

# 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**

<b>Species name (Latin binomial):</b>	Cynosurus echinatus L.
<b>Synonyms:</b>	
<b>Common names:</b>	annual dogtail, bristly dogtail grass, hedgehog dogtail, hedgehoggy
<b>Evaluation date (mm/dd/yy):</b>	3/21/05
<b>Evaluator #1 Name/Title:</b>	Elizabeth Brusati, project manager
<b>Affiliation:</b>	California Invasive Plant Council
<b>Phone numbers:</b>	510-843-3902
<b>Email address:</b>	edbrusati@cal-ipc.org
<b>Address:</b>	1442A Walnut St. #462, Berkeley, CA 94709
<b>Evaluator #2 Name/Title:</b>	Joseph M. DiTomaso
<b>Affiliation:</b>	University of California, Davis
<b>Phone numbers:</b>	530-754-8715
<b>Email address:</b>	jmditomaso@ucdavis.edu
<b>Address:</b>	Dept. Plant Sci., Mail Stop 4, Davis, CA 95616

Section below for list committee use—please leave blank

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

<p><b>General comments on this assessment:</b> enter text here</p>
--

**Table 2. Criteria, Section, and Overall Scores**

<a href="#">1.1</a>	Impact on abiotic ecosystem processes	<b>B</b>	<b>Observational</b>
<a href="#">1.2</a>	Impact on plant community	<b>B</b>	<b>Observational</b>
<a href="#">1.3</a>	Impact on higher trophic levels	<b>B</b>	<b>Observational</b>
<a href="#">1.4</a>	Impact on genetic integrity	<b>D</b>	<b>Rev'd, Sci. Pub'n</b>

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

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

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

<p><b>Plant Score</b></p> <p><i>Using matrix, determine Overall Score and Alert Status from the three section scores and enter below:</i></p> <p><b>Medium</b></p> <p><b>No Alert</b></p>
---

<a href="#">3.1</a>	Ecological amplitude/Range	<b>A</b>	<b>Other Pub. Mat'l</b>
<a href="#">3.2</a>	Distribution/Peak frequency <a href="#">Wksht C</a>	<b>A</b>	<b>Observational</b>

<p><b>Distribution</b></p> <p><i>Using matrix, determine score and enter below:</i></p> <p><b>A</b></p>
---

**Table 3. Documentation**

<b>Question 1.1</b> Impact on abiotic ecosystem processes	B Observational <a href="#">back</a>
Identify ecosystem processes impacted: Invasion of annual grasses may have changed the amount of soil moisture available during the summer. No information on this species specifically. Can also change the fire frequency in grasslands.	
Rationale: enter text here	
Sources of information: DiTomaso, observational.	
<b>Question 1.2</b> Impact on plant community composition, structure, and interactions	B Observational <a href="#">back</a>
Identify type of impact or alteration: Part of the invasive annuals collective (Geranium spp., Torilis spp., et al.) that displaces many native understory species (1).  Here and there in our Bald Hills prairies (HUM), can form monocultures. Have seen it worse in Southern Oregon, same habitat (QUGA4 woodlands), they even have a white oak/hedgehog dogtail association in their forest mapping (2).	
Rationale: enter text here	
Sources of information: 1. Personal communication, Peter Warner, California State Parks, Mendocino County 2. Personal communication, Andrea Williams, Redwood State and National Parks.	
<b>Question 1.3</b> Impact on higher trophic levels	B Observational <a href="#">back</a>
Identify type of impact or alteration: Long awns on inflorescence make plants unpalatable later in year. Not good quality or quantity forage for wildlife.	
Rationale: enter text here	
Sources of information: DiTomaso, observational	
<b>Question 1.4</b> Impact on genetic integrity	D Other Pub. Mat'l <a href="#">back</a>
Identify impacts: None	
Rationale: No native Cynosurus in California.	
Sources of information: Hickman, J. C. (ed.) 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, CA enter text here	

<b>Question 2.1</b> Role of anthropogenic and natural disturbance in establishment	B Other Pub. Mat'l <a href="#">back</a>
Describe role of disturbance: A pioneer species. In one study in oak woodlands, was found in sites heavily disturbed by cattle (1). Inhabits disturbed places (2).	
Rationale: enter text here	
Sources of information: 1. Jimerson, T. M., and S. K. Carothers. 2002. Northwest California Oak Woodlands: Environment, Species Composition, and Ecological Status. USDA Forest Service Gen. Tech. Rep. PSW-GTR-184	
2. DiTomaso, J., and E. Healy, in prep. Weeds of California and Other Western States.	
<b>Question 2.2</b> Local rate of spread with no management	B Observational <a href="#">back</a>
Describe rate of spread: Would spread at a slow rate in an uninfested area.	
Rationale: enter text here	
Sources of information: Personal communication, Peter Warner, California State Parks, Mendocino County.	
<b>Question 2.3</b> Recent trend in total area infested within state	C Observational <a href="#">back</a>
Describe trend: It's already widespread (see 3.1 and 3.2), so probably stable at this point.	
Rationale: enter text here	
Sources of information: Personal communication, Peter Warner, California State Parks, Mendocino County.	
<b>Question 2.4</b> Innate reproductive potential	B Other Pub. Mat'l <a href="#">back</a>
Describe key reproductive characteristics: Annual grass. Reproduces by seed. A persistent seedbank does not appear to develop (1). In an oak woodland, few seeds survived into the second year, and most of those were seedlings rather than dormant seed (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep	
2. Clark, D. L. and M. V. Wilson 2003. Post-dispersal seed fates of four prairie species. American Journal of Botany 90(5): 730-735..	
<b>Question 2.5</b> Potential for human-caused dispersal	C Observational <a href="#">back</a>
Identify dispersal mechanisms: Possibly some movement in hayfields, but this is not a common weed in areas with hay production.	

Rationale: enter text here	
Sources of information: DiTomaso, observational.	
<b>Question 2.6</b> Potential for natural long-distance dispersal	B Other Pub. Mat'l <a href="#">back</a>
Identify dispersal mechanisms: Awne d seeds facilitate long distance transport by animals, but most seed probably drop directly beneath parent plant. Fertile florets fall near the parent plant and probably disperse to greater distances with water, mud, and by clinging to animals, vehicle tires, and human shoes and clothing. A persistent seedbank does not appear to develop.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. 2006. Weeds of California. UC DANR Publ. #3488.	
<b>Question 2.7</b> Other regions invaded	C Other Pub. Mat'l <a href="#">back</a>
Identify other regions: Native to Europe. One of the most invasive species of Oregon oak woodlands in British Columbia. Also occurs in Oregon, Washington, many eastern and southern states, and a few south-central states.	
Rationale: Scoring as C because already present in many habitats in California.	
Sources of information: 1. DiTomaso and Healy in prep.	
<b>Question 3.1</b> Ecological amplitude/Range	A Other Pub. Mat'l <a href="#">back</a>
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Present in northwestern region, central-western region, Sierra Nevada foothills, Sacramento Valley (Sutter Buttes), western Transverse Ranges, and possibly south coast, to 1000m. Inhabits grassland, chaparral, oak woodland, summer dry pasture, coastal bluffs and terraces, riverbanks, and other disturbed places (1). Very common along the coast, and even more so inland. A major understory component in oak woodlands (so is somewhat shade-tolerant), and in almost all grasslands in the N. Coast Ranges and along the coast (2). Roadsides, fields, grassland, chaparral, oak woodland, summer dry pasture, coastal bluffs and terraces, riverbanks, other disturbed places.	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep 2. Personal communication, Peter Warner, California State Parks, Mendocino County.	
<b>Question 3.2</b> Distribution/Peak frequency	A Observational <a href="#">back</a>
Describe distribution: Spotty occurrence in oak woodlands and annual rangelands in the El Dorado county area (<1% infested). Not spreading (1). However, is a major component of grasslands and oak woodlands on the	

north coast.

Rationale: enter text here

Sources of information: 1. Personal communication, Wendy West, UC Cooperative Extension, El Dorado county.

**Worksheet A**[back](#)

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

## Worksheet C - California Ecological Types

[back](#)

(*sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
<b>Marine Systems</b>	marine systems	score
<b>Freshwater and Estuarine Aquatic Systems</b>	lakes, ponds, reservoirs	score
	rivers, streams, canals	score
	estuaries	score
<b>Dunes</b>	coastal	score
	desert	score
	interior	score
<b>Scrub and Chaparral</b>	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	D. presen
<b>Grasslands, Vernal Pools, Meadows, and other Herb Communities</b>	coastal prairie	A. >50%
	valley and foothill grassland	D. presen
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	score
	alkali playa	score
	pebble plain	score
<b>Bog and Marsh</b>	bog and fen	score
	marsh and swamp	score
<b>Riparian and Bottomland</b>	riparian forest	score
	riparian woodland	D. presen
	riparian scrub (incl. desert washes)	score
<b>Woodland</b>	cismontane woodland	C. 5-20%
	piñon and juniper woodland	score
	Sonoran thorn woodland	score
<b>Forest</b>	broadleaved upland forest	score
	North Coast coniferous forest	D. presen
	closed cone coniferous forest	D. presen
	lower montane coniferous forest	D. presen
	upper montane coniferous forest	score
	subalpine coniferous forest	score
<b>Alpine Habitats</b>	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).