

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

Table 1. Species and Evaluator Information

Species name (Latin binomial):	<i>Digitalis purpurea</i>
Synonyms:	
Common names:	foxglove
Evaluation date (mm/dd/yy):	7/31/03
Evaluator #1 Name/Title:	Peter J. Warner
Affiliation:	California Dept. of Parks and Recreation; CalEPPC
Phone numbers:	(707) 937-9172; (707) 937-2278
Email address:	pwarn@mcn.org ; pwarn@parks.ca.gov
Address:	P. O. Box 603, Little River, CA 95456-0603
Evaluator #2 Name/Title:	enter text here
Affiliation:	enter text here
Phone numbers:	enter text here
Email address:	enter text here
Address:	enter text here

Section below for list committee use—please leave blank

List committee members:	Jake Sigg, Peter Warner, Joe DiTomaso, Doug Johnson, Brianna Richardson
Committee review date:	08/01/03
List date:	enter text here
Re-evaluation date(s):	enter text here

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	U	None
1.2	Impact on plant community	C	observational
1.3	Impact on higher trophic levels	C	Observational; published (inference)
1.4	Impact on genetic integrity	D	Published (inferred)

“Impact”

Enter four characters from Q1.1-1.4 below:

UCCD

Use matrix determine the score; enter below:

C

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

“Invasiveness”

For questions at left, recall that an A gets 3 points, a B gets 2, a C gets 1, and a D or U gets=0. Enter the sum total of all points for Q2.1-2.7 below:

14

Use matrix to determine score and enter below:

B

“Plant Score”

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

Medium

3.1	Ecological amplitude	A	Published (other)
3.2	Distribution	B	observational

“Distribution”

Use matrix determine the score; enter below:

A

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes
Identify ecosystem processes impacted: None known
Rationale: enter text here
Sources of information: enter text here
Question 1.2 Impact on plant community composition, structure, and interactions
Identify type of impact or alteration: change in community composition; displacement of native species
Rationale: observed
Sources of information: Peter Warner (personal observation); Joe DiTomaso (personal observation)
Question 1.3 Impact on higher trophic levels
Identify type of impact or alteration: potential for wildlife poisoning – have generalist herbivores learned to avoid?
Rationale: inferred from toxicity of plant; reports on domestic animal injuries, deaths
Sources of information: Corrigan W., Moody R.R., Forbes J.C. (1978): Foxglove (<i>Digitalis purpurea</i>) poisoning in farmed red deer (<i>Cervus elaphus</i>). Vet. Rec. 102:119-122
Question 1.4 Impact on genetic integrity
Identify impacts: None known; probability remote due to lack of closely related native species
Rationale: inferred from lack of closely related species native to California
Sources of information: Hickman, JC, et al. 1993. The Jepson Manual: Higher Vascular Plants of California
Question 2.1 Role of anthropogenic and natural disturbance in establishment
Describe role of disturbance: little, if any, disturbance necessary for establishment
Rationale: inferred from conditions where plants have become established (observations)

Sources of information: Peter Warner (personal observation)
Question 2.2 Local rate of spread with no management
Describe rate of spread: Does not appear to spread rapidly; plants do not generally establish in dense populations
Rationale: based on observations of infestations
Sources of information: Peter Warner (personal observation)
Question 2.3 Recent trend in total area infested within state
Describe trend: probably slowly increasing, due to seed dispersal by birds; species has probably been widely dispersed for a long time (100+ years)
Rationale: observational; inference
Sources of information: Peter Warner (personal observations)
Question 2.4 Innate reproductive potential
Describe key reproductive characteristics: abundant production of small seeds (many per flower, many flowers/plant)
Rationale: written information; inference
Sources of information: Hickman, JC, et al. 1993. The Jepson Manual: Higher Vascular Plants of California; DiTomaso, J (unpublished data); Peter Warner (personal observation)
Question 2.5 Potential for human-caused dispersal
Identify dispersal mechanisms: plants widely used horticulturally; seeds dispersed on clothing, footwear, etc.
Rationale: written information; deductive reasoning based on observations of infested areas
Sources of information: DiTomaso, J (unpublished data);
Question 2.6 Potential for natural long-distance dispersal
Identify dispersal mechanisms: wind, water, mud clinging to animal hooves & feet
Rationale: written information

Sources of information: DiTomaso, J (unpublished data)
Question 2.7 Other regions invaded
Identify other regions: widespread in cool, moist areas of the North American west; northeast U. S.
Rationale: published information; observations
Sources of information: Hickman, JC, et al. 1993. The Jepson Manual: Higher Vascular Plants of California; DiTomaso, J (unpublished data); Peter Warner (personal observation)
Question 3.1 Ecological amplitude
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: common in cool, coastal forests, woodlands, scrub of Pacific Northwest; unknown types of habitats in Sierra Nevada, Cascades, Klamath Mtns.; probably introduced early in Euro-American settlement areas of the West
Rationale: observations; inference based on horticultural popularity, long-term medicinal use of plant
Sources of information: Peter Warner (personal observation); printed information (Hickman, JC, et al); DiTomaso, J (unpublished data)
Question 3.2 Distribution
Describe distribution: very common in suitable habitat; estimate that most compatible habitats have already been invaded
Rationale: inference as for Question 3.1
Sources of information: Peter Warner (personal observation); printed information (Hickman, JC, et al); DiTomaso, J (unpublished data)

Worksheet A

Complete this worksheet to answer Question 2.4.

Reaches reproductive maturity in 2 years or less (1 pt.)	Yes
Dense infestations produce >1,000 viable seed per square meter (2 pts.)	Yes
Populations of this species produce seeds every year. (1 pt.)	Yes
Seed production sustained over 3 or more months within a population annually (1 pt.)	No
Seeds remain viable in soil for three or more years (2 pts.)	Yes
Viable seed produced with <i>both</i> self-pollination and cross-pollination (1 pt.)	Yes
Has quickly spreading veg. structures (rhizomes, roots, etc.) that may root at nodes (1 pt)	No
Fragments easily and fragments can become established elsewhere (2 pts.)	No
Resprouts readily when cut, grazed, or burned (1 pt.)	No
	6 0
	A
Note any related traits: enter text here	

Worksheet C - California Ecological Types

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	score
	desert	score
	interior	score
Scrub and Chaparral	coastal bluff scrub	score
	coastal scrub	D
	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	
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	D
	valley and foothill grassland	score
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	D
	alkali playa	score
	pebble plain	score
Bog and Marsh	bog and fen	D
	marsh and swamp	D
Riparian and Bottomland	riparian forest	D
	riparian woodland	D
	riparian scrub (incl. desert washes)	D
Woodland	cismontane woodland	score
	piñon and juniper woodland	score
	Sonoran thorn woodland	score
Forest	broadleaved upland forest	score
	North Coast coniferous forest	B
	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).