

# 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</b> (Latin binomial):	Bromus japonicus Thunb. ex Murr.
<b>Synonyms:</b>	Bromus abolini Drob., Bromus chiapporianus de Not. Ex Nyman, Bromus commutatus Schrad., Bromus cyri Trin., Bromus gedrosianus Penzes, Bromus japonicus ssp. anatolicus (Boiss. & Heldr.) Penzes, Bromus japonicus Thunb. ex Murr. var. porectus Hack., Bromus japonicus var. susquarrosus (Borb.) Savul. & Rays, Bromus multiflorus DC. ex Lam. & DC, Bromus patulus Mert. & Koch, Bromus pendulus Schur. Bromus unilateralis Schur., Bromus vestitus Schrad.
<b>Common names:</b>	Japanese brome, Japanese chess
<b>Evaluation date</b> (mm/dd/yy):	1/3/07
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Section below for list committee use—please leave blank	
<b>List committee members:</b>	Joe DiTomaso, Peter Warner, Joanna Clines
<b>Committee review date:</b>	2/14/2007
<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>B</b>	<b>Rev'd, Sci. Pub'n</b>
<a href="#">1.2</a>	Impact on plant community	<b>B</b>	<b>Rev'd, Sci. Pub'n</b>
<a href="#">1.3</a>	Impact on higher trophic levels	<b>D</b>	<b>Other Pub. Mat'l</b>
<a href="#">1.4</a>	Impact on genetic integrity	<b>U</b>	<b>No Information</b>

<p><b>Impact</b></p> <p><i>Enter four characters from Q1.1-1.4 below:</i></p> <p><b>BBDU</b></p> <p><i>Using matrix, determine score and enter below:</i></p> <p><b>B</b></p>
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<a href="#">2.1</a>	Role of anthropogenic and natural disturbance	<b>3 (2 pts)</b>	<b>Rev'd, Sci. Pub'n</b>
<a href="#">2.2</a>	Local rate of spread with no management	<b>1 (1 pt)</b>	<b>Observational</b>
<a href="#">2.3</a>	Recent trend in total area infested within state	<b>1 (1 pt)</b>	<b>Other Pub. Mat'l</b>
<a href="#">2.4</a>	Innate reproductive potential <a href="#">Wksht A</a>	<b>1 (1 pt)</b>	<b>Observational</b>
<a href="#">2.5</a>	Potential for human-caused dispersal	<b>3 (2 pts)</b>	<b>Observational</b>
<a href="#">2.6</a>	Potential for natural long-distance dispersal	<b>0 (0 pts)</b>	<b>Other Pub. Mat'l</b>
<a href="#">2.7</a>	Other regions invaded	<b>1 (1 pt)</b>	<b>Observational</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>8</b></p> <p><i>Use matrix to determine score and enter below:</i></p> <p><b>C</b></p>
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<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>Low</b></p> <p><b>No Alert</b></p>
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<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>

<p><b>Distribution</b></p> <p><i>Using matrix, determine score and enter below:</i></p> <p><b>B</b></p>
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**Table 3. Documentation**

<b>Question 1.1</b> Impact on abiotic ecosystem processes	B Rev'd, Sci. Pub'n <a href="#">back</a>
Identify ecosystem processes impacted: Can be a litter accumulator, but not nearly to the level of medusahead. They are also capable of changing the fire frequency in an area, much like other introduced annual grasses.	
Rationale: enter text here	
Sources of information: Ogle, S.M., D. Ojima, and W.A. Reiners. 2005. Biological Invasions 6(3):365-377	
<b>Question 1.2</b> Impact on plant community composition, structure, and interactions	B Rev'd, Sci. Pub'n <a href="#">back</a>
Identify type of impact or alteration: Competes for moisture with and displaces perennial grasses.	
Rationale: enter text here	
Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 1.3</b> Impact on higher trophic levels	D Other Pub. Mat'l <a href="#">back</a>
Identify type of impact or alteration: Good forage for livestock and wildlife. No known negative impacts. Introduced as a livestock forage.	
Rationale: enter text here	
Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 1.4</b> Impact on genetic integrity	U No Information <a href="#">back</a>
Identify impacts: There are nine native species of Bromus in California. No information on hybridization.	
Rationale: enter text here	
Sources of information: Hickman, J. C. (ed.) 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, CA	
<b>Question 2.1</b> Role of anthropogenic and natural disturbance in establishment	B Rev'd, Sci. Pub'n <a href="#">back</a>
Describe role of disturbance: Mostly in disturbed sites but can invade undisturbed areas. Mechanical disturbance of the soil can greatly increase Japanese brome.	
Rationale: enter text here	

Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 2.2</b> Local rate of spread with no management	C Observational <a href="#">back</a>
Describe rate of spread: Appears to be static in its movement	
Rationale: enter text here	
Sources of information: DiTomaso, observational	
<b>Question 2.3</b> Recent trend in total area infested within state	C Observational <a href="#">back</a>
Describe trend: Has steadily increased in the northern Great Plains region over the past 30 years, but appears to be static in its movement	
Rationale: enter text here	
Sources of information: DiTomaso, observational	
<b>Question 2.4</b> Innate reproductive potential	C Other Pub. Mat'l <a href="#">back</a>
Describe key reproductive characteristics: Cool season annual. Reproduces by seed. Burning can reduce Japanese brome for 1-2 years but sites repopulated from the seedbank.	
Rationale: enter text here	
Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 2.5</b> Potential for human-caused dispersal	B Other Pub. Mat'l <a href="#">back</a>
Identify dispersal mechanisms: Seeds can be dispersed by vehicles, soil movement, or as seed contaminants, but this is probable not common. Movement in hay is likely more common.	
Rationale: enter text here	
Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 2.6</b> Potential for natural long-distance dispersal	D Other Pub. Mat'l <a href="#">back</a>
Identify dispersal mechanisms: Most seeds fall near parent plant but can disperse with water, mud, soil	

movement, or animals.	
Rationale: enter text here	
Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 2.7</b> Other regions invaded	C Observational <a href="#">back</a>
Identify other regions: Likely found in similar environments in other areas. Primarily a grassland species.	
Rationale: enter text here	
Sources of information: DiTomaso, observational and other internet sources	
<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: Grassland, sagebrush communities, rangeland, fields, open disturbed sites, roadsides, crops. Thrives on fertile soils. Desert shrub-grassland communities, pinyon-juniper communities, and open areas in low elevation coniferous forests. Throughout California, mostly to 1000m. Common in northern region of the state.	
Rationale: enter text here	
Sources of information: DiTomaso, J. M., and E. A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources Publication 3488. Oakland, CA. text here	
<b>Question 3.2</b> Distribution/Peak frequency	C Observational <a href="#">back</a>
Describe distribution: Most common in Great Basin grasslands.	
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>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>2 pts      1 unknown</b>
	<b>C (1-3)</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	score
	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. present
	Great Basin grassland	C. 5-20%
	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	D. present
	Sonoran thorn woodland	score
<b>Forest</b>	broadleaved upland forest	score
	North Coast coniferous forest	score
	closed cone coniferous forest	score
	lower montane coniferous forest	D. present
	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).