

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):	Aira praecox L.
Synonyms:	
Common names:	yellow hairgrass, early hairgrass
Evaluation date (mm/dd/yy):	1/24/05
Evaluator #1 Name/Title:	Elizabeth Brusati, project manager
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Evaluator #2 Name/Title:	enter text here
Affiliation:	enter text here
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Address:	enter text here

Section below for list committee use—please leave blank

List committee members:	Joe DiTomaso, Jake Sigg, Cyndi Roye, Peter Warner
Committee review date:	6/30/05
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

There is little information available on *A. praecox* or its congener *A. caryophyllea*. I applied some information from the *A. caryophyllea* PAF to this species.

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	D	Observational
1.2	Impact on plant community	C	Rev'd, Sci. Pub'n
1.3	Impact on higher trophic levels	D	Other Pub. Mat'l
1.4	Impact on genetic integrity	D	Rev'd, Sci. Pub'n

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

2.1	Role of anthropogenic and natural disturbance	∩ (1 pt)	Other Pub. Mat'l
2.2	Local rate of spread with no management	∩ (1 pt)	Observational
2.3	Recent trend in total area infested within state	∩ (1 pt)	Observational
2.4	Innate reproductive potential Wksht A	∩ (2 pts)	Rev'd, Sci. Pub'n
2.5	Potential for human-caused dispersal	∩ (1 pt)	Observational
2.6	Potential for natural long-distance dispersal	∩ (1 pt)	Observational
2.7	Other regions invaded	∩ (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>8</p> <p><i>Use matrix to determine score and enter below:</i></p> <p>C</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	B	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>C</p>

Table 3. Documentation

<p>Question 1.1 Impact on abiotic ecosystem processes</p>	<p>D Observational back</p>
<p>Identify ecosystem processes impacted: No information available. However, <i>A. caryophyllea</i> populations do not get extensive enough to have a major impact on abiotic processes, including moisture use and fire regimes.</p>	
<p>Rationale: enter text here</p>	
<p>Sources of information: Observational - Joe DiTomaso, Weed Science Program, UC Davis. ditomaso@vegmail.ucdavis.edu</p>	
<p>Question 1.2 Impact on plant community composition, structure, and interactions</p>	<p>C Rev'd, Sci. Pub'n back</p>
<p>Identify type of impact or alteration: No information available on <i>A. praecox</i>.. However, <i>Aira caryophyllea</i> is a very common grass in California grasslands. It does not generally form extensive high density populations over an expansive area and does not compete well in areas with a thick thatch or litter layer. Thus, it appears to have only a minor impact on plant community composition.</p>	
<p>Rationale: enter text here</p>	
<p>Sources of information: Bartolome, J.W. 1979. Germination and seedling establishment in California annual grassland. <i>Journal of Ecology</i> 67:273-281; Observational- J.M. DiTomaso 2004.</p>	
<p>Question 1.3 Impact on higher trophic levels</p>	<p>D Other Pub. Mat'l back</p>
<p>Identify type of impact or alteration: Unlikely that <i>Aira</i> causes any impact or alteration in higher trophic levels. Does not have much forage value, but is not common enough to be an important forage species.</p>	
<p>Rationale: enter text here</p>	
<p>Sources of information: Robbins, W.W. , M.K. Bellue and W.S. Ball. 1970. <i>Weeds of California</i>. Department of Agriculture, State of California, Sacramento Observational- J.M. DiTomaso 2004.</p>	
<p>Question 1.4 Impact on genetic integrity</p>	<p>D Rev'd, Sci. Pub'n back</p>
<p>Identify impacts: none</p>	
<p>Rationale: no native <i>Aira</i> spp.</p>	
<p>Sources of information: Hickman, J. C. (ed.) 1993. <i>The Jepson Manual, Higher Plants of California</i>. University of California Press. Berkeley, CA enter text here</p>	

Question 2.1 Role of anthropogenic and natural disturbance in establishment	C Other Pub. Mat'l back
Describe role of disturbance: <i>A. caryophylla</i> is found in disturbed grasslands, generally with little litter layer. Assume <i>A. praecox</i> is similar.	
Rationale: enter text here	
Sources of information: Hickman, J.C. (ed.). 1993. The Jepson Manual. UC Press, Berkeley;	
Bartolome, J.W. 1979. Germination and seedling establishment in California annual grassland. <i>Journal of Ecology</i> 67:273-281	
Question 2.2 Local rate of spread with no management	C Observational back
Describe rate of spread: Very uncommon in distribution in California. Does not seem to spread much.	
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: Does not appear very common.	
Rationale: enter text here	
Sources of information: DiTomaso, observational.	
Question 2.4 Innate reproductive potential	B Rev'd, Sci. Pub'n back
Describe key reproductive characteristics: Winter annual. <i>A. caryophylla</i> produces numerous seeds (1). <i>A. praecox</i> produces both somatic and vegetative growth after inflorescence emergence (2). Only 2.9% of seeds survived after two years (3).	
Rationale: enter text here	
Sources of information: 1. Bartolome, J.W. 1979. Germination and seedling establishment in California annual grassland. <i>Journal of Ecology</i> 67:273-281	
2. Rozijn, N. A. M. G. and D. C. Van Der Werf. 1986. Effect of drought during different stages in the life-cycle on the growth and biomass allocation of two <i>Aira</i> species. <i>Journal of Ecology</i> 74(2): 507-524.	
2. Roberts, H.A. 1986. Persistence of seeds of some grass species in cultivated soil. <i>Grass and Forage Science</i> . 41:273-276.	

http://biodiversity.uno.edu/delta/pooid/www/descr037.htm	
Question 2.5 Potential for human-caused dispersal	C Observational back
Identify dispersal mechanisms: Little potential for human-caused movement (based on <i>A. caryophylla</i>).	
Rationale: enter text here	
Sources of information: J. DiTomaso - observational	
Question 2.6 Potential for natural long-distance dispersal	C Observational back
Identify dispersal mechanisms: Very little long distance movement via natural means. Seeds simply fall to the soil (based on <i>A. caryophylla</i>).	
Rationale: enter text here	
Sources of information: J. DiTomaso - observational	
Question 2.7 Other regions invaded	C Other Pub. Mat'l back
Identify other regions: Native to Europe. Present in Oregon, Washington, and along the East Coast from South Carolina to New York. No information on habitats invaded in those areas.	
Rationale: enter text here	
Sources of information: USDA, NRCS. 2004. 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	B Other Pub. Mat'l back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Present in Marin, Sonoma, and Mendocino counties (1). Inhabits sandy soils and open sites (2). <i>A. praecox</i> is better adapted to drought than <i>A. caryophylla</i> and can probably occur in grasslands and drier sites within dune habitats (3).	
Rationale: enter text here	
Sources of information: 1. USDA, NRCS. 2004. The PLANTS Database, Version 3.5 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA	
2. DiTomaso, J., and E. Healy. in prep. Weeds of California and Other Western States	
3. Rozijn, N. A. M. G. and D. C. Van Der Werf. 1986. Effect of drought during different stages in the life-cycle	

on the growth and biomass allocation of two Aira species. Journal of Ecology 74(2):507-524.	
Question 3.2 Distribution/Peak frequency	D Observational back
Describe distribution: Based on the USDA PLANTS information, it's present in only three counties. Need to find more data. Herbarium records show few collections.	
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	No: 0 pts
Viable seed produced with <i>both</i> 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 1 unknown
	B (4-5 pts)
Note any related traits: Basing score in information from <i>A. caryophyllea</i>	

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. present
	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	score
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	score
	valley and foothill grassland	D. present
	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	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).