Plant Risk Evaluator -- PRE™
Evaluation Report

Cytisus scoparius -- Nevada

2023-2025 Western IPM Project

PRE Score: 17 -- High Potential Risk
Confidence: 78 / 100
Questions answered: 20 of 20 -- Valid (80% or more questions answered)

Privacy: Private
Status: Submitted

Evaluation Date: February 27, 2025

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

Cytisus scoparius

Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Cytisus scoparius*) 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

Cytisus scoparius is native to Europe and has been introduced across the world as an ornamental. Cytisus scoparius is a shrub growing up to 2.5 meters tall often forming monocultures, displacing native vegetation, altering the fire fuel structure, producing thickets, and is toxic to grazing animals. This plant reproduces only by seed. It produces copious viable seeds which can survive for over 30 years, enabling them to disperse through human disturbances. Most Cytisus scoparius occurrences are outside the climate matching region, in areas with more precipitation. Although this species is invasive in places with a similar climate to Nevada, including California, Oregon and Washington, these occurrences are at lower elevations than most of Nevada. There is limited evidence Cytisus scoparius may not compete as well at higher elevations, similar to those found across Nevada.

General Information

Status: Submitted
Screener: Nicole Valentine
Evaluation Date: February 27, 2025

Plant Information

Plant: *Cytisus scoparius*

Regional Information

Region Name: Nevada

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:

Cytisus scoparius is native to Europe, from Ireland to west-central Ukraine and from southern Spain to southern Sweden (GBIF). Cytisus scoparius was introduced to several areas as an ornamental. It was introduced as an ornamental to CA in the 1850s in the Sierra Nevada foothills (Bossard et al 2000). Cytisus scoparius was used to prevent erosion and stabilize dunes (Bossard et al 2000). It has naturalized in many areas in the US including California, Oregon, Washington, and the East Coast (Calflora; iNaturalist; Zouhar 2005). Cytisus scoparius is also well documented as naturalized in Japan, South Africa, southwestern Australia, southwestern Canada, and Chile (GBIF; Zouhar 2005).

Reference(s):

- Calflora (0). Calflora: Plant Search.
- GBIF (2016). GBIF Backbone Taxonomy.
- iNaturalist Network (0). iNaturalist.
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Bossard, C. C., Randall J. M., & Hoshovsky M. C. (2000). Invasive plants of California's wildlands.

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

Answer / Justification:

Cytisus scoparius has naturalized in areas in the US with a similar climate including eastern Washington, eastern Oregon, the Tahoe border of California, southern Utah, and western Texas. (Calflora; iNaturalist; Zouhar 2005). Outside of the US, there is also an occurrence in a climate matching area in Mexico (GBIF).

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- iNaturalist Network (0). iNaturalist.
- GBIF (2016). GBIF Backbone Taxonomy.
- Bossard, C. C., Randall J. M., & Hoshovsky M. C. (2000). Invasive plants of California's wildlands.

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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:

Cytisus scoparius is invasive is many places. Cytisus scoparius is classified as a noxious weed in Hawaii, California, Idaho, Oregon, and Washington (Zouhar 2005; WA State Noxious Weed Control Board). It is also classified as a "Category 3," widespread nonnative species by the USDA, Forest Service, Eastern Region (Zouhar 2005). Cytisus scoparius is a major forestry problem in the US, Canada, Chile, and New Zealand (Zouhar 2005; Balocchi and Sanfuentes 2024). Cytisus scoparius is also invasive in Australia, Argentina, Canada, India, Iran, Japan and South Africa (CABI).

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Washington State Noxious Weed Control Board (0). Scotch Broom. 2025,
- Balocchi, F., & Sanfuentes E. A. (2024). Fungal Pathogens on Scotch Broom (Cytisus scoparius) and French Broom (Genista monspessulana) From Chile. Forest Pathology. 54(6),
- CABI (2007). CABI Invasive Species Compendium.

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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:

Cytisus scoparius is classified as a noxious weed in California, Oregon and Washington; all of which have occurrences overlapping with the climate matching region (Zouhar 2005; WA State Noxious Weed Control Board). Cytisus scoparius is a major forestry problem in the US (Zouhar 2005). In Washington it displaces native and beneficial plants, causing loss of grassland and open forest (Washington State Noxious Weed Control Board). Nevada is on average much higher elevation than the area the occurrences in California, Oregon, and Washington have been found. Nevada averages over 1,000 meters in elevation. Cytisus scoparius produced less than five seed pods in sites over 1,000 meters elevation in New Zealand (Williams 1981). As a result, Cytisus scoparius may not compete as well in Nevada.

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Washington State Noxious Weed Control Board (0). Scotch Broom. 2025,
- Williams, PA. (1981). Aspects of the ecology of broom (Cytisus scoparius) in Canterbury, New Zealand. New Zealand Journal of Botany. 19, 31-43.

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

Answer / Justification:

There are several invasive brooms, but I could not find many examples with occurrences within the similar climate. Cytisus multiflorus and Cytisus striatus, of the same genus, are not invasive with occurrences in a similar climate (GBIF). Spartium junceum is another broom that is invasive in California and there are occurrences within the climate matching region of California (Cal-IPC; GBIF).

Reference(s):

- Cal-IPC (2025). Th Cal-IPC Inventory.
- GBIF (2016). GBIF Backbone Taxonomy.

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

Answer / Justification:

Most Cytisus scoparius occurrences are outside the climate matching region. Cytisus scoparius only has a few occurrences in the climate matching areas in the US in Utah, New Mexico, Oregon and Washington. Most occurrences in the US alone are outside the climate matching areas in areas with more precipitation such as the US Pacific Northwest coastline and the Eastern US coastline. There is one occurrence outside the US that is within a climate matching area and this occurrence is in Mexico. The most dense occurrences of Cytisus scoparius are across western Europe in its native range, which is outside the climate matching region. There are also several occurrences outside the climate matching region in New Zealand, southwestern Australia, Chile, and South Africa.

Reference(s):

- GBIF (2016). GBIF Backbone Taxonomy.

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:

Cytisus scoparius can dominate a plant community, forming a dense monoculture, replacing native vegetation (Zouhar 2005; WA State Noxious Weed Control Board). Cytisus scoparius in Washington displaces native and beneficial plants, causing loss of grassland and open forest (WA State Noxious Weed Control Board). Cytisus scoparius is a major forestry problem in the US, particularly in reforestation after logging, as it can quickly overtop commercial crop trees (Zouhar 2005). Cytisus scoparius also acidifies the soil, inhibiting establishment of other species (Bossard et al 2000).

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Washington State Noxious Weed Control Board (0). Scotch Broom. 2025,
- Bossard, C. C., Randall J. M., & Hoshovsky M. C. (2000). Invasive plants of California's wildlands.

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

- 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:

Cytisus scoparius is a shrub, 2 to 2.5 meters tall (Jepson eFlora). Cytisus scoparius forms dense monoculture, replacing native vegetation and alterring the fuel structure (Zouhar 2005; WA State Noxious Weed Control Board). Several reviews suggest that Cytisus scoparius creates a fire hazard in Australia and California forests (Zouhar 2005). Cytisus scoparius invasions may also increase fire intensity and frequency in invaded Oregon white oak communities by increases fire hazard by creating extensive areas with large amounts of dead wood (Zouhar 2005). Cytisus scoparius is reported to increase the frequency and intensity of fires (Parsons 1992 as cited in Bossard et al 2000).

Reference(s):

- Jepson Flora Project (2014). Jepson eFlora.
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Washington State Noxious Weed Control Board (0). Scotch Broom. 2025,
- Bossard, C. C., Randall J. M., & Hoshovsky M. C. (2000). Invasive plants of California's wildlands.

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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: **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:

Cytisus scoparius contains toxic quinolizidine alkaloids (Burrows and Tyrl 2013 as cited in WA State Noxious Weed Control 2014). Cytisus scoparius is listed as an unsafe herb and can cause nausea and vomiting in humans. Its seeds are also toxic to ungulates, and mature plants are unpalatable and can cause digestive problems and neurologic dysfunction in horses (Burrows and Tyrl 2013 as cited in WA State Noxious Weed Control 2014). Although there have been reports of livestock loss due to ingestion of toxic quinolizidine alkaloids produced by Cytisus scoparius, it is uncommon for livestock to consume enough due to its bitter taste which can make it unpalatable to animals (Zouhar 2006; WA State Noxious Weed Control 2014). I found no evidence on whether the plant was a health risk to fish. Some animals, including deer, rabbits, and mice, have been reported to browse on Cytisus scoparius (Zouhar 2006).

Reference(s):

- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

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

- 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:

Cytisus scoparius is a shrub, 2 to 2.5 meters tall (Jepson eFlora). Cytisus scoparius can dominate a plant community, forming dense monospecific stands (Downey and Smith 2000; WA State Noxious Weed Control Board 2014; Zouhar 2005).

Reference(s):

- Jepson Flora Project (2014). Jepson eFlora.
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Downey, PO., & Smith JMB. (2000). Demography of the invasive shrub Scotch broom (Cytisus scoparius) at Barrington Tops, New South Wales: insights for management. Austral Ecology. 25, 477-485.

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:

Although Cytisus scoparius can sprout from the root crown after cutting, freezing, or fire, there is no evidence this species reproduces and spreads vegetatively from its original location (Zouhar 2005).

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

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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:

Although Cytisus scoparius can sprout from the root crown after cutting, freezing, or fire, there is no evidence this species spreads from detached fragments (Zouhar 2005). This species is only known to reproduce from seed.

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

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

Answer / Justification:

Cytisus scoparius spreads by seed (WA State Noxious Weed Control Board 2014; Downey 2000). Studies carried out on Scotch broom seeds from a foothill site on the El Dorado National Forest in California showed that fresh seed was 98% viable (Zouhar 2005). There was a study in New Zealand that showed Cytisus scoparius produced few seeds at higher elevation, especially at sites over 1,000 meters in elevation (Williams 1981). Nevada averages over 1,000 meters in elevation. As a result, Cytisus scoparius may not produce many viable seeds in Nevada.

Reference(s):

- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Williams, PA. (1981). Aspects of the ecology of broom (Cytisus scoparius) in Canterbury, New Zealand. New Zealand Journal of Botany. 19, 31-43.
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Downey, PO., & Smith JMB. (2000). Demography of the invasive shrub Scotch broom (Cytisus scoparius) at Barrington Tops, New South Wales: insights for management. Austral Ecology. 25, 477-485.

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

Answer / Justification:

There are many reports of Cytisus scoparius producing well over 1,000 seeds (Zouhar 2005; Whatcom County Noxious Weed Control Board). Shrubs produce an average of 9,650 seeds per year (Bossard and Rejmánek 1994 as cited in WA State Noxious Weed Control Board 2014). Studies carried out on Scotch broom seeds from a foothill site on the El Dorado National Forest in California showed that fresh seed was 98% viable (Zouhar 2006). Seed production is lowered by drought conditions (Bossard and Rejmánek 1993 in Peterson and Prasard 1998 as cited in WA State Noxious Weed Control Board 2014). There was a study in New Zealand that showed Cytisus scoparius produced less seeds at higher elevation, especially at sites over 1,000 meters in elevation (Williams 1981). Nevada averages over 1,000 meters in elevation. As a result, Cytisus scoparius may not produce as many seeds in Nevada.

Reference(s):

- Williams, PA. (1981). Aspects of the ecology of broom (Cytisus scoparius) in Canterbury, New Zealand. New Zealand Journal of Botany. 19, 31-43.
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Whatcom County Noxious Weed Board (0). Management of Scotch (Scot's) Broom. 2025,

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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: **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:

Cytisus scoparius have hard seed coats that delay germination and enable seeds to survive in the soil seed bank for at least 5 years and possibly as long as 30 years (Zouhar 2005). Scarification is required before germination can occur (Zouhar 2005). Mechanical, heat, and chemical scarification may induce germination (Zouhar 2005).

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

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

Answer / Justification:

Cytisus scoparius becomes reproductive on reaching an age of 2 to 3 years and a height of about 2 to 3 feet (Zouhar 2005).

Reference(s):

- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

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

Answer / Justification:

Cytisus scoparius flowers for over three months in California (Jepson eFlora; UCANR 2018). On some sites a second, less prolific flowering occurs in summer (Zouhar 2005).

Reference(s):

- University of California Agriculture and Natural Resources (UCANR) (2018). Profiles of California Brush.
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Jepson Flora Project (2014). Jepson eFlora.

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

Answer / Justification:

Most Cytisus scoparius seed falls within 1 meter of parent plants and rarely beyond 10 feet (WA State Noxious Weed Control Board 2014; Zouhar 2005). Ants may take Cytisus scoparius seeds back to their nests, but this is unlikely to account for long distances (Zouhar 2005).

Reference(s):

- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

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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:

Most Cytisus scoparius seed falls within 1 meter of parent plants, and rarely beyond 10 feet (WA State Noxious Weed Control Board 2014; Zouhar 2005). Although Cytisus scoparius has a hard seed coat that can survive long distance transport in rivers and streams, it is unlikely to land in water given the short dispersal distance and Cytisus scoparius is not a riparian plant (Williams 1981; Zouhar 2005). Cytisus scoparius seed has been recovered from stream sediments up to 50 meters downstream from Cytisus scoparius shrubs, but this may be uncommon and falls short of the 100 meters to qualify for long distance (Zouhar 2005).

Reference(s):

- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.
- Williams, PA. (1981). Aspects of the ecology of broom (Cytisus scoparius) in Canterbury, New Zealand. New Zealand Journal of Botany. 19, 31-43.

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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: **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:

Cytisus scoparius is commonly used as an ornamental and its seeds can remain viable in the soil for over ten years, making it likely to come into regular contact with humans (WA State Noxious Weed Control Board; Zouhar 2005). Cytisus scoparius has a hard seed coat that allows the seed to survive for years including through rough transport (WA State Noxious Weed Control Board). Cytisus scoparius seeds have been found in samples taken from recreation vehicles (inside and out) and shoes (Zouhar 2005). Construction crews can disperse broom seeds long distances by transporting contaminated soil or gravel (Zouhar 2005).

Reference(s):

- Washington State Noxious Weed Control Board (2014). Cytisus scoparius (L.) Link. .
- Zouhar, K. (2005). Cytisus scoparius, C. striatus. Fire Effects Information System.

Total PRE Score

PRE Score: 17 -- High Potential Risk
Confidence: 78 / 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: Private

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:

• Scott Heacox	March 19, 2025
• Michael Chamberland	March 15, 2025
• Jutta Burger	March 10, 2025

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 # 11137

Date Created: March 19, 2025 - 5:40pm
Date Updated: March 25, 2025 - 5:16pm

Submitted by: Scott Heacox

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

Issue Description

Overall, well done! I might add a bit more discussion about the type of habitat it's generally found in. There is a lot of good discussion about elevation, but by looking at the occurrence map, that seems to be only a part of what determines its distribution. Precipitation seems to be critical too, because it is rare or absent in arid areas (low and high elevation) of California such as Central Valley and the Colorado and Mojave Deserts. I might be biased since I'm a desert ecologist, but from my view it might be nice to specify in the summary that it seems to occur mostly in low elevation areas with adequate precipitation, such as coastal areas or mountain foothills in the west, but is largely absent from low or high (as in much of Nevada) elevation deserts, likely due to aridity and/or elevation.

Issue Resolution (Screener's Response to Issue) Thank you, Scott! I added in a sentence in the summary about most occurrences are in areas with more precipitation. I avoided talking about elevation at a larger scale since I am not familiar with a quick glance at elevations. -NV

Issue ID # 11135

Date Created: March 19, 2025 - 5:13pm

Date Updated: March 25, 2025 - 4:22pm

Submitted by: Scott Heacox

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

I feel like this answer could be written a bit more clearly. The question is about the ability for detached fragments to resprout, but your answer only discusses regrowth after disturbance (not from detached fragments). Maybe state that, although regrowth from an existing root crown is possible, you could not find evidence of reproduction from detached fragments, and that this plant is only known to reproduce from seed. --Heacox

Issue Resolution (Screener's Response to Issue) Reworded to directly answer the question as suggested. -NV

Issue ID # 11101

Date Created: March 15, 2025 - 9:01am
Date Updated: March 26, 2025 - 11:22am

Submitted by: Michael Chamberland

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

Issue Description

The same issue as in question 13 - Is any information available to suggest why Cytisus scoparius produced few seeds at higher elevation? It is not clear why elevation would suppress seed set, unless due to freezing or alpine conditions, which would also stunt growth overall. - M. Chamberland

Issue Resolution (Screener's Response to Issue)

I did not find any solid evidence of why Cytisus scoparius produced fewer seeds at higher elevation. Williams (1981) said the reduction in seed production at greater elevations may have been caused by winter cold or winter drought affect the previous season's growth. In the same paper, it doesn't look like the plants at higher elevation are much different in size than the lower elevation plants (Williams 1981). There are occurrences of Scotch broom naturalizing in areas in the same hardiness zones as Nevada or colder (GBIF). Seedlings and young plants are especially sensitive to frost (Zouhar 2005). Mature plants can tolerate fairly severe frosts, but plants may experience considerable dieback after very severe winters (Zouhar 2005). -NV

Issue ID # 11100

Date Created: March 15, 2025 - 8:59am
Date Updated: March 26, 2025 - 11:22am

Submitted by: Michael Chamberland

Status: Fixed
Type: Suggestion
Severity: Minor
Scope: Q13. Does the species (or cultivar or variety) commonly produce viable seed?

Issue Description

Is any information available to suggest why Cytisus scoparius produced few seeds at higher elevation? It is not clear why elevation would suppress seed set, unless due to freezing or alpine conditions, which would also stunt growth overall. - M. Chamberland

Issue Resolution (Screener's Response to Issue)

I did not find any solid evidence of why Cytisus scoparius produced fewer seeds at higher elevation. Williams (1981) said the reduction in seed production at greater elevations may have been caused by winter cold or winter drought affect the previous season's growth. In the same paper, it doesn't look like the plants at higher elevation are much different in size than the lower elevation plants (Williams 1981). There are occurrences of Scotch broom naturalizing in areas in the same hardiness zones as Nevada or colder (GBIF). Seedlings and young plants are especially sensitive to frost (Zouhar 2005). Mature plants can tolerate fairly severe frosts, but plants may experience considerable dieback after very severe winters (Zouhar 2005). -NV

Issue ID # 11099

Date Created: March 15, 2025 - 8:10am
Date Updated: March 26, 2025 - 11:23am

Submitted by: Michael Chamberland

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

Issue Description

For citations which are showing as year (0), the date the site was accessed can be used, and would be preferable to leaving as 0. - M. Chamberland

Issue Resolution (Screener's Response to Issue)

I am leaving as is for now since these are generic sources that can be used outside of specific species. Changing the year on these generic sources may reflect in another person's PAF as well. -NV

Issue ID # 11098

Date Created: March 15, 2025 - 8:08am
Date Updated: March 25, 2025 - 4:32pm

Submitted by: Michael Chamberland

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

Issue Description

Check the evaluation for spelling, particularly for consistency in spelling Cytisus scoparius. - M.

Chamberland

Issue Resolution (Screener's Response to Issue) I went through and checked species, but I may have been looking at this too long. Please let me know if I missed anything else and where. -NV

Issue ID # 11063

Date Created: March 10, 2025 - 5:49pm
Date Updated: March 11, 2025 - 11:17am

Submitted by: Jutta Burger

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

Issue Description

Maybe rephrase the "toxic threat" sentence in summary. Unclear what that would mean. - JB

Issue Resolution (Screener's Response to Issue) reworded to "is toxic" -NV

Issue ID # 11062

Date Created: March 10, 2025 - 5:48pm
Date Updated: March 11, 2025 - 11:28am

Submitted by: Jutta Burger

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

Issue Description

It would be useful to add the reference, "Invasive Plants of California Wildlands" (Bossard, Randall et al. 2000) as a reference, since there is a really thorough review of this species in the book. I attached Cytisus scoparius to this ref. in PRE to make adding it easier.

They make comments about C. scoparius also acidifying the soil, as well as of it increasing frequency & intensity of fires (primary ref there is Parsons 1992).

Other comments from the book that might be helpful are that it was introduced as an ornamental to CA in the 1850's in the Sierra Nevada foothills (unknown date of intro into NV). Later used to prevent erosion and stabilize dunes.

Issue Resolution (Screener's Response to Issue) Thanks Jutta. Included the background information in Q1 and updated Q7 and Q8 with the additional information. -NV

Issue ID # 11061

Date Created: March 10, 2025 - 5:30pm
Date Updated: March 11, 2025 - 11:16am

Submitted by: Jutta Burger

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

Issue Description

You may want to go down to "medium" confidence on this, both because the previous answer had "high" confidence and because there is some evidence that Scotch broom may not be able to produce copious amounts of seed at Nevada's elevation. - JB

Issue Resolution (Screener's Response to Issue)

Agreed, confidence was downscaled to medium. -NV

Issue ID # 11060

Date Created: March 10, 2025 - 5:25pm
Date Updated: March 11, 2025 - 11:15am

Submitted by: Jutta Burger

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

Issue Description

Seems like confidence can be high on this since the FEIS seems to have pretty specific information on it. Note also that two different dates are listed for the Zouhar reference. -JB

Issue Resolution (Screener's Response to Issue) Thanks, fixed the year of reference and updated confidence from medium to high. -NV

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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