



Figure 1: *Senecio elegans* (purple ragwort). Photo by Dean Wm. Taylor (2002)

## California Pest Rating Proposal for

*Senecio elegans* L.: purple ragwort, red-purple ragwort, purple  
groundsel, wild cineraria

Family: Asteraceae tribe Senecioneae

Current Pest Rating: B

Proposed Pest Rating: B

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Comment Period: **09/14/2022 through 10/29/2022**

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### Initiating Event:

Purple ragwort has been previously rated “B” by the CDFA, but has not been reviewed under the current pest risk assessment system. A pest rating proposal is required to evaluate the current rating and status of purple ragwort in the state of California.

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## History & Status:

**Background:** Purple ragwort is an erect sticky-hairy annual herb with a prominent taproot, growing up to 60 or more centimeters in height. The leaves are pinnately divided, with the ultimate margin toothed or crenate. Up to 30 showy flower heads are borne in flat-topped clusters. Each flowering head bears 13-21 showy deep red to purple ray flowers and up to 100 or more disk flowers, and is subtended by an involucre of black-tipped phyllaries (Trock, 2012). The cylindrical, one-seeded achene fruits are hairy along the longitudinal ribs and approximately 2.5-3 mm in length. The pappus atop the fruit is made up of thin, whitish, minutely barbed bristles.

Purple ragwort is an attractive plant with showy flowers that has been cultivated as an ornamental, but has become naturalized in several areas of the world, particularly in Mediterranean climate zones similar to its native habitat in southern Africa (Barkley, 2006). The species is known from 8 to 9 localities in sand dunes along the coast of California. Most records indicate only a few plants were present, but the species has persisted for over 100 years along the coast of San Francisco and for multiple decades in several coastal counties from Humboldt County in northern California to San Luis Obispo County in south-central California (CCH, 2022). The species is known in Australia as a garden escape that is now relatively widely established as an environmental weed in coastal areas (Biosecurity Queensland, 2016).

**Worldwide Distribution:** Purple ragwort is native to the Cape region of South Africa. It has been cultivated as an ornamental and is reported as naturalized in Australia (Queensland, New South Wales, ACT, Victoria, Tasmania, South Australia, Western Australia, Northern Territories), and parts of New Zealand, Europe (Spain, Portugal, United Kingdom) and the Azores, and North America (coastal California) (Biosecurity Queensland, 2016; USDA/GRIN, 2022).

**Official Control:** Purple ragwort has previously been rated “B” as an environmental weed in California but has not to date been placed on the noxious weed list for California [3 CCR § 4500]. It is not listed as a noxious weed seed in the United States (USDA/AMS, 2022).

**California Distribution:** Purple ragwort was first documented as introduced in 1912 along the coast in San Francisco, California by the noted botanist Alice Eastwood. It has also been documented from vouchered collections from coastal dune habitats in Humboldt, Sonoma, San Mateo, Santa Cruz, Monterey, and San Luis Obispo Counties (CCH, 2022), and has been reported from one locality in San Diego County (Calflora, 2022).

**California Interceptions:** The species has not had documented interceptions from transport into California (CDFA PDR database, 2022).

The risk **purple ragwort** would pose to California is evaluated below.

## Consequences of Introduction:

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- 1) Climate/Host Interaction:** The plant has naturalized on coastal dunes in California. It is present in a number of coastal areas of Australia, but is noted as a plant of disturbed habitats (Government of South Australia, 2022). Therefore, purple ragwort 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:** The plant produces numerous seeds with pappus of long thin bristles that aid in wind dispersal of the seed units. The plant has also been spread into many parts of the world as a cultivated ornamental, and the seeds can be spread in soil or garden waste (Government of South Australia, 2022). However, its habitat specialization limits its spread. Purple ragwort receives a **Medium (2)** in this category.

Evaluate the natural and artificial dispersal potential of the pest.

**Score: 2**

- 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:** The plant is likely to have little effect on agriculture given its distribution on coastal dune sites. Plants of the genus *Senecio* are noted for containing pyrrolizidine alkaloids toxic to livestock (Fuller and McClintock, 1986), but are distasteful and tend to be avoided. Purple ragwort has not been specifically noted in terms of poisoning of livestock and is probably unlikely to be consumed by livestock in clinically significant amounts given the coastal dune distribution. The species receives a **Low (1)** in this category.

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

**Economic Impact: Low**

- A. The pest could lower crop yield.
  - B. The pest could lower crop value (includes increasing crop production costs).
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- 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: 1**

- **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:** The plant could outcompete natural dune vegetation given its high potential reproductive rate. Several federally listed species, including *Erysimum menziesii* (Menzies' wallflower) and *Layia carnosa* (beach layia) reside in the dunes invaded by this plant. Therefore, it receives a **High (3)** in this category.

**Environmental Impact: A, B, C**

- 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:**

- 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 purple ragwort: Medium (11)**

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:** It receives a **Low (-1)** in this category.

**Score: -1**

- 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**
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**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 = **Medium (10)***

**Uncertainty:**

Spread in California has been limited by habitat to date and the species has been considered uncommon in the state by DiTomaso and Healy (2007). However, the species has shown great ability to spread locally if neglected, as in Humboldt County. It is unclear to what degree the species has been cultivated as an ornamental in California.

**Conclusion and Rating Justification:**

This plant does not appear to be as invasive as many of the plants listed as noxious weeds on the CCR 4500 list. Nevertheless, coastal dune habitat in California is limited and is the home to many sensitive species. In Australia it has been noted as displacing native plant species, and this competition to threatened species may be significant. Therefore, we recommend a rating of B for this plant to encourage control and eradication efforts.

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### **Responsible Party:**

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**\*Comment Period: 09/14/2022 through 10/29/2022**

### **\*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](mailto:plant.health[@]cdfa.ca.gov).

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### **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.
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❖ 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.

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**Proposed Pest Rating: B**

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