear the spread of plant fragments is a common method of dispersal. "Spread is primarily by seeds" -Asparagus Weed Management Manual.

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.
- Center for Aquatic and Invasive Plants UF/IFAS (0). Asparagus aethiopicus: Species Overview.
- NSW Dept. of Primary Industries (2018). NSW Weed Wise: Asparagus aethiopicus.

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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 **Very High** confidence in this answer based on the available literature.

Answer / Justification:

The main method of reproduction is seed.

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.
- W., B. D., & R. R. (1995). Protasparagus densiflorus: an environmental weed of coastal vegetation reserves.. Pacific Conservation Biology. 2,

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

- 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:

"Up to 600 mature fruit were observed on a single plant at one time, and while most fruit was observed on bushes in May and June, ripe fruit was observed in every month of the year." Plants can also produce 3 seeds per fruit and if there are 2-3 seeds per fruit on some plants there will be over 1,000 seeds per plant.

Reference(s):

- W., B. D., & R. R. (1995). Protasparagus densiflorus: an environmental weed of coastal vegetation reserves.. Pacific Conservation Biology. 2,
- University of South Florida (0). Asparagus aethiopicus Florida Invasie Plants.

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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 **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Germination was greater than 30% after 30 days of collecting fruits in both February and April.

Reference(s):

- W., B. D., & R. R. (1995). Protasparagus densiflorus: an environmental weed of coastal vegetation reserves.. Pacific Conservation Biology. 2,

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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 **Very High** confidence in this answer based on the available literature.

Answer / Justification:

Plants mature within 1.5 - 2 years (see source page 12)

Reference(s):

- State of New South Wales, Office of Environment and Heritage (2013). Asparagus Weeds Management Manual.

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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 **Very High** confidence in this answer based on the available literature.

Answer / Justification:

"Up to 600 mature fruit were observed on a single plant at one time, and while most fruit was observed on bushes in May and June, ripe fruit was observed in every month of the year."

Reference(s):

- W., B. D., & R. R. (1995). Protasparagus densiflorus: an environmental weed of coastal vegetation reserves.. Pacific Conservation Biology. 2,

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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:

Several sources suggest birds are one dispersal agent, and move seeds "far from the main plant." Presumably birds ingest the fruits and disperse the seeds long distances.

Reference(s):

- Center for Aquatic and Invasive Plants UF/IFAS (0). Asparagus aethiopicus: Species Overview.
- NSW Dept. of Primary Industries (2018). NSW Weed Wise: Asparagus aethiopicus.

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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 main way this species reproduces is through dispersal of seeds in the fruits. Birds and other wildlife are believed to be primary dispersers. The fruits are round and heavy and cannot be dispersed by wind; they could roll down hill in some unique situations. Available sources do not mention if the fruits float and emphasize dispersal by wildlife.

Reference(s):

- Center for Aquatic and Invasive Plants UF/IFAS (0). Asparagus aethiopicus: Species Overview.

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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 **Medium** confidence in this answer based on the available literature.

Answer / Justification:

No, the main dispersal for this species is seeds by birds and by plant parts (crown divisions, rhizomes) intentionally by gardeners, not by contaminated seed, equipment vehicles or clothing. Fruits and plant propagules, such as rhizomes would be spread intentionally by gardeners, or in infected compost or soil, but would not be frequent.

Reference(s):

- [Anonymous] .

Total PRE Score

PRE Score: 17 -- High Potential Risk
Confidence: 82 / 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: 2021 Western IPM Grant Project
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:

• Nicole Valentine	October 15, 2021
• Jutta Burger	October 10, 2021
• Ron Vanderhoff	October 5, 2021

This evaluation has a total of 3 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 # 7371

Date Created: October 15, 2021 - 2:55pm
Date Updated: December 9, 2021 - 1:22pm

Submitted by: Nicole Valentine

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q20. Are the plant’s propagules frequently dispersed via contaminated seed, equipment, vehicles, boats or clothing/shoes?

Issue Description

Would infected compost count as contaminated seed or spread through equipment? In the question before you answered that the main dispersal for vegetative parts is through people then here you say plant parts but not how. Nikki Valentine

Issue Resolution (Screener's Response to Issue)

Added language that the main dispersal is by birds and wildlife with seeds, and plant parts are not frequuently dispersed as the question is asking.

Issue ID # 7358

Date Created: October 13, 2021 - 6:28pm
Date Updated: December 9, 2021 - 1:38pm

Submitted by: Nicole Valentine

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q02. Is the species (or cultivar or variety) noted as being naturalized elsewhere in the US or world in a similar climate?

Issue Description

I think you could change confidence from high to very high given that it has naturalized several areas matching the climate and you have additional peer-reviewed sources like Cussan 2006 that confirm this. It has also naturalized in Spain, Italy, and southern New Zealand. The climate match map can be hard when partially matching up to entire provinces, but I also found this reference for it naturalizing in Spain, which is completely in the climate match. Aymerich, P., & Sáez, L. (2019). Checklist of the vascular alien flora of Catalonia (northeastern Iberian Peninsula, Spain). Mediterranean Botany, 40(2), 215-242. https://doi.org/10.5209/mbot.63608
https://pdfs.semanticscholar.org/623e/d73348c7473794000b57b5a3f63051a5d840.pdf Nikki Valentine

Issue Resolution (Screener's Response to Issue)

Added that is growing in Spain and added the citation. Thanks much!

Issue ID # 7357

Date Created: October 13, 2021 - 3:59pm
Date Updated: November 29, 2021 - 1:59pm

Submitted by: Nicole Valentine

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 agree with your answer. There is evidence supporting that it is unpalatable to most livestock. Lusigi, Nkurunziza, and Masheti (1984) did not observe cattle or sheep utilizing Asparagus aethiopicus, but goats were found to utilize Asparagus aethiopicus at the lowest rate (less than 20% of their diet or only as an alternative) during the wet season. W.J. Lusigi, E.R. Nkurunziza, and S. Masheti. Journal Of Range

Management 37(6), November 1984.
https://journals.uair.arizona.edu/index.php/jrm/article/viewFile/7784/7396 Nikki Valentine

Issue Resolution (Screener's Response to Issue)

I added the reference to the Kenyan styudy about this species being a minor component in the diet of goats.

Issue ID # 7327

Date Created: October 10, 2021 - 8:14pm
Date Updated: December 6, 2021 - 10:54am

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q19. Are the plant’s propagules frequently dispersed long distance (>100 m) by wind or water?

Issue Description

Agree with answer it would be stronger if you mentioned whether the propagule is the fruit or the seed. If the former, does its anatomy tell us anything about bouyancy? - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Added sentene about dispersal unit is the fruit and that there is little evidence that main route or dispersal is by floating. Most dispersal is by wildlife.

Issue ID # 7326

Date Created: October 10, 2021 - 8:12pm
Date Updated: December 6, 2021 - 10:28am

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q14. Does this plant produce copious viable seeds each year (>1000)?

Issue Description

Need to specify (and profide ref for) number of seeds per fruit. -- Jutta Burger

Issue Resolution (Screener's Response to Issue)

Added reference that includes number of seeds per fruit (3).

Issue ID # 7325

Date Created: October 10, 2021 - 8:11pm
Date Updated: November 30, 2021 - 2:50pm

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

Describe (and provide ref for) the method by which it can reproduce vegetatively. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Updated text to show that rhizomes can be used to spread vegetatively.

Issue ID # 7324

Date Created: October 10, 2021 - 8:10pm
Date Updated: December 9, 2021 - 1:18pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

Issue Description

Not sure that I agree with the answer here based on the evidence presented. The justification provides ample evidence for smothering other vegetation, but the only support for "impenetrable thickets" is the it forms spiny mats. Justification needs to include evidence for obstruction to humans, livestock or wildlife. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Changed my answer to no and confidence down to medium. Added language that asparagus fern likley does not inhibit livestock and people, and there is little evidence to support or refute if it impedes smaller wildlife or not.

Issue ID # 7323

Date Created: October 10, 2021 - 8:05pm
Date Updated: November 17, 2021 - 11:54am

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q06. Is the species found predominately in a climate matching the region of concern?

Issue Description

Note: a significant portion of NZ actually does match CA climate. Suggest removing NZ (any other areas to include, such as Hawaii?). Agree w the score. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Deleted New Zealand from Q6 answer. Added Hawaii.

Issue ID # 7322

Date Created: October 10, 2021 - 7:59pm
Date Updated: December 9, 2021 - 2:10pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Evaluation as a whole

Issue Description

Use the term "naturalized" in your answer since that is what the question is referring to and provide a description of where it is native to. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Added "naturalized" to a few answers where appropriate.

Issue ID # 7321

Date Created: October 10, 2021 - 7:58pm
Date Updated: December 9, 2021 - 1:41pm

Submitted by: Jutta Burger

Status: Fixed
Type: Comment
Severity: Minor
Scope: Regional Information

Issue Description

Minor comment that you can take or leave. I save the climate matching map with a title like California_ClimateMatch or something similar, since it is distinct for CA but does not take this species distribution into consideration (you will have the same map for all evaluations in CA). - Jutta Burger

Issue Resolution (Screener's Response to Issue)

Saved map with name CA in title

Issue ID # 7320

Date Created: October 10, 2021 - 7:56pm
Date Updated: November 29, 2021 - 1:57pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Plant Information

Issue Description

Thanks for pulling this information together. It should actually be presented in the species profile. You can click on the species and add this info in or let me know and I will do it. We never went though this in the training and there is still other detail that we will need to add. - Jutta Burger

Issue Resolution (Screener's Response to Issue)

I moved the information in the plant information to the species profile. Please flag again if I did it incorrectly.

Issue ID # 7055

Date Created: September 18, 2021 - 8:17am
Date Updated: December 9, 2021 - 1:25pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q20. Are the plant’s propagules frequently dispersed via contaminated seed, equipment, vehicles, boats or clothing/shoes?

Issue Description

Might be better to say "crown divisions" than rhizomes, as they don't really propagate from rhizomes. Maybe "Main methods of dispersal are by birds, garden waste and plant parts."

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Added language to address crown divisions and gardeners. My understanding of the crown dizisions was separating the rhizomes in the crown, but I could be wrong. I added language tohat crown divisions and rhizomes are both possible.

Issue ID # 7054

Date Created: September 18, 2021 - 8:13am
Date Updated: December 6, 2021 - 10:59am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q19. Are the plant’s propagules frequently dispersed long distance (>100 m) by wind or water?

Issue Description

The seeds are certainly too heavy for wind dispersal. But also, the fruits, which contain the seeds, are not buoyant and sink in water, making water dispersal unlikely. Unfortunately, I do not have a reference for the latter, just my own observation. Because my observations are anecdotal and without a citable reference, probably best to leave the confidence as Medium.

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Couldn't find a citation about boyancy of fruits, Maybe one exists, I couldnt find it. I agree some fruits sink, but that is my personal observation and not sure if fruits of different ripeness sink or float. Nothing to change until more data is found.

Issue ID # 7053

Date Created: September 17, 2021 - 6:53pm
Date Updated: November 17, 2021 - 11:49am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q04. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?

Issue Description

I agree with how the question was answered.

However, by looking at each of the geo-referenced Calflora and iNat observations and CCH collections (157 records) of this sp. in CA there is one consistancy across every datapoint: the occurences are ALL very urban edge areas. I see essentially no occurences far from these urban edges. This does not change the scoring, since the question is answered correctly and it appears that this sp. is more of a wildlands invader in other parts of the world. Still, an interesting observation, at least for CA.

https://www.calflora.org/entry/observ.html#srch=t&taxon=Asparagus+aethiopicus&cols=b&cch=t&inat=r

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Added a sentrence in answer about current observations are near wildland urban interface.

Issue ID # 7052

Date Created: September 17, 2021 - 6:35pm
Date Updated: December 6, 2021 - 10:45am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q14. Does this plant produce copious viable seeds each year (>1000)?

Issue Description

No suggestion, just a brief comment . . .

This is one question I don't care for as it is written. Asking if >1,000 seeds are produced is not especially meaningful without a context of the plant size, biomass or cover of the specimen. A single small annual or herbacous plant should not be assessed with the same propagule measurement as a large tree or robust shrub. This questions just seems odd and perhaps should be restated as "seeds per meter sq." or seeds per 10 meters sq. of cover" or some other spatial measurement.

I suspect that an A. aethiopicus may struggle to reach >1,000 seeds per plant. However, its density of seed drop may nontheless be significant, per plant. I suspect there may be no change to the scoring here, just a general PRE comment. For several other species I could see this quation producing a misleading answer/score.

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Clarified that some plants can produce 1,000 seeds per plant. Most of Ron's comment is about the method of determining the answer for this question (seeds per plant or seed per area), which I understand his concern.

Issue ID # 7051

Date Created: September 17, 2021 - 6:21pm
Date Updated: November 30, 2021 - 2:52pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Comment
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

Agree. You might consider moving this to HIGH confidence. There is little or no evidence of dispersal in this manner. Dumped plants from green waste/yard waste would not be considered propagation.

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Changed to high confidence.

Issue ID # 7050

Date Created: September 17, 2021 - 6:10pm
Date Updated: December 6, 2021 - 10:42am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

Issue Description

One misconception is that this sp. spreads from rhizomes, tubers or stolons, which it does not. Although it can reproduce by division of the crown. You correctly mention that it CAN be spread vegetatively, but it might be worthwhile to elaborate slightly on this. Although it is technically a possibility, division of the crown in a natural environment is an unlikelty form of reproduction. Certainly seed is far more likely and the larger issue. This is mentioned in the same reference in your biblio, "NSW Dept. of Primary Industries". Perhaps simply elaborate on this point.

Here is their reference quote again:

"Ground asparagus reproduces both by seed and vegetatively from its crown or corm. Fragments of the short, crown-forming rhizomes can generate new plants, however the roots and tubers themselves cannot reproduce vegetatively, and act only as storage organs.

Spread occurs through the sale of nursery stock to gardeners, the dumping of garden waste containing crowns, fruits and seeds, and when birds feed on the fruit and disperse the seed."

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Clarified that most spread is by seeds and the vegetative spread is only by dividing the crowns or rhizomes and tubers are not a mode of spread.

Issue ID # 7049

Date Created: September 17, 2021 - 5:39pm
Date Updated: November 17, 2021 - 12:00pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q08. Is the plant noted as promoting fire and/or changing fire regimes?

Issue Description

I think your comments are all accurate. Even as obvious as they seem, they should still likely have a citation. Maybe even something as simple as the Wikipedia
entry: https://en.wikipedia.org/wiki/Asparagus_aethiopicus

or from the Environmental Weeds of Australis / LUCID
site: https://keyserver.lucidcentral.org/weeds/data/media/Html/asparagus_aethiopicus_sprengeri.htm

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

Added weeds of Australia citation

Issue ID # 7048

Date Created: September 17, 2021 - 5:30pm
Date Updated: November 17, 2021 - 11:56am

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Comment
Severity: Minor
Scope: Q06. Is the species found predominately in a climate matching the region of concern?

Issue Description

Your answer is fine. However, just iNaturalist observvations (Research grade and "wild" only) confirm that the distribution seems to extend well into climates rather unlike that of CA.

https://www.inaturalist.org/observations?captive=false&place_id=any&subview=map&taxon_id=75603

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

No changes made. Comment

Issue ID # 7047

Date Created: September 17, 2021 - 5:18pm
Date Updated: December 9, 2021 - 1:27pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: General Information

Issue Description

Very mionor type:

In the Evaluation Summary section it should real "than", not "then".

Ron Vanderhoff

Issue Resolution (Screener's Response to Issue)

I can't find the error, but maybe a previous change fixed the than and then issue.

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.

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