

# 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>	Cynoglossum officinale L. Bien.
<b>Synonyms:</b>	none
<b>Common names:</b>	beggar's-lice, common houndstongue, dog bur, dog's tongue, glovewort, gypsyflower, sheelice, sticktight, woolmat
<b>Evaluation date (mm/dd/yy):</b>	2/3/05
<b>Evaluator #1 Name/Title:</b>	Elizabeth Brusati, project manager
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<b>Evaluator #2 Name/Title:</b>	Joseph DiTomaso
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Section below for list committee use—please leave blank

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

**General comments on this assessment:**

enter text here

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

<a href="#">1.1</a>	Impact on abiotic ecosystem processes	<b>U</b>	<b>No Information</b>
<a href="#">1.2</a>	Impact on plant community	<b>B</b>	<b>Other Pub. Mat'l</b>
<a href="#">1.3</a>	Impact on higher trophic levels	<b>B</b>	<b>Rev'd, Sci. Pub'n</b>
<a href="#">1.4</a>	Impact on genetic integrity	<b>U</b>	<b>No Information</b>

**Impact**

*Enter four characters from Q1.1-1.4 below:*

**UBBU**

*Using matrix, determine score and enter below:*

**B**

<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>A (3 pts)</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>A (3 pts)</b>	<b>Rev'd, Sci. Pub'n</b>
<a href="#">2.6</a>	Potential for natural long-distance dispersal	<b>B (2 pts)</b>	<b>Rev'd, Sci. Pub'n</b>
<a href="#">2.7</a>	Other regions invaded	<b>C (1 pt)</b>	<b>Other Pub. Mat'l</b>

**Invasiveness**

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

**15**

*Use matrix to 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**

<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>C</b>	<b>Observational</b>

**Distribution**

*Using matrix, determine score and enter below:*

**B**

**Table 3. Documentation**

<b>Question 1.1</b> Impact on abiotic ecosystem processes	U No Information <a href="#">back</a>
Identify ecosystem processes impacted: no information	
Rationale: enter text here	
Sources of information: enter text here	
<b>Question 1.2</b> Impact on plant community composition, structure, and interactions	B Other Pub. Mat'l <a href="#">back</a>
Identify type of impact or alteration: Forms dense stands. Allelopathic.	
Rationale: Extracts of hound's-tongue inhibited seed germination and root elongation of wheatgrass (1).	
Sources of information: 1. Li, S., Q. Dai, M. K. Upadhaya, and B. Adomas. 2002. Influence of hound's-tongue and spotted knapweed leaf leachates on seed germination and seedling growth of crested wheatgrass. Weed Science Society of America abstracts. 42:23	
<b>Question 1.3</b> Impact on higher trophic levels	B Rev'd, Sci. Pub'n <a href="#">back</a>
Identify type of impact or alteration: Contains toxic pyrrolizidine alkaloids, heliosupine, and acetylheliosupine (1). All animals are susceptible, including wildlife.	
Rationale: Poisoning usually occurs when dry plants are mixed with hay and fed to cattle, causing diarrhoea, and nervous problems. No information on impacts on wildlife (1).	
Sources of information: Upadhaya, M. K., H. R. Tilsner, and M. D. Pitt. 1988. The biology of Canadian weeds. 87. <i>Cynoglossum officinale</i> L. Canadian Journal of Plant Science. 68:763-774	
<b>Question 1.4</b> Impact on genetic integrity	U No Information <a href="#">back</a>
Identify impacts: No information on hybridization but there are two native <i>Cynoglossum</i> in California and native <i>C. occidentale</i> overlaps with <i>C. officinale</i> .	
Rationale: enter text here	
Sources of information: 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: Inhabits disturbed places. See question 3.1	
Rationale: enter text here	

Sources of information: DiTomaso and Healy in prep.	
<b>Question 2.2</b> Local rate of spread with no management	B Observational <a href="#">back</a>
Describe rate of spread: Can spread fairly rapidly in forested areas of Northern California.	
Rationale: enter text here	
Sources of information: DiTomaso, observational.	
<b>Question 2.3</b> Recent trend in total area infested within state	A Observational <a href="#">back</a>
Describe trend: Appears to be spreading in past 10 years, particularly in the northeastern portion of the state.	
Rationale: enter text here	
Sources of information: Joe DiTomaso, UC Davis, observational Carri Piroosko, California Dept. of Food and Agriculture, pers.obs. .	
<b>Question 2.4</b> Innate reproductive potential	B Other Pub. Mat'l <a href="#">back</a>
Describe key reproductive characteristics: Biennial or short-lived perennial. Flowers in second or third year. Forms a rosette. Reproduces by seed only. Seed production is by autogamy and no outcrossing has been reported. Estimates of seed production range from 50 to >2000/plant. Does not produce a large, persistent bank of buried seeds (1, 2). In England, could produce 2400 seeds/plant (2).	
Rationale: enter text here	
Sources of information: 1. Upadhyaya et al. 1988 2. Boorman, L. A., and R. M. Fuller. 1984. The comparative ecology of two sand dune biennials: <i>Lactuca virosa</i> L. and <i>Cynoglossum officinale</i> L. <i>New Phytologist</i> . 69:609-629	
<b>Question 2.5</b> Potential for human-caused dispersal	B Rev'd, Sci. Pub'n <a href="#">back</a>
Identify dispersal mechanisms: Cattle can disperse seeds on rangelands (1).	
Rationale: More burrs were lost from plants in grazed pastures than ungrazed. There was a positive, linear relationship between the number of burrs on a cow's face and the burr stalks/ha in a paddock (1).	
Sources of information: 1. DeClerck-Floate, R. 1997. Cattle as dispersers of hound's-tongue on rangeland in	

southeastern British Columbia. Journal of Range Management. 50:239-243. Carri Pirosko, California Dept. of Food and Agriculture, pers.obs.	
<b>Question 2.6</b> Potential for natural long-distance dispersal	B Rev'd, Sci. Pub'n <a href="#">back</a>
Identify dispersal mechanisms: Can disperse slowly over time by attaching to animal wool, hair, and fur. Specific gravity of seeds may be too high for them to float in water for long periods, so dispersal by water is unlikely (1).	
Rationale: enter text here	
Sources of information: 1. Upadhyaya et al. 1988	
<b>Question 2.7</b> Other regions invaded	C Other Pub. Mat'l <a href="#">back</a>
Identify other regions: Native to Eurasia. Present in most contiguous U.S. states except some southern states (1). In Yellowstone National Park, was associated with closed canopies, suggesting it prefers or at least tolerates shade (2). Occurs in all provinces of Canada. In British Columbia, occurs in Interior Douglas Fir, and ponderosa pine-bunchgrass zones (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep 2. Upadhyaya et al. 1988	
<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: Inhabits open disturbed, often moist places, roadsides, fields, pastures, rangeland, open woodland, forests, sand dunes, waste places, abandoned cropland, ditch and canal banks. Often grows on bare soil that is sandy or gravelly. Present in Cascade Range, mostly 800-1525m, possibly higher (1). USDA database lists it in Shasta and Plumas counties (2).	
Rationale: 1. DiTomaso, J. and E. Healy. Weeds of California and Other Western States. in prep. 2. USDA, NRCS. 2004. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	
Sources of information: enter text here	
<b>Question 3.2</b> Distribution/Peak frequency	D Observational <a href="#">back</a>
Describe distribution: Not common at this time, but is expanding range.	
Rationale: enter text here	

Sources of information: DiTomaso, observational.

**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>No: 0 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>Yes: 2 pts</b>
Viable seed produced with <i>both</i> self-pollination and cross-pollination	<b>No: 0 pt</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      Total Unknowns</b>
	<b>B (4-5 pts)</b>
<b>Note any related traits:</b> enter text here	

## Worksheet C - California Ecological Types

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(*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	score
	coastal scrub	score
	Sonoran desert scrub	score
	Mojavean desert scrub (incl. Joshua tree woodland)	score
	Great Basin scrub	D. presen
	chenopod scrub	score
	montane dwarf scrub	score
	Upper Sonoran subshrub scrub	score
	chaparral	score
<b>Grasslands, Vernal Pools, Meadows, and other Herb Communities</b>	coastal prairie	score
	valley and foothill grassland	D. presen
	Great Basin grassland	D. presen
	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	score
	riparian scrub (incl. desert washes)	score
<b>Woodland</b>	cismontane woodland	score
	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	D. presen
	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).