



Figure 1: Yellowspine thistle (*Cirsium ochrocentrum*). Photo: CDFA, 2001

**California Pest Rating Proposal for**  
***Cirsium ochrocentrum* A. Gray: yellowspine thistle**

**Current Pest Rating: A**

**Proposed Pest Rating: C**

---

**Comment Period: 11/21/2019 through 1/5/2019**

---

## Initiating Event:

This plant has been included on the CDFA noxious weed list [3 CCR § 4500] as an A-rated plant pest. However, yellowspine thistle has not been reviewed under the current pest rating system. A pest rating proposal is required to evaluate the current rating and status of yellowspine thistle in the state of California.

## History & Status:

**Background:** Yellowspine thistle grows up to one meter tall and is an erect perennial with woolly stems and upper leaf surfaces. The leaves range up to 25 centimeters long and up to 3 centimeters wide and are armed with large (up to 20 mm long) prickles. Flowers are white, pink, or pale purple (Keil, 2006). Besides producing seeds, this plant spreads via adventitious buds on runner roots to form patches (Keil, 2006).

**Worldwide Distribution:** Yellowspine thistle grows in the Great Plains from South Dakota to New Mexico and Texas and in Arizona and north and central Mexico (Keil, 2006). Where yellowspine thistle is native versus adventive is uncertain. There are records of yellowspine thistle in San Diego as far back as 1895 (CCH, 2019). There is a collection from Flagstaff in 1891 indicating that yellowspine thistle may be native to Arizona. The collector of a specimen from Cochise County in 1907 commented that yellowspine thistle was “common on the high prairie lands” (SEINet, 2019).

**Official Control:** Yellowspine thistle is listed as a noxious weed in California. Iowa lists *Cirsium* spp. as a primary noxious weed (State of Iowa, 2018).

**California Distribution:** This plant has been documented as present in at least 12 counties in California: Butte, Lassen, Los Angeles, Modoc, Plumas, Riverside, San Diego, Santa Barbara, Sierra, Siskiyou, Tulare, and Ventura (CCH, 2019). It may be native to some of these counties, although it is likely introduced in the north.

**California Interceptions:** Yellowspine thistle was intercepted in hay from Oregon at a border station in 2008 (CDFA, 2019).

The risk yellowspine thistle would pose to California is evaluated below.

---

## Consequences of Introduction:

- 1) **Climate/Host Interaction:** This species is present over a broad geographic area, including northeastern and southern California (Calflora, 2019). Therefore, yellowspine thistle receives a **Medium (2)** in this category.

Evaluate if the pest would have suitable hosts and climate to establish in California.

**Score: 2**

- Low (1) Not likely to establish in California; or likely to establish in very limited areas.
- **Medium (2) may be able to establish in a larger but limited part of California.**
- High (3) likely to establish a widespread distribution in California.

- 2) **Known Pest Host Range:** Risk is **High (3)** as weeds do not require any one host, but grow wherever ecological conditions are favorable.

Evaluate the host range of the pest.

**Score: 3**

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

- 3) **Pest Dispersal Potential:** *Cirsium* species produce a low to medium number of relatively large seeds that are dispersed by wind and possibly by birds as well. Although it sprouts from roots, it does not form large patches nor is it likely to be dispersed via root fragments. Yellowspine thistle receives a **Low (1)** in this category.

Evaluate the natural and artificial dispersal potential of the pest.

**Score: 1**

- **Low (1) does not have high reproductive or dispersal potential.**
- Medium (2) has either high reproductive or dispersal potential.
- High (3) has both high reproduction and dispersal potential.

- 4) **Economic Impact:** Thistles establish readily in disturbed areas and can resprout from the root system. Yellowspine thistle has very large, sharp spines that could injure livestock and people, and high densities of this weed could degrade the quality of land for grazing. Treatment of infested areas would increase production costs. Yellowspine thistle receives a **Medium (2)** in this category.

Evaluate the economic impact of the pest to California using the criteria below.

**Economic Impact: 2**

- A. The pest could lower crop yield.
  - B. The pest could lower crop value (includes increasing crop production costs).**
-

- C. The pest could trigger the loss of markets (includes quarantines).
- D. The pest could negatively change normal cultural practices.
- E. The pest can vector, or is vectored, by another pestiferous organism.
- F. The organism is injurious or poisonous to agriculturally important animals.**
- G. The organism can interfere with the delivery or supply of water for agricultural uses.

**Economic Impact Score: 2**

- Low (1) causes 0 or 1 of these impacts.
- **Medium (2) causes 2 of these impacts.**
- High (3) causes 3 or more of these impacts.

- 5) Environmental Impact:** Many non-native thistles are highly competitive and can rapidly invade open, disturbed areas. These invasive abilities are not shared by thistles native to North America. Nevertheless, small scale infestations in pastures, etc. could trigger herbicide treatments. Therefore, it receives a **Medium (2)** in this category.

**Environmental Impact: 2**

- A. The pest could have a significant environmental impact such as lowering biodiversity, disrupting natural communities, or changing ecosystem processes.
- B. The pest could directly affect threatened or endangered species.
- C. The pest could impact threatened or endangered species by disrupting critical habitats.
- D. The pest could trigger additional official or private treatment programs.**
- E. The pest significantly impacts cultural practices, home/urban gardening or ornamental plantings.

**Environmental Impact Score: 2**

- Low (1) causes none of the above to occur.
- **Medium (2) causes one of the above to occur.**
- High (3) causes two or more of the above to occur.

**Consequences of Introduction to California for yellowspine thistle: Medium (10)**

Add up the total score and include it here.

- Low = 5-8 points
- Medium = 9-12 points**
- High = 13-15 points

- 6) Post Entry Distribution and Survey Information:** Yellowspine thistle has a limited distribution in California, but it has been reported in 12 counties and is present in northern and southern California. It presumably could spread to a larger area. It receives a **Medium (-2)** in this category.
-

**Score: -2**

-Not established (0) Pest never detected in California or known only from incursions.

-Low (-1) Pest has a localized distribution in California or is established in one suitable climate/host area (region).

**-Medium (-2) Pest is widespread in California but not fully established in the endangered area, or pest established in two contiguous suitable climate/host areas.**

-High (-3) Pest has fully established in the endangered area, or pest is reported in more than two contiguous or non-contiguous suitable climate/host areas.

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

**Final Score:** *Score of Consequences of Introduction – Score of Post Entry Distribution and Survey Information = Low (8)*

**Uncertainty:**

There was very little data found regarding impacts attributed to this species. It was necessary to consider the impact of North American species in the genus *Cirsium*. The biology of *Cirsium ochrocentrum*, including its ability to invade areas and compete with other plants, may be significantly different from these *Cirsium* species and the potential impact of this species may have been under- or overestimated in this pest rating proposal. It is possible that this species is native to California, based on its long history in southern California and in Arizona.

**Conclusion and Rating Justification:**

Yellowspine thistle is native to the western United States and northern Mexico and it has been reported from locations that are spread fairly widely across California. Although this thistle may be causing economic and environmental damage, and it may spread further in the state, it is already well-established in several areas and official statewide control does not appear feasible. For these reasons, **the proposed rating for yellowspine thistle is C.**

**References:**

Calflora. 2019. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals. Accessed: October 8, 2019

[https://www.calflora.org/cgi-bin/species\\_query.cgi?where-calrecnum=2145](https://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=2145)

---

CDFA. 2019. Pest and damage record database. *Cirsium ochrocentrum*. Plant Health and Pest Prevention Services. CA Department of Food and Agriculture. Accessed October 8, 2019:

<https://pdr.cdfa.ca.gov/PDR/pdrmainmenu.aspx>

Consortium of California Herbaria (CCH). 2019. Data provided by the participants of the CCH. Regents of the University of California 2019. Accessed July 31, 2019:

<http://ucjeps.berkeley.edu/consortium/>

Keil, D.J. 2006. *Cirsium*. In: Flora of North America Editorial Committee, eds. 1993+ Flora of North America North of Mexico. 19+ vols. New York and Oxford. Vol. 19, 20 and 21, page 123.

[http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=250066387](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250066387)

Keil, D.J. 2012. *Cirsium ochrocentrum* var. *ochrocentrum*, in Jepson Flora Project (eds.) *Jepson eFlora*. Accessed October 8, 2019:

[http://ucjeps.berkeley.edu/eflora/eflora\\_display.php?tid=70931](http://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=70931)

NRCS. 2019. PLANTS database. U.S. Department of Agriculture. Accessed October 9, 2019:

<https://plants.sc.egov.usda.gov/core/profile?symbol=CIOC2>

SEINet. 2019. Arizona – New Mexico Chapter: SEINet Network. Accessed October 9, 2019:

<http://swbiodiversity.org/seinet/collections/index.php>

State of Iowa. 2018. Title VIII. Transportation. Chapter 317.1A Noxious weeds. December 7, 2018.

---

**Author:**

Kyle Beucke, 2800 Gateway Oaks Drive, Suite 200 Sacramento, CA 95833; 916-403-6741,  
plant.health[@]cdfa.ca.gov

**Responsible Party:**

Robert Price, Primary Botanist, California Department of Food and Agriculture, 3294 Meadowview Rd.,  
Sacramento, CA 95832. Phone: 916-738-6700, plant.health[@]cdfa.ca.gov.

---

**\*Comment Period: 11/21/2019 through 1/5/2019**

**\*NOTE:**

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

---

**Comment Format:**

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

**Example Comment:**

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

- ❖ Posted comments will not be able to be viewed immediately.
  - ❖ Comments may not be posted if they:
    - Contain inappropriate language which is not germane to the pest rating proposal;
    - Contains defamatory, false, inaccurate, abusive, obscene, pornographic, sexually oriented, threatening, racially offensive, discriminatory or illegal material;
-

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

Violates agency regulations prohibiting workplace violence, including threats.

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

---

**Proposed Pest Rating: C**

---