Part IV. Plant Assessment Form

For use with "Criteria for Categorizing Invasive Non-Native Plants that Threaten Wildlands" by the California Exotic Pest Plant Council and the Southwest Vegetation Management Association

Electronic version, February 28, 2003

Table 1. Species and Evaluator Information

Species name (Latin binomial)**:**	Chrysanthemum coronarium L.
Synonyms:	Glebionis coronarium
Common names:	garland chrysanthemum, crown daisy
Evaluation date (mm/dd/yy)**:**	4/20/05
Evaluator #1 Name/Title:	Elizabeth Brusati, project manager
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Evaluator #2 Name/Title:	Joseph M. DiTomaso
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Section below for list committee use—please leave blank

List committee members:	Jake Sigg, Peter Warner, Bob Case, John Knapp, Elizabeth Brusati
Committee review date:	7/8/05
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	U	No Information
1.2	Impact on plant community	B	Observational
1.3	Impact on higher trophic levels	U	No Information
1.4	Impact on genetic integrity	D	Other Pub. Mat'l

Impact

Enter four characters from Q1.1-1.4 below:

UBUD

Using matrix, determine score and enter below:

B

2.1	Role of anthropogenic and natural disturbance	B (2 pts)	Observational
2.2	Local rate of spread with no management	A (3 pts)	Observational
2.3	Recent trend in total area infested within state	B (2 pts)	Observational
2.4	Innate reproductive potential Wksht A	B (2 pts)	Other Pub. Mat'l
2.5	Potential for human-caused dispersal	C (1 pt)	Other Pub. Mat'l
2.6	Potential for natural long-distance dispersal	C (1 pt)	Observational
2.7	Other regions invaded	C (1 pt)	Other Pub. Mat'l

Invasiveness

Enter the sum total of all points for Q2.1-2.7 below:

12

Use matrix to determine score and enter below:

B

3.1	Ecological amplitude/Range	A	Observational
3.2	Distribution/Peak frequency Wksht C	D	Observational

Distribution

Using matrix, determine score and enter below:

B

Plant Score

Using matrix, determine Overall Score and Alert Status from the three section scores and enter below:

Medium

No Alert

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes U No Information back
Identify ecosystem processes impacted: Unknown
Rationale: enter text here
Sources of information: enter text here
Question 1.2 Impact on plant community composition, structure, and interactions B Observational back
Identify type of impact or alteration: Forms dense stands that can outcompete native species in riparian and sand areas (1). Seeds sprout quickly after rain and can form dense stands even on dry south-facing hillsides. Can grow to five feet tall in rainy years and a solid mass can persist for years (2). Also has formed monocultures at Malibu Bluffs State Park (3). One of several species that shades out Monardella linoides ssp. viminea (Willowy monardella) and contribute to this endangered plant's decline (4).
Rationale: enter text here
Sources of information: 1. Cindy Burrascano, California Native Plant Society, San Diego. pers comm. 2. Carrie Schneider, California Native Plant Society, pers. comm. 3. Michael O'Brien, landscape architect, pers. comm. 4. Mike Kelly, California Native Plant Society, pers. comm.
Question 1.3 Impact on higher trophic levels U No Information back
Identify type of impact or alteration: One variety is edible and can be cooked like spinach (1). The dense stands it forms presumably has an impact on wildlife that would have used the more open areas that were present before invasion, but there's no specific information on this.
Rationale: enter text here
Sources of information: 1. Brenzel, K. N. 2001. Sunset Western Garden Book. Sunset Publishing Company, Menlo Park, CA.
Question 1.4 Impact on genetic integrity D Other Pub. Mat'l back
Identify impacts: None
Rationale: No native species of Chrysanthemum.
Sources of information: Hickman, J. C. (ed.) 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, CA

Question 2.1 Role of anthropogenic and natural disturbance in establishment B Observational back
Describe role of disturbance: Invades areas such as riparian habitat and dunes that receive natural disturbance. Does not invade undisturbed coastal sage scrub (1).
Rationale: enter text here
Sources of information: 1. Michael O'Brien, landscape architect, pers. comm.
Question 2.2 Local rate of spread with no management A Observational back
Describe rate of spread: Expanding in San Diego County (1). Expanding rapidly at Malibu Bluffs State Park (2) and at Lopez Canyon in San Diego County (3).
Rationale: enter text here
Sources of information: 1. Mike Kelly, California Native Plant Society, San Diego. pers. comm. 2. Michael O'Brien, landscape architect, pers. comm. 3. Cindy Burrascano, California Native Plant Society, San Diego. pers comm.
Question 2.3 Recent trend in total area infested within state B Observational back
Describe trend: no information
Rationale: enter text here
Sources of information: DiTomaso, observational
Question 2.4 Innate reproductive potential B Other Pub. Mat'l back
Describe key reproductive characteristics: Annual.
Rationale: enter text here
Sources of information: Hickman, J. C. (ed.) 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, CA
Question 2.5 Potential for human-caused dispersal B Other Pub. Mat'l back
Identify dispersal mechanisms: Common escaped ornamental (1). There's a story that it was originally spread by railroad workers to brighten up their ride (unknown if this is true) (2).

Rationale: enter text here
Sources of information: DiTomaso, J. and E. Healy. in prep. Weeds of California and Other Western States. 2. Cindy Burrascano, California Native Plant Society, San Diego. pers comm.
Question 2.6 Potential for natural long-distance dispersal C Observational back
Identify dispersal mechanisms: Possibly wind, birds, or storm water, but seeds do not have a distinct pappus facilitating wind dispersal so most seed likely fall to ground below parent plant.
Rationale: enter text here
Sources of information: DiTomaso, observational
Question 2.7 Other regions invaded C Other Pub. Mat'l back
Identify other regions: Native to southern Europe. Present in Oregon, Arizona, Alaska, som northeastern and southeastern states (1).
Rationale: enter text here
Sources of information: 1. USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
Question 3.1 Ecological amplitude/Range A Observational back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Present in coastal San Diego County from Mexico to Orange County. Invades riparian areas, grasslands, coastal bluffs, sand dunes, the edges of marshes, and disturbed areas (1). In many San Diego canyons (2). Highly invasive in many valley bottoms and stream sides in San Diego (3).
Rationale: enter text here
Sources of information: 1. Cindy Burrascano, California Native Plant Society, San Diego. pers comm. 2. Carrie Schneider, California Native Plant Society, pers. comm. 3. Mike Kelly, California Native Plant Society, pers. comm.
Question 3.2 Distribution/Peak frequency D Observational back
Describe distribution: Infrequent in state.
Rationale: enter text here

Sources of information: DiTomaso, observational.

Worksheet A

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Reaches reproductive maturity in 2 years or less	**Yes: 1 pt**
Dense infestations produce >1,000 viable seed per square meter	**Yes: 2 pts**
Populations of this species produce seeds every year.	**Yes: 1 pt**
Seed production sustained over 3 or more months within a population annually	**No: 0 pt**
Seeds remain viable in soil for three or more years	**Unknown: 0 pts**
Viable seed produced with *both* self-pollination and cross-pollination	**Unknown: 0 pts**
Has quickly spreading vegetative structures (rhizomes, roots, etc.) that may root at nodes	**No: 0 pt**
Fragments easily and fragments can become established elsewhere	**No: 0 pts**
Resprouts readily when cut, grazed, or burned	**No: 0 pt**
	4 pts **2 unknowns**
	B (4-5 pts)

Note any related traits: enter text here

Worksheet C - California Ecological Types

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(*sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
Marine Systems	marine systems	**score**
Freshwater and Estuarine Aquatic Systems	lakes, ponds, reservoirs	**score**
	rivers, streams, canals	**score**
	estuaries	**score**
Dunes	coastal	**D. presen**
	desert	**score**
	interior	**score**
Scrub and Chaparral	coastal bluff scrub	**D. presen**
	coastal scrub	**score**
	Sonoran desert scrub	**score**
	Mojavean desert scrub (incl. Joshua tree woodland)	**score**
	Great Basin scrub	**score**
	chenopod scrub	**score**
	montane dwarf scrub	**score**
	Upper Sonoran subshrub scrub	**score**
	chaparral	**score**
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	**D. presen**
	valley and foothill grassland	**score**
	Great Basin grassland	**score**
	vernal pool	**score**
	meadow and seep	**score**
	alkali playa	**score**
	pebble plain	**score**
Bog and Marsh	bog and fen	**score**
	marsh and swamp	**D. presen**
Riparian and Bottomland	riparian forest	**score**
	riparian woodland	**score**
	riparian scrub (incl.desert washes)	**D. presen**
Woodland	cismontane woodland	**score**
	piñon and juniper woodland	**score**
	Sonoran thorn woodland	**score**
Forest	broadleaved upland forest	**score**
	North Coast coniferous forest	**score**
	closed cone coniferous forest	**score**
	lower montane coniferous forest	**score**
	upper montane coniferous forest	**score**
	subalpine coniferous forest	**score**
Alpine Habitats	alpine boulder and rock field	**score**
	alpine dwarf scrub	**score**

* A. means >50% of type occurrences are invaded; B means >20% to 50%; C. means >5% to 20%; D. means present but ≤5%; U. means unknown (unable to estimate percentage of occurrences invaded).