

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):	Brassica nigra (L.) Koch
Synonyms:	Sinapis nigra (L.)
Common names:	black mustard
Evaluation date (mm/dd/yy):	3/9/2004
Evaluator #1 Name/Title:	Matt Brooks/Research Botanist
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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:	Cynthia Roye, Carla Bossard, Doug Johnson, Joe DiTomaso, Jake Sigg, Alison Stanton, Matt Brooks, Peter Warner.
Committee review date:	March 19, 2004
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	C	Observational
1.2	Impact on plant community	B	Observational
1.3	Impact on higher trophic levels	U	No Information
1.4	Impact on genetic integrity	D	Other Pub. Mat'l

“Impact”
 Enter four characters from Q1.1-1.4 below:
CBUD
 Use matrix determine the score; enter below:
B

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

“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:
11
 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
No Alert

3.1	Ecological amplitude	A	Other Pub. Mat'l
3.2	Distribution	A	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: C. Possibly fire regimes
Rationale: May increase fuel loads, but only where alien annual grasses have already altered the fire regime, so additional effect of this species may be only to slightly increase fire intensity.
Sources of information: Matt Brooks personal observation
Question 1.2 Impact on plant community composition, structure, and interactions
Identify type of impact or alteration: B. May reduce biomass and fecundity of co-existing species.
Rationale: Can produce large amounts of biomass, and matures early in the phenologic year, possibly usurping soil water before other native annual plants reach peak development
Sources of information: Matt Brooks personal observation
Question 1.3 Impact on higher trophic levels
Identify type of impact or alteration: U, unknown
Rationale: enter text here
Sources of information: enter text here

Question 1.4 Impact on genetic integrity
Identify impacts: D. no known hybridiation
Rationale: There are no native Brassica species in California, although hybridization with the alien Brassica napus has been observed.
Sources of information: Hickman, 1993. The Jepson Manual, Higher Plant of California. U.C. Press. and Joe DiTomaso personal observation
Question 2.1 Role of anthropogenic and natural disturbance in establishment
Describe role of disturbance: B. Disturbance promotes dominance and spread.
Rationale: This is an early successional species, which may decline in dominance as native species re-establish, but likely varies among vegetation types. It may persist indefinitely in riparian areas with repeated natural disturbance.
Sources of information: Matt Brooks personal observation
Question 2.2 Local rate of spread with no management
Describe rate of spread: C. Slow unless there is disturbance.
Rationale: Occurs in habitat openings caused by nautural distubances, roads, urban developments, agricultural fields, etc.
Sources of information: Matt Brooks personal observation
Question 2.3 Recent trend in total area infested within state
Describe trend: C. constant
Rationale: possibly declining where H. incana and B. tournefortii have more recently displaced B. nigra as dominant alien in sage scrub.
Sources of information: Matt Brooks personal observation
Question 2.4 Innate reproductive potential
Describe key reproductive characteristics: A. high
Rationale: reported to establish from seedbank in chaparall after 40 year fire-free interval

Sources of information: Jon Keeley personal communication, DiTomaso, J.M. and E.A. Healy. Weeds of California and other Western States. University of California, Division of Agriculture and Natural Resources, Oakland, CA (in press, expected publication in 2005).
Question 2.5 Potential for human-caused dispersal
Identify dispersal mechanisms: B. moderate
Rationale: Mustard seeds are sticky when wet facilitating dispersal on vehicles and grow in hay fields where they may be dispersed along with the hay when it is sold. Seen on gravel bars, mudflats, roadsides, pipeline ROWs.
Sources of information: . Matt Brooks personal observation
Question 2.6 Potential for natural long-distance dispersal
Identify dispersal mechanisms: C. Low
Rationale: Likely dispersed by saltation or rodents.
Sources of information: Matt Brooks personal observation
Question 2.7 Other regions invaded
Identify other regions: C. low
Rationale: occurs in similar habitats outside California.
Sources of information: Personal observation: Matt Brooks; Peter Warner; Joe DiTomaso.
Question 3.1 Ecological amplitude
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: A. Widespread
Rationale: has invaded shrublands, grasslands, and riparian areas
Sources of information: Hickman, 1993. The Jepson Manual, Higher Plant of California. U.C. Press. and Matt Brooks personal observation, DiTomaso, J.M. and E.A. Healy. Weeds of California and other Western States. University of California, Division of Agriculture and Natural Resources, Oakland, CA (in press, expected publication in 2005).

Question 3.2 Distribution

Describe distribution: A. very frequent

Rationale: common in sage scrub

Sources of information: Matt Brooks personal observation

Worksheet A

Complete this worksheet to answer Question 2.4.

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	Yes: 2 pts
Viable seed produced with <i>both</i> self-pollination and cross-pollination	No: 0 pt
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
	6 pts Total Unknowns
	A (6+ pts)
Note any related traits: enter text here	

Worksheet C - California Ecological Types

(*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	score
	desert	score
	interior	score
Scrub and Chaparral	coastal bluff scrub	B. 21-50
	coastal scrub	A. >50%
	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. present
	valley and foothill grassland	C. 5-20%
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	D. present
	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	D. present
	riparian scrub (incl. desert washes)	D. present
Woodland	cismontane woodland	D. present
	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).

