

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):	Alternanthera philoxeroides (C. Martius) Griseb.
Synonyms:	Bucholzia philoxeroides Mart., Telanthera philoxeroides (Mart.)
Common names:	Alligatorweed
Evaluation date (mm/dd/yy):	2/26/05
Evaluator #1 Name/Title:	Elizabeth Brusati, project manager
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Section below for list committee use—please leave blank

List committee members:	Joe DiTomaso, Alison Stanton, Joanna Clines, Cynthia Roye, Doug Johnson
Committee review date:	7/8/05
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

enter text here

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	A	Other Pub. Mat'l
1.2	Impact on plant community	B	Other Pub. Mat'l
1.3	Impact on higher trophic levels	A	Other Pub. Mat'l
1.4	Impact on genetic integrity	D	Other Pub. Mat'l

Impact

Enter four characters from Q1.1-1.4 below:

ABAD

Using matrix, determine score and enter below:

A

2.1	Role of anthropogenic and natural disturbance	A (3 pts)	Other Pub. Mat'l
2.2	Local rate of spread with no management	A (3 pts)	Other Pub. Mat'l
2.3	Recent trend in total area infested within state	D (0 pts)	Observational
2.4	Innate reproductive potential Wksht A	B (2 pts)	Other Pub. Mat'l
2.5	Potential for human-caused dispersal	B (2 pts)	Other Pub. Mat'l
2.6	Potential for natural long-distance dispersal	A (3 pts)	Rev'd, Sci. Pub'n
2.7	Other regions invaded	C (1 pt)	Rev'd, Sci. Pub'n

Invasiveness

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 Overall Score and Alert Status from the three section scores and enter below:

**High
Red Alert**

3.1	Ecological amplitude/Range	B	Other Pub. Mat'l
3.2	Distribution/Peak frequency Wksht C	D	Observational

Distribution

Using matrix, determine score and enter below:

C

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes	A Other Pub. Mat'l back
Identify ecosystem processes impacted: Dense floating mats reduce light penetration (1). Serious infestations can create anoxic conditions (1, 2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso, J., and E. Healy. in prep. Weeds of California and Other Western States 2. Phillips M.V. 1993. Alternanthera philoxeroides: A Review of the Literature. Florida Dept. Natural Resources, Bureau of Aquatic Plant Management.	
Question 1.2 Impact on plant community composition, structure, and interactions	B Other Pub. Mat'l back
Identify type of impact or alteration: Crowds out native species (1).	
Rationale: enter text here	
Sources of information: DiTomaso and Healy in prep.	
Question 1.3 Impact on higher trophic levels	A Other Pub. Mat'l back
Identify type of impact or alteration: Can create situations for breeding mosquitos (1, 2). Crowds out forage plants used by wintering waterfowl (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep. 2. Phillips M.V. 1993. Alternanthera philoxeroides: A Review of the Literature. Florida Dept. Natural Resources, Bureau of Aquatic Plant Management.	
Question 1.4 Impact on genetic integrity	D Other Pub. Mat'l back
Identify impacts: None	
Rationale: No native Alternanthera species.	
Sources of information: Hickman, J. C. (ed.) 1993. The Jepson Manual, Higher Plants of California. University of California Press. Berkeley, CA enter text here	
Question 2.1 Role of anthropogenic and natural disturbance in establishment	A Other Pub. Mat'l back
Describe role of disturbance: Grows best in eutrophic conditions (1). Is not adversely affected by habitat manipulation and may benefit from disturbances such as drawdown for waterfowl management. Increased	

turbidity appears to adversely affect it, however (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep. 2. Phillips M.V. 1993. Alternanthera philoxeroides: A Review of the Literature. Florida Dept. Natural Resources, Bureau of Aquatic Plant Management.	
Question 2.2 Local rate of spread with no management	A Other Pub. Mat'l back
Describe rate of spread: Would certainly double in less than 10 years based on fast growth rate and past history.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy in prep.	
Question 2.3 Recent trend in total area infested within state	D Observational back
Describe trend: CDFA eradication efforts have reduced the population to only a few patches.	
Rationale: enter text here	
Sources of information: CDFA biologists, observational.	
Question 2.4 Innate reproductive potential	B Other Pub. Mat'l back
Describe key reproductive characteristics: Stems stolon-like, root at node. Reproduces vegetatively from stems and roots. Rapid growth rate. Seeds rarely develop (1). More than 1000 shoots per square meter may develop (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep. 2. Julien, M. H. and J. E. Broadbent. 1980. The biology of Australian weeds. 3. Alternanthera philoxeroides (Mart.) Griseb. J Aust Inst Agric Sci 46(3): 150-155..	
Question 2.5 Potential for human-caused dispersal	B Other Pub. Mat'l back
Identify dispersal mechanisms: Mechanical removal without careful removal of all plant parts can facilitate spread (1). Was previously used in the aquarium trade but is no longer today (2). Stems could be dragged by boats.	
Rationale: enter text here	

Sources of information: 1. DiTomaso and Healy in prep. 2. Julien, M. H. and J. E. Broadbent. 1980. The biology of Australian weeds. 3. Alternanthera philoxeroides (Mart.) Griseb. J Aust Inst Agric Sci 46(3): 150-155.	
Question 2.6 Potential for natural long-distance dispersal	A Rev'd, Sci. Pub'n back
Identify dispersal mechanisms: Floating mats can break away and colonize new sites (1, 2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep 2. Julien, M. H. and J. E. Broadbent. 1980. The biology of Australian weeds. 3. Alternanthera philoxeroides (Mart.) Griseb. J Aust Inst Agric Sci 46(3): 150-155..	
Question 2.7 Other regions invaded	C Rev'd, Sci. Pub'n back
Identify other regions: Native to South America. In southeastern states, including Texas. Also Central America (1) and Australia (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep. 2. Julien, M. H. and J. E. Broadbent. 1980. The biology of Australian weeds. 3. Alternanthera philoxeroides (Mart.) Griseb. J Aust Inst Agric Sci 46(3): 150-155.	
Question 3.1 Ecological amplitude/Range	B Other Pub. Mat'l back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Inhabits shallow water, wet soils, ditches, marshes, pond margins, slow-moving watercourses. Tolerates saline conditions to 10% salt by volume. Cannot survive prolonged freezing temperatures. San Joaquin Valley, Southwestern region, and possibly elsewhere to 200m. Requires a warm summer growing season. Tolerates cold winters but cannot survive prolonged freezing temperatures (1). Usually a water plant but can also be semiterrestrial or terrestrial near water (2).	
Rationale: enter text here	
Sources of information: 1. DiTomaso and Healy in prep. 2. Aurand D. 1982. Nuisance Aquatic Plants and Aquatic Plant Management Programs in the United States, Volume 2. Southeastern Region. US EPA/ The Mitre Corporation.	
Question 3.2 Distribution/Peak frequency	D Observational back
Describe distribution: Uncommon due to control efforts of CDFA.	

Rationale: enter text here

Sources of information: DiTomaso and Healy in prep

Worksheet A[back](#)

Reaches reproductive maturity in 2 years or less	Yes: 1 pt
Dense infestations produce >1,000 viable seed per square meter	No: 0 pts
Populations of this species produce seeds every year.	No: 0 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	No: 0 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	Yes: 1 pt
Fragments easily and fragments can become established elsewhere	Yes: 2 pts
Resprouts readily when cut, grazed, or burned	Yes: 1 pt
	5 pts Total Unknowns
	B (4-5 pts)
Note any related traits: enter text here	

Worksheet C - California Ecological Types

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(*sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
Marine Systems	marine systems	score
Freshwater and Estuarine Aquatic Systems	lakes, ponds, reservoirs	D. presen
	rivers, streams, canals	D. presen
	estuaries	score
Dunes	coastal	score
	desert	score
	interior	score
Scrub and Chaparral	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
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	score
	valley and foothill grassland	score
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	score
	alkali playa	score
	pebble plain	score
Bog and Marsh	bog and fen	score
	marsh and swamp	D. presen
Riparian and Bottomland	riparian forest	score
	riparian woodland	score
	riparian scrub (incl. desert washes)	score
Woodland	cismontane woodland	score
	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).