

Cal-IPC Plant Assessment Form

For use with “[Criteria for Categorizing Invasive Non-Native Plants that Threaten Wildlands](#)”
by the California Invasive Plant Council and the Southwest Vegetation Management Association

Version February 2003, modified March 2009
California Invasive Plant Council (formerly CA Exotic Pest Plant Council)
Berkeley, CA www.cal-ipc.org, phone (510) 843-3902

Table 1. Species and Evaluator Information

Species name (Latin binomial):	<i>Limnobium laevigatum</i> (Humb. & Bonpl. ex Willd.) Heine
Synonyms:	
Common names:	South American spongeplant, West Indian spongeplant
Evaluation date (mm/dd/yy):	05/13/2011
Evaluator #1 Name/Title:	Elizabeth Brusati, Science Program Manager
Affiliation:	Cal-IPC
Phone numbers:	510-843-3902
Email address:	edbrusati@cal-ipc.org
Address:	1442-A Walnut St. #462, Berkeley, CA 94709
Evaluator #2 Name/Title:	Joseph M. DiTomaso, Specialist in Cooperative Extension
Affiliation:	Dept. of Plant Sciences, University of California-Davis
Phone numbers:	530-754-8715
Email address:	jmditomaso@ucdavis.edu
Address:	Mail Stop 4, One Shields Ave., Davis CA 95616

Section below for list committee use—please leave blank

List committee members:	
Committee review date:	
List date:	
Re-evaluation date(s):	

General comments on this assessment:

Table 2. Criteria, Section, and Overall Scores

Species: *Limnobium laevigatum*

Region: California

1.1	Impact on abiotic ecosystem processes	A	Other Publ. Mat.
1.2	Impact on plant community	A	Other Publ. Mat.
1.3	Impact on higher trophic levels	A	Other Publ. Mat.
1.4	Impact on genetic integrity	D	Rev. Sci. Lit.

Impact

Enter four characters from Q1.1-1.4 below:

AAAD

Using matrix, determine score and enter below:

A

Plant Score

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

High Alert

2.1	Role of anthropogenic and natural disturbance	A	Other Publ. Mat.
2.2	Local rate of spread with no management	A	Other Publ. Mat.
2.3	Recent trend in total area infested within state	B	Other Publ. Mat.
2.4	Innate reproductive potential Wksht A	A	Other Publ. Mat.
2.5	Potential for human-caused dispersal	A	Other Publ. Mat.
2.6	Potential for natural long-distance dispersal	A	Other Publ. Mat.
2.7	Other regions invaded	D	Other Publ. Mat.

Invasiveness

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

17

Use matrix to determine score and enter below:

A

Documentation

Average of all questions

3.0 out of 4.0

3.1	Ecological amplitude/Range	C	Other Publ. Mat.
3.2	Distribution/Peak frequency Wksht C	D	Observational

Distribution

Using matrix, determine score and enter below:

C

Table 3. Documentation (Scores are explained in the “[Criteria for Categorizing Invasive Non-Native Plants that Threaten Wildlands](#)”. Short citations may be used in this table. List full citations at end of PAF.)

Impact	
Question 1.1 Impact on abiotic ecosystem processes	A Other Publ. Mat. back
Identify ecosystem processes impacted: Has the capacity to cover large areas of open water. This has occurred in the Kings River near Fresno and also is beginning to occur in the Delta. Can cause significant reduction in dissolved oxygen in water resulting in fish kills.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Pat Akers, CDFA, Observational, http://www.cdfa.ca.gov/phpps/ipc/hydrilla/sos/sos_info/sos_info_files/frame.htm	
Question 1.2 Impact on plant community composition, structure, and interactions	A Other Publ. Mat. back
Identify type of impact or alteration: Forms solids stands that completely cover water, blocking light to all species in water column.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Pat Akers, CDFA, observational, http://www.cdfa.ca.gov/phpps/ipc/hydrilla/sos/sos_info/sos_info_files/frame.htm	
Question 1.3 Impact on higher trophic levels	A Other Publ. Mat. back
Identify type of impact or alteration: If covers large areas, could block open water needed by waterfowl and other wildlife as well as cause negative impacts to Delta pumping and irrigation systems. However, has not reached this point yet in California.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Question 1.4 Impact on genetic integrity	D Rev Sci Lit back
Identify impacts: No native <i>Limnobium</i> in California.	
Sources of information: Jepson Manual	
Invasiveness	
Question 2.1 Role of anthropogenic and natural disturbance in establishment	A Other Publ. Mat. back
Describe role of disturbance: Can establish in rivers, streams, and the Delta without human disturbance.	

Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Question 2.2 Local rate of spread with no management	A Other Publ. Mat. back
Describe rate of spread: Expected to spread at a more rapid rate than water hyacinth because it not only reproduces through vegetation propagules, but is also a prolific seed producer.	
Sources of information: . Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Question 2.3 Recent trend in total area infested within state	B Other Publ. Mat back
Describe trend: Spreading rapidly in some river systems in the state, as well as the Delta. Management efforts are keeping it from spreading too quickly, but it still is spreading.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf Pat Akers, CDFA, observational, http://www.cdfa.ca.gov/phpps/ipc/hydrilla/sos/sos_info/sos_info_files/frame.htm	
Question 2.4 Innate reproductive potential	A Other Publ. Mat. back
Describe key reproductive characteristics: Spreads vegetatively and has abundant seed dispersal. Seeds germinate rapidly to produce extremely small, floating seedlings. A handful can contain 60 seedlings.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf DiTomaso and Healy. 2003. Aquatic and Riparian Weeds of the West. UC ANR Publ. No. 3421. Pat Akers, CDFA, observational, http://www.cdfa.ca.gov/phpps/ipc/hydrilla/sos/sos_info/sos_info_files/frame.htm	
Question 2.5 Potential for human-caused dispersal	A Other published back
Identify dispersal mechanisms: Seedlings can likely be spread as hitchhikers on boats. Sold as an aquarium plant.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Question 2.6 Potential for natural long-distance dispersal	A Other published back
Identify dispersal mechanisms: Small floating seedlings are dispersed by wind, currents, and tidal action. Likely can attach to waterfowl or water hyacinth plants.	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	

Question 2.7 Other regions invaded	D Other Publ. Mat. back
Identify other regions: Native to central Mexico, South America, and the Caribbean. Not known to escape elsewhere	
Sources of information: USDA-GRIN 2011	
Distribution	
Question 3.1 Ecological amplitude/Range	C Other Publ. Mat. back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: First found in Redding and Arcata in 2003, San Joaquin River in 2007, and Sacramento-San Joaquin Delta in 2008.	
Little is known about growth rates, nutrient requirements or cold tolerance. Small seedlings can withstand frost and mild freezes because protected under the taller aquatic vegetation. Currently under study by USDA.	
Sources of information: Hrusa et al. 2002, Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Question 3.2 Distribution/Peak frequency	D Observation back
Describe distribution: New invader, not yet widespread	
Sources of information: Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
References	
List full citations for all references used in the PAF (short citations such as DiTomaso and Healy 2007 may be used in table above). Websites should include the name of the organization and the date accessed. Personal communications should include the affiliation of the person providing the observation. Enter each reference on a separate line; the table will expand as needed.	
Examples:	
Mitich, L. W. 1995. Intriguing world of weeds: Tansy ragwort. Weed Technology. 9: 402-404.	
HEAR. Date unknown. <i>Emex spinosa</i> . Hawaiian Ecosystems at Risk. www.hear.org/pier/species/emex_spinosa.htm . Accessed March 17, 2009	
DiTomaso, J. M. Personal communication from Dr. Joe DiTomaso, Dept. of Plant Science, UC Davis. Email received 3/17/09.	
Pat Akers, CDFA, observational, http://www.cdfa.ca.gov/phpps/ipc/hydrilla/sos/sos_info/sos_info_files/frame.htm	
Anderson, L. 2011. Spongeplant: A new aquatic weed threat in the Delta. Cal-IPC News. 19(1):4-5. http://www.cal-ipc.org/resources/news/pdf/Cal-IPC_News_2011Spring.pdf	
Hrusa, F., B. Ertter, A. Sanders, G. Leppig, and E. Dean. 2002. Catalog of non-native vascular plants occurring spontaneously in California beyond those addressed in The Jepson Manual. Part I. Madroño. 49(2): 61-98	

USDA-GRIN. 2011 GRIN Taxonomy for Plants. United States Department of Agriculture, Germplasm Resources Information Network. http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl [Accessed May 18, 2011]

Worksheet A[back](#)

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
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	Unknown
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 1 pt
Resprouts readily when cut, grazed, or burned	Yes 1 pt
	9 pts Unknowns 1
	A
Note any related traits:	

Worksheet C - California Ecological Types[back](#)*(sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
Marine Systems	marine systems	score
Freshwater and Estuarine Aquatic Systems	lakes, ponds, reservoirs	D
	rivers, streams, canals	D
	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	score
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).