Plant Risk Evaluator -- PRE™
Evaluation Report

Cutandia memphitica -- California

2023-2025 Western IPM Project

PRE Score: 7 -- Low Potential Risk
Confidence: 71 / 100
Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Completed

Evaluation Date: September 29, 2024

This PDF was created on August 21, 2025

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

Cutandia memphitica

Image by Lynn C. Sweet

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Cutandia memphitica*) 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

Cutandia memphitica (Spreng.) K. Richt., Poaceae, is an annual plant native to North Africa, Iberian Peninsula, Italiy, through the Middle East and to eastern Pakistan and surrounding areas. It is restricted to sandy habitats, favoring inland stabilized sand fields and sand dunes. This species has not been found outside of it's native range, withholding California, where it has been documented three times. The first documentation of C. memphitica in California was in 1933 in western San Bernardino County. It was not documented again until 2020 and 2024 by the author within the southern Mojave Desert in San Bernardino County, where it was likely introduced through military equipment. The plant was identified through photographs by Andrew C. Sanders in 2020, and then was verified through DNA and molecular analysis by CDFA in 2024. We currently have very little documentation of this species native distribution, however, through analogous studies pertaining to the effects of regional war, grazing value, and agriculture, it is clear that this is a fairly common species within appropriate habitat. This review considers this species as a low potential risk, likely due to of the lack of introduction of this species and other members of the Cutundia genus worldwide, among other results. However, introduced grasses in delicate desert ecosystems pose a risk and the spread of this species regionally should be monitored.

General Information

Status: Completed
Screener: Melanie Davis
Evaluation Date: September 29, 2024

Plant Information

Plant: *Cutandia memphitica*

If the plant is a cultivar, how does its behavior differs from its parent's?
Not a cultivar.

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

Answer / Justification:

Cutandia memphitica has not been recorded as naturalized outside of it's native range. As of the time of this report, it has been introduced to California where it has been recorded three times, once in 1933, once in 2020, and once in 2024. The latter of the two records were at the same location in the southern Mojave desert where it was common throughout sandy substrate. Although it was occurring near roads, it had also become locally naturalized and spread into the surrounding habitat.

Reference(s):

- USDAGrin (2024). Cutandia memphitica (Spreng.) K. Richt. GRIN-Global.
- Barkworth, M. E. (2021). Cutandia memphitica - FNA.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- Calflora (2024). Cutandia memphitica Calflora.
- eFlora (2024). Cutandia memphitica in Flora of Pakistan.
- USDA (2024). USDA Plants Database: Cutandia memphitica (Spreng.) K. Richt..
- CCH2, P. (2024). CCH2 Portal - Occurrence Records.

---

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

Answer / Justification:

Cutandia memphitica has not been noted as naturalized outside of its native range, but it has been consistently documented within a small region of eastern San Bernardino County for the past four years. See response to Question 1.

Reference(s):

- PlantRight (2024). ClimateMatch Cutandia memphitica in California.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- eFlora (2024). Cutandia memphitica in Flora of Pakistan.

---

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

Answer / Justification:

Cutandia memphitic is not invasive anywhere.

Reference(s):

- PlantRight (2024). ClimateMatch Cutandia memphitica in California.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- Calflora (2024). Cutandia memphitica Calflora.

---

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

Answer / Justification:

Cutandia memphitic is not invasive anywhere.

Reference(s):

- PlantRight (2024). ClimateMatch Cutandia memphitica in California.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- eFlora (2024). Cutandia memphitica in Flora of Pakistan.

---

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

Answer / Justification:

Members of the Cutandia genus are either circum-Mediterranean like C. dichotoma, C. divaricata, and C. maritima. Cutandia stenostachya and C. rigescens are more rare and restricted to Turkey and Azerbaijan, respectively. However, Steševi? et al. (2017) poses that Cutandia maritima in non-native in the east in Croatia, where it was discovered in 1990, and Montenegro where is was first documented in 2005 and published in 2009 (Glasnovi? 2009). Steševi? et al. was unable to prove that C. maritima was introduced in the Balkans, however if it was it occurs rarely and would not be considered invasive. Cutandia is in the subtribe of Parapholiinae, which it shares with other genera that have been introduced or become invasive in California and other regions that share a similar climate. Parapholis incurva is found to be invasive in the USA and Australia, Parapholis strigosus is introduced in California and Australia, however these taxon are not closely related to Cutandia to consider answering this question "Yes".

Reference(s):

- Steševi?, D., Bubanja N., Cakovi? D., Jogan N., Lukovi? M., & Šilc U. (2017). Sciendo. Hacquetia. 16, 181–187.
- Glasnovi?, P. (2009). Report of the working group for plants. .
- PlantRight (2024). Cal-IPC Climate Match Tool: Cutandia Worldwide.
- Randall, R.P. (2017). A Global Compendium of Weeds. Third Edition..
- PlantRight (2024). ClimateMatch Parapholis strigosa in California.
- PlantRight (2024). ClimateMatch Parapholis incurva in California.

---

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

Answer / Justification:

Where Cutandia memphitica is most recorded does not match the combined climate of California (Israel). However, this species is commonly found in countries like Iraq, Iran, and Kuwait, where there is little representation on the Climate Match Tool. Although C. memphitica is found in regions of Spain, which do match the climate of California, this is not it's primary area of distribution. Although the Climate Match Tool does not represent the actual home range of the species, of which has been vastly under-documented in the occurrence data and more evidence could show that the climates have more in common, I am answering this question 'No'. With more accurate representation we could find >50% of the species' range does match California's climate (Omar & Bartolome, 1994; Faraj et al., 2024; Mohamed et al., 1991; Omar, 1991).

Reference(s):

- Omar, S., & Bartolome J. (1994). Nutrient Variation in Plants and Soil Impacted by oil-well Fires Caused by Iraqi Forces During the Gulf War.
- Omar, S. Ahmad S. (1991). Dynamics of range plants following 10 years of protection in arid rangelands of Kuwait. Journal of Arid Environments. 21, 99–111.
- Mohamed, S. A., Abbas J., & Saleh M. (1991). Natural diet of the Arabian Rheem gazelle, Gazella subgutturosa marica. Journal of Arid Environments. 20, 371–374.
- PlantRight (2024). ClimateMatch Cutandia memphitica in California.
- Barkworth, M. E. (2021). Cutandia memphitica - FNA.
- Faraj, A. H., Colak E. S., & Isik D. (2024). The influence of temperature, light, pH and salinity on germination and growth of Cutandia memphitica (Spreng.) Benth. Advancements in Life Sciences., vol. 11, no. 3, pp. 565-571.

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: **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:

Cutandia memphitica has not been established outside of it's native range. It is a medium sized annual grass and while it does have the potential to displace small native annual forb species that are associated with sandy habitats through resource competition, I was unable to find supportive evidence in the literature. Where this species has been introduced it can easily reproduce and compete for resources (personal observation). It does not grow taller than 35cm, does not have an overstory, and is not a vine.

Reference(s):

- PlantRight (2024). ClimateMatch Cutandia memphitica in California.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- eFlora (2024). Cutandia memphitica in Flora of Pakistan.

---

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

Answer / Justification:

I was unable to find any evidence in the literature around Cutandia memphitica promoting fire or changing fire regimes. It is reliant on sandy habitats, either active or stabilized dunes, which can be sparse in vegetation, but are not always, and do not have an associated fire ecology. However, being a medium sized annual grass that can grow in dense stands, it would leave residual biomass on the landscape that could become easily ignited after desiccation during the summer months, akin to the widespread affects of Schismus and Bromus species in the California deserts. I think that there could be a case for this species to promote or alter fire regimes, however due to lack of evidence and insufficient background I cannot reasonably answer "yes" here. More data and research is needed here.

Reference(s):

- Danin, A., & Orshan G. (1999). Vegetation of Israel. 1: Desert and coastal vegetation.
- El-Amier, YA., El-Halawany EF., & Abdullah TJ. (2014). Composition and Diversity of Plant Communities in Sand Formations Along the Northern Coast of the Nile Delta in Egypt.. Research Journal of Pharmaceutical Biological and Chemical Sciences.
- Wragg, P. D., Mielke T., & Tilman D. (2018). Forbs, grasses, and grassland fire behaviour.
- Danin, A. (1978). Plant species diversity and plant succession in a sandy area in the Northern Negev..
- Underwood, E. C., Klinger R. C., & Brooks M. L. (2019). Effects of invasive plants on fire regimes and postfire vegetation diversity in an arid ecosystem. Ecology and Evolution. 9, 12421–12435.

---

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:

Cutandia memphitica is considered a valuable resources for grazing in arid regions where it occurs. It is palatable to both livestock and wildlife.

Reference(s):

- Omar, S. Ahmad S. (1991). Dynamics of range plants following 10 years of protection in arid rangelands of Kuwait. Journal of Arid Environments. 21, 99–111.
- Bidak, L. M., Kamal S. A., Halmy M. Waseem A., & Heneidy S. Z. (2015). Goods and services provided by native plants in desert ecosystems: Examples from the northwestern coastal desert of Egypt. Global Ecology and Conservation. 3, 433–447.
- Badawy, M.T., & Youssef K.M. (2008). IMPACT OF FEEDING SYSTEMS ON PHYSIOLOGICAL, REPRODUCTIVE AND PRODUCTIVE PERFORMANCE OF SHAMI GOATS DURING DIFFERENT PHYSIOLOGICAL STAGES. Egyptian Journal of Animal Production. 45, 101–117.
- Mohamed, S. A., Abbas J., & Saleh M. (1991). Natural diet of the Arabian Rheem gazelle, Gazella subgutturosa marica. Journal of Arid Environments. 20, 371–374.

---

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

Answer / Justification:

Cutandia memphitica does not generally grow higher than 35 cm, lacks thorns and does not grow in thickets.

Reference(s):

- eFlora (2024). Cutandia memphitica in Flora of Pakistan.

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

Answer / Justification:

Cutandia memphitica is not described as being stoloniferous or rhizomatous and there is no evidence that it can sprout roots from it's nodes.

Reference(s):

- Barkworth, M. E. (2021). Cutandia memphitica - FNA.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- eFlora (2024). Cutandia memphitica in Flora of Pakistan.

---

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

Answer / Justification:

There is no evidence that Cutandia memphitica can reproduce vegetatively.

Reference(s):

- Barkworth, M. E. (2021). Cutandia memphitica - FNA.
- Kew (2014). Cutandia memphitica (Spreng.) K.Richt. \textbar Plants of the World Online \textbar Kew Science.
- Calflora (2024). Cutandia memphitica Calflora.

---

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:

Cutandia memphitica reproduces sexually and commonly produces viable seed.

Reference(s):

- Danin, A. (1996). Plant Adaptations to Environmental Stresses in Desert Dunes. (Cloudsley-Thompson, J. L., Ed.).Plants of Desert Dunes. 133–152.
- Faraj, A. H., Colak E. S., & Isik D. (2024). The influence of temperature, light, pH and salinity on germination and growth of Cutandia memphitica (Spreng.) Benth. Advancements in Life Sciences., vol. 11, no. 3, pp. 565-571.

---

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

Answer / Justification:

I was unable to find any counts of viable seeds in the literature, however we can infer the answer here. Faraj et al. (2024) collected Cutandia memphitica for germination experiments in Iraqi date palm farms and only yielded 30 seeds to work with, however the number of plants collected from was not disclosed. Personal experience attempting to harvest seeds from an individual plant yielded

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

Answer / Justification:

Faraj et al. (2024) found a high germination rate for Cutandia memphitica in a lab setting. They reported that 30 seeds, which had been collected within 1 year prior and stored at 20-25C in paper bags, after sterilization, being placed in petri dishes with filter paper, and 3 days of incubation at 25C, 72.49% of seeds germinated. After 14 days of incubation at 15C 96.66% of the seeds had germinated. The study also revealed that 90% of the germinated seeds germinated in complete darkness. This is the only study I found for germinating Cutandia memphitica, and it was done under very specific parameters that did not emulate natural conditions. The purpose of the study was to define restrictions of germination so that it can be managed near date palm farms in Iraq, where, although it is native, is considered weedy in agriculture.

Reference(s):

- Faraj, A. H., Colak E. S., & Isik D. (2024). The influence of temperature, light, pH and salinity on germination and growth of Cutandia memphitica (Spreng.) Benth. Advancements in Life Sciences., vol. 11, no. 3, pp. 565-571.

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

Answer / Justification:

Cutandia memphitica is a plant with an annual life cycle. This species generally germinates in the winter, flowers in the spring, and produces and disperses seeds in the late spring and early summer, additionally, Faraj et al. (2024) was able to germinate seeds within a year of collection.

Reference(s):

- Danin, A. (1996). Plant Adaptations to Environmental Stresses in Desert Dunes. (Cloudsley-Thompson, J. L., Ed.).Plants of Desert Dunes. 133–152.
- Faraj, A. H., Colak E. S., & Isik D. (2024). The influence of temperature, light, pH and salinity on germination and growth of Cutandia memphitica (Spreng.) Benth. Advancements in Life Sciences., vol. 11, no. 3, pp. 565-571.
- Danin, A., & Fragman-Sapir O. (2024). Cutandia memphitica (Spreng.) K.Richt. \textbar Flora of Israel and adjuscent areas.
- Barkworth, M. E. (2021). Cutandia memphitica - FNA.

---

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

- 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:

Sample sizes for phenology are low in the documentation, observational data, and the literature, but all indicate that this Cutandia memphitica flowers from March to late April (sometimes starting as early as February), and produces ripe fruit from April to May.

Reference(s):

- Danin, A., & Fragman-Sapir O. (2024). Cutandia memphitica (Spreng.) K.Richt. \textbar Flora of Israel and adjuscent areas.
- iNaturalist (2024). Observations of Cutandia memphitica worldwide.
- Barkworth, M. E. (2021). Cutandia memphitica - FNA.

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: **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:

I was unable to find any evidence that animals are responsible for seed dispersal of Cutandia memphitica. However, it is a palatable grass and is often grazed by livestock and wildlife. There is nothing about the morphology of the plant that implies that it can hitch onto animal fur or hair (it lacks sticky glands, burrs, or hairs).

Reference(s):

- Badawy, M.T., & Youssef K.M. (2008). IMPACT OF FEEDING SYSTEMS ON PHYSIOLOGICAL, REPRODUCTIVE AND PRODUCTIVE PERFORMANCE OF SHAMI GOATS DURING DIFFERENT PHYSIOLOGICAL STAGES. Egyptian Journal of Animal Production. 45, 101–117.
- Mohamed, S. A., Abbas J., & Saleh M. (1991). Natural diet of the Arabian Rheem gazelle, Gazella subgutturosa marica. Journal of Arid Environments. 20, 371–374.
- Barkworth, M. E. (2021). Cutandia memphitica - FNA.

---

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

- 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:

Cutandia memphitical does not occur in riparian or otherwise wet or moist habitats, so the likelyhood of water dispersal is low. However, seeds are incased in proportionatly large glumes and spikelets detach easily when dry. These morphological features, combined with the arid, exposed, aeolian driven habitat the species can be found in, indicate that wind is a mode of dispersal for this taxon. Wind can easily disperse dried plant material over 100 meters.

Reference(s):

- Danin, A., & Orshan G. (1999). Vegetation of Israel. 1: Desert and coastal vegetation.
- Barkworth, M. E. (2021). Cutandia memphitica - FNA.

---

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:

In 2020 during vegetation surveys in the southern Mojave Desert we documented Cutandia memphitica within an area of high human disturbance. This region of the desert strictly closed to civilians, experiences high use of vehicles and equipment, and is approximately 4 miles away from the vivilian boundary. We did not find any Cutandia memphitica between the collection location and the civilian boundary. While there is no other plausible explanation for the occurrence of this species than it establishing from seed that was carried into the region via training equipment, this is an anecdotal and singular observation and does not address the frequency of dispersal in this method.

Reference(s):

- CCH2, P. (2024). CCH2 Portal - Occurrence Records.

Total PRE Score

PRE Score: 7 -- Low Potential Risk
Confidence: 71 / 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: 2023-2025 Western IPM 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:

• Chris McDonald	February 12, 2025
• Elizabeth D. Brusati	February 7, 2025
• Jutta Burger	January 29, 2025
• Lauren Quon	December 30, 2024
• Ron Vanderhoff	October 9, 2024

This evaluation has a total of 5 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 # 10819

Date Created: February 12, 2025 - 10:19am
Date Updated: February 27, 2025 - 8:50am

Submitted by: Chris McDonald

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

Issue Description

I agree this species does not seem to have literature on promoting or altering the fire regime. Is there the potential this grass could form dense stands and create a fuel load in the deserts? This would be similar to the Bromes and also Schismus (see the 4th paragraph of the
introduction
https://pmc.ncbi.nlm.nih.gov/articles/PMC6875662/#:~:text=Three%20widespread%20invasive%20annual%20grasses,term%20effects%20on%20postfire%20plant. I think there is a case here to either change to a Yes, based on plant morphology and how other annual grasses (Schismus) have stabilized sandy soils and altered fire regime and increased fuel loads or leave as a No but with low confidence and state the morphology is different, but it might be currently unknown about fire regime potential. We have a good understanding of fire regime change in SW US deserts by annual grasses.. CM

Issue Resolution (Screener's Response to Issue) I agree that this could be a yes or no, and I've gone back and forth with reviewers about it. I kept my answer as a no, but decreased the confidence to Low, and added some more justification. I think with more evidence this could be a yes, but answering yes now would be too big of a leap.

Issue ID # 10817

Date Created: February 12, 2025 - 10:09am
Date Updated: February 28, 2025 - 11:54am

Submitted by: Chris McDonald

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q05. Are other species of the same genus invasive in a similar climate?

Issue Description

Cutandia seems to be a small poorly known genus. I did some digging and its related to a few genera that are invasive in a similar climate and in CA. Here is the list of closely related genera in the Parapholiinea https://en.wikipedia.org/wiki/Poeae and its closely related to Parapholis incurva which is invasive and would be closely related (found in Australia and California) https://www.gbif.org/species/5290069 and Parapholis strigosa is also found in CA, but seems much more limited in abundance, but also found in Australia https://www.gbif.org/species/5290068. https://florabase.dbca.wa.gov.au/browse/profile/516. https://keyserver.lucidcentral.org/weeds/data/media/Html/parapholis_incurva.htm#:~:text=Coast%20barb grass%20(Parapholis%20incurva)%20is,South%20Australia%20and%20Western%20Australia.

I'd change to a Yes. Closely related genera are invasive or appear to be likely from internet searches. CM.

Issue Resolution (Screener's Response to Issue) Upon closer inspection, Parapholis and Cutandia are not closely related enough to change my response to a yes, as per the question guidelines and advice from JB.

Issue ID # 10816

Date Created: February 12, 2025 - 9:52am
Date Updated: February 27, 2025 - 8:54am

Submitted by: Chris McDonald

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

Issue Description

In the evaluation summary, it's hard to figure out which areas the plant is native to, based on the list of countries vs. the map shown in GBIF. The list of countries in the evaluation summary are mostly NE Africa and the Middle east and east of there, as well as Spain and Italy, which leaves out NW Africa, where GBIF shows locations from Libya all the way to the Canary Islands. If it is native west to the Canaries, it would be easier to say, native to North Africa, Iberian Peninsula, Italy (GBIF doesn't show an Italy locations, but you might have more info) through the Middle East and to eastern Pakistan and surrounding areas. And then list some specific countries. CM

Issue Resolution (Screener's Response to Issue) Agreed, thank you for the tip to make this more readable. The data on Italy distributions came from my research and was not in GBIF

Issue ID # 10815

Date Created: February 12, 2025 - 9:41am
Date Updated: February 27, 2025 - 8:58am

Submitted by: Chris McDonald

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 agree with the other comment about Q2 should be a yes, the description was that its spreading along road shoulders in the Mojave. That would indicate its been naturalized - CM

Issue Resolution (Screener's Response to Issue) I see the issue here. Fixed.

Issue ID # 10799

Date Created: February 7, 2025 - 9:51am
Date Updated: February 27, 2025 - 8:51am

Submitted by: Elizabeth D. Brusati

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

This should be answered No because there is not enough information on how frequent this type of dispersal is. In fact, your own answer states:

While there is no other plausible explanation for the occurrence of this species than it establishing from seed that was carried into the region via training equipment, this is **an anecdotal and singular observation and does not address the frequency of dispersal i**n this method.

Issue Resolution (Screener's Response to Issue) Agreed, I changed my answer

Issue ID # 10798

Date Created: February 7, 2025 - 9:49am
Date Updated: February 27, 2025 - 8:58am

Submitted by: Elizabeth D. Brusati

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

This question should be answered Yes since in Q1 you state that this species has become naturalized in California.

Issue Resolution (Screener's Response to Issue) I see the issue here. Fixed.

Issue ID # 10797

Date Created: February 7, 2025 - 9:10am
Date Updated: February 27, 2025 - 8:42am

Submitted by: Ron Vanderhoff

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

Issue Description

This is my only question on this excellent assessment. As discussed, the species has NOT been primariy documented in climate matching regions of the world. In the discussion it is noted that the taxon MAY be under collected and under documented and the native range MAY include more climate matching areas. Although this may be a valid comment, it is nonetheless speculative. Is it not also possible that it has been equally undocumented in areas that are NOT a California climate match? If so, this would also return a "No" answer, perhaps with LOW confidence.

Additionally, the comment of the specific climate of the Eastern San Bernardino desert detection location being a more appropriate climate match to its native range is likely valid. However, is this consistant with the protocol for these assesments? Considering California's very large climate geography I suspect several other species would quality as well. Finally, if we were to apply such a fine scale climate matching analysis, then the potential for widespread invasion in California be unlikely and any California invasiveness would be somewhat limited.

Issue Resolution (Screener's Response to Issue) I would going too fine scale, I see that now. I pulled back on this question and followed the reviewer's suggestion here

Issue ID # 10796

Date Created: February 7, 2025 - 9:06am
Date Updated: February 27, 2025 - 8:43am

Submitted by: Ron Vanderhoff

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

Issue Description

This is my only question on this excellent assessment that I question. As discussed, the species has NOT been primariy documented in climate matching regions of the world. In the discussion it is noted that the taxon may be under collected and under documented and the native range MAY include more climate matcing areas. Altough this may be a valid comment, it is nonetheless speculative. Is it not also possible that it has been equally undocumented in areas that are not a California climate match. If so, this would also return a "No" answer, perhaps wit LOW confidence.

Additionally, the comment of the specific climate of the Eastern San Bernardino desert detection location being a more appropriate climate match to its native range is likely valid. However, is this consistant with the protocol for these assesments? Considering California's very large climate geograpy I suspect several other species would quality as well. Finally, if we were to apply such a fine scale climate matcing analysis, then the potential for widespread invasion in California be unlikely and any California invasiveness would be somewhat limited.

Issue Resolution (Screener's Response to Issue) This is a duplicate issue

Issue ID # 10703

Date Created: January 29, 2025 - 4:41pm
Date Updated: February 5, 2025 - 4:51pm

Submitted by: Jutta Burger

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

Issue Description

Update the summary and tuck somewhere in one of the question justifications (maybe #1) that the ID of this plant was confirmed (=> your correspondence w/ Genevieve Walden). - JB

Issue Resolution (Screener's Response to Issue) Done!

Issue ID # 10702

Date Created: January 29, 2025 - 4:37pm
Date Updated: February 5, 2025 - 4:36pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Major
Scope: Q07. Does this plant displace native plants and dominate the plant community in areas where it has been established?

Issue Description

I would say 'no' on this question unless you through personal observation (medium confidence) have seen it displace other vegetation. And if you have, then the answer to question 1 and 2 should be potentially reconsidered. Right now, you and your team are the primary source of information for its behavior outside of its native range. - JB

Issue Resolution (Screener's Response to Issue) I agree with this issue comment and changed my response.

Issue ID # 10701

Date Created: January 29, 2025 - 4:32pm
Date Updated: February 5, 2025 - 4:45pm

Submitted by: Jutta Burger

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q01. Has the species (or cultivar or variety, if applicable) become naturalized where it is not native?

Issue Description

It would be good to describe the kind of habitat (sounds like highly disturbed?) that it has been found in outside of its native range to better justify the "no" here. Otherwise, if it is persisting / reproducing in other more naturally disturbed areas (like sand dunes, this would be a "yes". - JB

Issue Resolution (Screener's Response to Issue) I changed my answer because it had become locally naturalized where we found it.

Issue ID # 10660

Date Created: December 30, 2024 - 7:12pm
Date Updated: February 5, 2025 - 4:46pm

Submitted by: Lauren Quon

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q01. Has the species (or cultivar or variety, if applicable) become naturalized where it is not native?

Issue Description

Might be worth mentioning the location? but not necessary- I was just curious.

- LQ

Issue Resolution (Screener's Response to Issue) I had to remove location data for security reasons

---

Issue ID # 10535

Date Created: October 9, 2024 - 8:49am
Date Updated: February 5, 2025 - 4:50pm

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

Perhaps a lower confidence. I agree with your conclusions at tis military base. Nonetheless, this is one isolated observation. Te question states "frequently dispersed". Without more evidence it might be safer to go with a "medium" confidence.

Issue Resolution (Screener's Response to Issue) Agreed - I fixed and changed some wording here

---

Issue ID # 10534

Date Created: October 9, 2024 - 8:41am
Date Updated: February 5, 2025 - 4:48pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion

Severity: Minor
Scope: Q15. 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?

Issue Description

Given that the only published resource found was of a different, related species, the germination was not performed in a native environment, and only one documentation could be found I suggest lowering the confidence of the answer to "low".

Issue Resolution (Screener's Response to Issue) I agree and I changed my confidence.

Issue ID # 10533

Date Created: October 9, 2024 - 8:33am
Date Updated: February 5, 2025 - 4:47pm

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

Although it may be true, the statement "Additionally, grasses on the landscape, in general create higher fire." needs clarification. Annual grasses can alter fire ignition, intensity, spread and so forth, but I think "higher fire" might need clearer definition. I also suggest citing a publication as support for the statement.

Issue Resolution (Screener's Response to Issue) I removed the statement in question as I think I answered the question adequately without it.

Issue ID # 10532

Date Created: October 9, 2024 - 8:22am
Date Updated: February 5, 2025 - 4:36pm

Submitted by: Ron Vanderhoff

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q07. Does this plant displace native plants and dominate the plant community in areas where it has been established?

Issue Description

There is a lack of information about displacement of native flora or dominating a plant community. Te question is asked as "does", implying pre-existing evidence rather than speculation. But the answer is stated as "potential" or "can", which is probably speculative. Even though the speculation is valid I believe te question may be better answered as a No. Or perhaps left unanswered, due to the lack of documentation.

Issue Resolution
No resolution has been entered for this 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.

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.