

**Australia/New Zealand Weed Risk Assessment adapted for Florida.**

**Data used for analysis published in: Gordon, D.R., D.A. Onderdonk, A.M. Fox, R.K. Stocker, and C. Gantz. 2008. Predicting Invasive Plants in Florida using the Australian Weed Risk Assessment. Invasive Plant Science and Management 1: 178-195.**

<i>Stellaria media (common chickweed)</i>			
Question number	Question	Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in habitats with periodic inundation	n	0
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	y	0
3.02	Garden/amenity/disturbance weed	y	0
3.03	Weed of agriculture	y	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	0
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	?	
4.05	Toxic to animals	y	1
4.06	Host for recognised pests and pathogens	y	1
4.07	Causes allergies or is otherwise toxic to humans	n	0
4.08	Creates a fire hazard in natural ecosystems	n	0
4.09	Is a shade tolerant plant at some stage of its life cycle	y	1
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	n	0
5.01	Aquatic	n	0

5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat		
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	?	
6.04	Self-compatible or apomictic	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative fragmentation	y	1
6.07	Minimum generative time (years)	1	1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y	1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	y	1
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	n	-1
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	y	1
8.01	Prolific seed production	y	1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	y	1
8.03	Well controlled by herbicides	y	-1
8.04	Tolerates, or benefits from, mutilation or cultivation	y	1
8.05	Effective natural enemies present in Florida, or east of the continental divide		
<b>Total Score</b>			<b>25</b>

<b>Outcome</b>	<b>Reject*</b>
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\*Used secondary screen from: Daehler, C. C., J.L. Denslow, S. Ansari, and H. Kuo. 2004. A risk assessment system for screening out harmful invasive pest plants from Hawaii's and other Pacific islands. *Conserv. Biol.* 18: 360-368.

section	# questions answered	satisfy minimum?
A	8	yes
B	11	yes
C	21	yes
total	40	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		no evidence of selection for reduced weediness
1.02		
1.03		
2.01		
2.02		
2.03	Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu.	Has an extremely wide distribution on 6 continents.
2.04	Grime, Hodgson, and Hunt (1988) <i>Comparative Plant Ecology: a Functional Approach to Common British Species</i> . Unwin Hyman Ltd., London.	"Occurs on moist, but not submerged or waterlogged, soils."
2.05	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	Native to Europe, but now "found widely on every continent".
3.01	Wagner, Herbst, and Sohmer (1999) <i>Manual of the flowering plants of Hawai'i</i> . University of Hawai'i Press/Bishop Museum Press, Honolulu.	"Native to Eurasia, widely naturalized"
3.02	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	"Chickweed is a weed of...lawns and gardens"
3.03	Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu.	"This species is reported to be a weed in more than 20 crops in 50 countries."
3.04		no evidence
3.05	Holm (1979) <i>A Geographical Atlas of World Weeds</i> . John Wiley and Sons.	<i>S. aquatica</i> and <i>S. uliginosa</i> are considered serious agricultural weeds in several countries.
4.01	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	no description of these traits
4.02		no evidence
4.03	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	no description of this
4.04	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill.	"It is a source of food for animals, the plant being eaten by hogs and

	Canadian Journal of Plant Science 60: 981-992.	rabbits (Spencer 1940)" [unclear whether eaten readily]
4.05	Turkington, Kenkel, and Franko (1980) The biology of Canadian weeds. 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science 60: 981-992.	"S. media is capable of accumulating nitrates to potentially toxic levels (Case 1957), and grazing of the weed may cause digestive disorders in sheep and goats (Carruthers 1903)." BUT "It is a source of food for animals, the plant being eaten by hogs and rabbits (Spencer 1940) and the seeds by birds (Hatfield 1970)."
4.06	Turkington, Kenkel, and Franko (1980) The biology of Canadian weeds. 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science 60: 981-992.	"It harbors viruses and fungi which overwinter between crop plantings (Converse and Stace-Smith 1971), as well as aphids and nematodes which transmit viruses to crop plants (Fryer and Evans 1968)."
4.07	Turkington, Kenkel, and Franko (1980) The biology of Canadian weeds. 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science 60: 981-992.	"Man sometimes uses the plant for salads (Grieve 1959)."
4.08		no evidence
4.09	Holm, Plucknett, Pancho, and Herberger (1977) The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu.	"The plant prefers shady, moist places under trees and shrubs"
4.1	Holm, Plucknett, Pancho, and Herberger (1977) The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu.	"S. media will grow on a very wide range of soils"
4.11	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	growth habit: forb/herb
4.12	1. Holm, Plucknett, Pancho, and Herberger (1977) The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu. 2. Turkington, Kenkel, and Franko (1980) The biology of Canadian weeds. 42. <i>Stellaria media</i> (L.) Vill. Canadian Journal of Plant Science 60: 981-992.	1. "forms thick, succulent mats" 2. " <i>S. media</i> competes with crop plants by shading and smothering young seedlings with its mat-like growth." [but is an herb]
5.01		terrestrial
5.02	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Caryophyllaceae
5.03	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	herbaceous Caryophyllaceae
5.04	Holm, Plucknett, Pancho, and Herberger (1977) The World's Worst Weeds: Distribution and Biology. The University Press of Hawaii, Honolulu.	"roots fibrous, shallow"
6.01		

6.02	Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu.	"The seeds germinate well"
6.03	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	"Stace (1975) reported a hybrid between <i>S. media</i> and <i>S. neglecta</i> in Britain, but this has yet to be verified."
6.04	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	" <i>S. media</i> is cleistogamous and almost homogamous, self-pollinated and self-fertilized."
6.05	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	" <i>S. media</i> is cleistogamous and almost homogamous, self-pollinated and self-fertilized."
6.06	Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu.	"it spreads by rooting at the nodes"
6.07	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	"The mean life span is 5-7 wk with 4-5 of this being required to reach flowering (Sinha and Whitehead 1965)."
7.01	1. Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992. 2. Grime, Hodgson, and Hunt (1988) <i>Comparative Plant Ecology: a Functional Approach to Common British Species</i> . Unwin Hyman Ltd., London.	seeds are dispersed by footwear (1) and farm machinery (2)
7.02	Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu.	Planted on steep slopes in Europe to give soil cover and hold the soil.
7.03	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	" <i>S. media</i> seeds are contaminants in seeds of wheat, barley, rye, oats, timothy, rape, swede, mustard, fodder beets, sugar beets and kale."
7.04	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	seeds are dispersed by wind
7.05		no evidence
7.06	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	"Seeds are dispersed...through the digestive tracts of birds"
7.07		no evidence of any means of attachment
7.08	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	"Seeds are dispersed...through the digestive tracts of...cattle, horses and pigs"
8.01	1. Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu. 2. Grime, Hodgson, and Hunt (1988) <i>Comparative Plant Ecology: a Functional Approach to Common British</i>	1. estimated production of 11 to 13 million seeds per hectare [=1,100 to 1,300 seeds per m <sup>2</sup> ] 2. up to 13,000 seeds per plant

	Species. Unwin Hyman Ltd., London.	
8.02	Holm, Plucknett, Pancho, and Herberger (1977) <i>The World's Worst Weeds: Distribution and Biology</i> . The University Press of Hawaii, Honolulu.	In buried-seed experiments, <i>S. media</i> had 97% germination at 1 year, and 22% germination at 10 years.
8.03	Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	"Chickweed...can be controlled by the use of several common herbicides...The weed is controlled by Fenoprop (1.2 kg/ha), Mecoprop (1.2 kg/ha), Dicamba (0.42 kg/ha), Dicamba + Phenoxy (1:3 at 0.56 kg/ha), Linuron + MCPA (1:2 at 0.84 kg/ha), Pronadime (0.84 kg/ha) and Chloroxuron (5.6 kg/ha)."
8.04	1. Uva, Neal, and DiTomaso (1997) <i>Weeds of the Northeast</i> . Cornell University Press, Ithaca. 2. Turkington, Kenkel, and Franko (1980) <i>The biology of Canadian weeds</i> . 42. <i>Stellaria media</i> (L.) Vill. <i>Canadian Journal of Plant Science</i> 60: 981-992.	1. "common chickweed tolerates close and frequent mowing" 2. "Like most weeds, chickweed is favored by...grazing when grown with grass (Schulz 1970)." BUT "Close mowing controls chickweed (Muenscher 1955)"
8.05		