

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):	Anthemis cotula L.
Synonyms:	Maruta cotula, Anthemis foetida, Maruta foetida
Common names:	Mayweed, dog fennel, Mayweed chamomile, hogs fennel, stinking chamomile, stinkweed, white stinkweed
Evaluation date (mm/dd/yy):	2/28/05
Evaluator #1 Name/Title:	Elizabeth Brusati, project manager
Affiliation:	California Invasive Plant Council
Phone numbers:	510-843-3902
Email address:	edbrusati@cal-ipc.org
Address:	1442A Walnut St. #462, Berkeley, CA 94709
Evaluator #2 Name/Title:	Joseph DiTomaso
Affiliation:	University of California-Davis
Phone numbers:	530-754-8715
Email address:	jmditomaso@ucdavis.edu
Address:	Dept. Plant Sci., Mail Stop 4, Davis, CA 95616

Section below for list committee use—please leave blank

List committee members:	Carla Bossard, John Randall, Carri Pirosko, Dan Gluesenkamp, Gina Skurka, Brianna Richardson
Committee review date:	7/8/05
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

enter text here

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	U	No Information
1.2	Impact on plant community	D	Rev'd, Sci. Pub'n
1.3	Impact on higher trophic levels	U	No Information
1.4	Impact on genetic integrity	D	Other Pub. Mat'l

<p>Impact</p> <p><i>Enter four characters from Q1.1-1.4 below:</i></p> <p>UDUD</p> <p><i>Using matrix, determine score and enter below:</i></p> <p>C</p>

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

<p>Invasiveness</p> <p><i>Enter the sum total of all points for Q2.1-2.7 below:</i></p> <p>11</p> <p><i>Use matrix to determine score and enter below:</i></p> <p>B</p>
--

<p>Plant Score</p> <p><i>Using matrix, determine Overall Score and Alert Status from the three section scores and enter below:</i></p> <p>Not listed</p> <p>No Alert</p>

3.1	Ecological amplitude/Range	A	Other Pub. Mat'l
3.2	Distribution/Peak frequency Wksht C	D	Observational

<p>Distribution</p> <p><i>Using matrix, determine score and enter below:</i></p> <p>B</p>

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes	U No Information back
Identify ecosystem processes impacted: No information but probably no effect.	
Rationale: enter text here	
Sources of information: enter text here	
Question 1.2 Impact on plant community composition, structure, and interactions	D Rev'd, Sci. Pub'n back
Identify type of impact or alteration: Suspected of being allelopathic but no known impacts in wildland areas.	
Rationale: Leaf tissue mixed in soil reduced alfalfa and ryegrass development (1, 2).	
Sources of information: 1. Smith, A. E. 1987. Increasing importance and control of mayweed chamomile in forage crops. Agronomy Journal. 79(4): 657-660. Smith, A. E. 1990. Potential allelopathic influence of certain pasture weeds. Crop Protection. 9(6): 410-414. DiTomaso, observational.	
Question 1.3 Impact on higher trophic levels	U No Information back
Identify type of impact or alteration: Caused purple blisters to John Randall. No other information.	
Rationale: enter text here	
Sources of information: enter text here	
Question 1.4 Impact on genetic integrity	D Other Pub. Mat'l back
Identify impacts: None.	
Rationale: No native Anthemis species.	
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	C Rev'd, Sci. Pub'n back
Describe role of disturbance: Inhabits disturbed places (1, 2). Does not generally establish in undisturbed sites.	
Rationale:	

Sources of information: 1. DiTomaso and Healy in prep. 2. Erneberg, M. 1999. Effects of herbivory and competition on an introduced plant in decline. <i>Oecologia</i> 118(2): 203-209.	
Question 2.2 Local rate of spread with no management	B Observational back
Describe rate of spread: Plant is primarily an agricultural weed and appears to spread only slowly in wildland areas.	
Rationale: enter text here	
Sources of information: DiTomaso, Observational.	
Question 2.3 Recent trend in total area infested within state	C Observational back
Describe trend: Populations seems to be static in their spread in wildlands statewide.	
Rationale: enter text here	
Sources of information: DiTomaso, observational	
Question 2.4 Innate reproductive potential	A Rev'd, Sci. Pub'n back
Describe key reproductive characteristics: Annual.. Reproduces by seed. Strongly self-incompatible (1). In California, most seeds germinate after the first fall rains or in spring. Seeds can survive as long as 25 years in field conditions. Scarification enhances germination. Germination does not require light. Can germinate nearly year-round under favorable conditions (2)	
Rationale: enter text here	
Sources of information: 1. Kay, Q. O. N. 1958. Biological flora of the British Isles: anthemis cotula L." <i>Journal of Ecology</i> 59(2): 623-636 2. DiTomaso and Healy in prep.	
Question 2.5 Potential for human-caused dispersal	B Other Pub. Mat'l back
Identify dispersal mechanisms: Can be dispersed by human activities and as a contaminant in feed and seed.	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep.	

Question 2.6 Potential for natural long-distance dispersal	C Other Pub. Mat'l back
Identify dispersal mechanisms: Can be dispersed by water or in mud, but long distance transport is probably very rare.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. in prep.	
Question 2.7 Other regions invaded	C Other Pub. Mat'l back
Identify other regions: Native to Europe. Present in all contiguous states. State-listed noxious weed in Colorado and a secondary noxious weed in Tasmania, Australia (1).	
Rationale: Scoring as C because already widespread in California.	
Sources of information: 1. DiTomaso and Healy. in prep. Weeds of California and Other Western States.	
Question 3.1 Ecological amplitude/Range	A Other Pub. Mat'l back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Inhabits disturbed places, fields, roadsides, coastal dunes, chaparral, woodlands, waste places. Present in northwestern California, central-western region, central Sierra Nevada, Central Valley, South Coast, Transverse Ranges, Peninsular Ranges, to 2000m (1). In England, often associated with heavy clay soils (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep. 2. Kay 1958	
Question 3.2 Distribution/Peak frequency	D Observational back
Describe distribution: enter text here	
Rationale: enter text here	
Sources of information: DiTomaso, observational.	

Worksheet A[back](#)

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	Yes: 2 pts
Viable seed produced with <i>both</i> self-pollination and cross-pollination	No: 0 pt
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
	6 pts Total Unknowns
	A (6+ pts)
Note any related traits: enter text here	

Worksheet C - California Ecological Types

[back](#)

(*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	score
	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	D. presen
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	D. presen
	valley and foothill grassland	D. presen
	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	score
Riparian and Bottomland	riparian forest	score
	riparian woodland	score
	riparian scrub (incl. desert washes)	score
Woodland	cismontane woodland	D. presen
	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).