

Assessment completed 9/20/2018 Williams & Lieurance

<i>Praxelis clematidea</i> ALL ZONES		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) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	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 North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	y	2
3.02	Garden/amenity/disturbance weed	y	2
3.03	Weed of agriculture	y	4
3.04	Environmental weed	n	0
3.05	Congeneric weed	n	0
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	y	1
4.05	Toxic to animals	?	
4.06	Host for recognised pests and pathogens	unk	0
4.07	Causes allergies or is otherwise toxic to humans	?	
4.08	Creates a fire hazard in natural ecosystems	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	?	
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	y	1
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	n	0
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 propagation	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	n	-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	y	1
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)	y	1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	y	1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	unk	-1
8.03	Well controlled by herbicides	n	1
8.04	Tolerates, or benefits from, mutilation or cultivation	y	1
8.05		?	
Total Score		22	
Implemented Pacific Second Screening		no	
Risk Assessment Results		High	

section	# questions answered	satisfy minimum?
A		11 yes
B		6 yes
C		21 yes
total		38 yes

	Reference	Source data
1.01		no evidence of selection for reduced invasive traits.
1.02		skip to 2.01
1.03		skip to 2.01
2.01	USDA Aphis Weed Risk Assessment for Praxelis clematidea R. M. King & H. Rob. (Asteraceae) – Praxelis https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/wra/Praxelis_clematidea.pdf Access date June 27 2018	No computer analysis was performed. According to the USDA Aphis Geographic potential for Praxelis clematidea, "The map for Praxelis represents the joint distribution of Plant Hardiness Zones 7-13." These data are presented with low to negligible amounts of uncertainty.
2.02		Native range is well known; refer to 2.01 source data.
2.03	USDA Aphis Weed Risk Assessment for Praxelis clematidea R. M. King & H. Rob. (Asteraceae) – Praxelis https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/wra/Praxelis_clematidea.pdf Access date June 27 2018	Found in more than 3 Köppen Geiger climate zones. According to the USDA Aphis Geographic potential for Praxelis clematidea, "the following Köppen-Geiger climate classes: tropical rainforest (Af), tropical savanna (Aw), and humid subtropical (Cfa). All three of these zones are found in Florida.
2.04	USDA Aphis Weed Risk Assessment for Praxelis clematidea R. M. King & H. Rob. (Asteraceae) – Praxelis https://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/wra/Praxelis_clematidea.pdf Access date June 27 2018	According to the USDA Aphis Geographic potential for Praxelis clematidea, "The map for Praxelis represents the joint distribution of Plant Hardiness Zones 7-13, areas with 10-100+ inches of annual precipitation, and the following Köppen-Geiger climate classes: tropical rainforest, tropical savanna, steppe, humid subtropical, and marine west coast.
2.05	NGRP. 2014. Germplasm Resources Information Network (GRIN). United States Department of Agriculture, Agricultural Research Service, National Genetic Resources Program (NGRP). http://www.arsgrin.gov/cgi-bin/npgs/html/index.pl?language=en	Native to S America now in Australia, FL, Hong Kong, China, New Guinea, etc.

3.01	<p>1. 2006. Wang, Zhenhui/An, Feng/Chen, Qiubo. Praxelis (Praxelis clematidea): a New Invasive Exotic Weed in China. Chinese Journal of Tropical Agriculture. 06: 2. Weeds of Australia (https://keyserver.lucidcentral.org/weeds/data/media/Html/praxelis_clematidea.htm accessed 9/20/2018)</p>	<p>1. "Invasive species pose a serious threat to introduced ecosystems and their biodiversity, and cause considerable economic loss to the regions they invaded. Praxelis (Praxelis clematidea (Grisebach) King et Robinson)(Compositae), an annual or short lived perennial herb native to South America, already became a noxious weed in Asia and Oceania. And it is spreading rapidly in Southern China now. This species was described and reviewed briefly in relation to biological characteristic, dispersal, hazard, research advances and some strategies in management and control. Its invasive mechanism of Praxelis is suggested to be studied as soon as possible. It is expected that this review could be helpful to prevent and control the spread of Praxelis." 2. Naturalised Distribution: This species was first recorded near Tully in northern Queensland in 1993, but it has spread quickly and is now relatively widespread in the coastal districts of Queensland. It is most common in northern Queensland, particularly between Townsville and Mossman, but has also been recorded more recently from the more remote parts of Cape York Peninsula and a few locations in central (i.e. Gladstone, Yeppoon and Mackay) and south-eastern (i.e. Childers and Gympie) Queensland.</p>
3.02	<p>1. 2003. Waterhouse, B.M.. Know your enemy: recent records of potentially serious weeds in northern Australia, Papua New Guinea and Papua (Indonesia). Telopea. 10(1): 477-485. 2. Weeds of Australia Biosecurity Queensland Edition https://keyserver.lucidcentral.org/weeds/data/media/Html/praxelis_clematidea.htm</p>	<p>In north Queensland, Praxelis clematidea is an abundant weed of roadsides, stream banks and pastures. It encroaches upon sugarcane plantations and other cultivated areas and is able to invade the understorey of relatively undisturbed woodlands...It now threatens much of northern Australia (including more southerly parts of Queensland and northern New South Wales), New Guinea, South-East Asia and the Pacific Islands. 2.1. "Praxelis (Praxelis clematidea) is on the Alert List for Environmental Weeds" 2.</p>
3.03	<p>1. Weeds of Australia Biosecurity Queensland Edition https://keyserver.lucidcentral.org/weeds/data/media/Html/praxelis_clematidea.htm 2. 2003. CRC Weed Management. Weed Management Guide - Praxelis- Praxelis clematidea. http://www.weeds.gov.au/publications/guidelines/alert/praxelis_clematidea.html</p>	<p>1. "It also encroaches upon sugarcane plantations and other crops." 2. Praxelis appears likely to be a significant weed of dryland agriculture in Hong Kong and mainland China.</p>
3.04		no evidence
3.05	<p>Abbott, J. R., C. L. White, and S. B. Davis. 2008. Praxelis clematidea (Asteraceae), a genus and species new for the flora of North America. Journal of the Botanical Research Institute of Texas 2(1):621-626.</p>	<p>"Praxelis contains 13 species, which are all native to South America and have not been reported as exotics elsewhere (Abbott et al., 2008)"</p>
4.01		no evidence of spines, thorns or burrs in this plant

4.02	<p>1. Wang, Z. H., P. Christie, Q. B. Chen, X. X. Liu, L. L. Xie, C. J. Bai, and X. L. Li. 2006. Allelopathic potential and chemical constituents of volatile oil from <i>Praxelis clematidea</i>. <i>Allelopathy Journal</i> 18(2):225-235.</p> <p>2. Chen, Z. Y., S. F. Liang, D. W. Li, Z. S. Feng, W. H. Li, C. L. Peng, X. S. Tian, and X. Y. Zhou. 2011. Allelopathy of 12 species including <i>Eupatorium catarium</i> on <i>Bidens alba</i> seedlings [Abstract]. <i>Journal of Tropical and Subtropical Botany</i> 5. 2. 2007. Guangyi, L./Zhenrong, C./Xiao, D./Long, Y./Qinfen, L.. Allelopathy of <i>Eupatorium catarium</i> Veldkamp to several weeds common in south China cropping system. <i>Chinese Agricultural Science Bulletin</i>. 05: .</p>	<p>Likely, but no direct evidence of allelopathy (these data test phytotoxicity) "Volatile oil extracts from leaves of <i>P. clematidea</i> that were presented to test plants as a volatile source (aerosolized in a sealed flask) had a significant inhibitory effect on the root length, shoot length, and fresh weight of germinating lettuce (<i>Lactuca sativa</i>) and mustard (<i>Brassica rapa</i>) seedlings relative to controls (Wang et al., 2006). Higher concentrations of these volatile oils had stronger inhibitory effects. Analysis of the volatile oils with gas chromatography identified a variety of compounds all of which are known to be allelopathic (Wang et al., 2006). The volatile oils extracted in this study also reduced the radial growth of fungal colonies and inhibited feeding by larvae of <i>Spodoptera litura</i> (Wang et al., 2006). Aqueous extracts from the leaves of <i>P. clematidea</i> had a significant inhibitory effect on the growth of <i>Bidens alba</i> seedlings; there was a significant correlation between the concentration of the extracts and the inhibitory effect (Chen et al., 2011)." 2. "<i>Eupatorium catarium</i> Veldkamp, an aggressive plant, has spread throughout the agroecosystem and wilderness in Hainan and Guangdong province in the last decade and has become a serious problem in many parts of this area. Preliminary research on the Allelopathy of this species found that the aqueous extract has strong inhibition to the seed germination and seedling elongation of cabbage and radish. In present study the allelopathy of this species to five common weeds (<i>E. odoratum</i> L., <i>Mimosa pudica</i> L., <i>Echinochloa crusgalli</i> (L.) Beauv, <i>Bidens pilosa</i> L. and <i>Abutilon theophrasti</i> Medic) in south China was investigated to further understand its allelochemical potential and the potential used as green manure in cropping system weeds management. Two kinds of aqueous extracts, one from fresh material and another from</p>
4.03	<p>Heide-Jorgensen, H. S. 2008. <i>Parasitic Flowering Plants</i>. Brill, Leiden, The Netherlands. 438 pp.</p>	<p>"Asteraceae is not a plant family known to contain parasitic species"</p>
4.04	<p>1. Pollock, S., A. Holland, W. D. Smith, and R. Price. 2004. New alien weed for Queensland: <i>Praxelis</i>: Queensland Herbarium alert sheet. Queensland Government, Queensland, Australia. 1 pp. 2. 2003. CRC Weed Management. <i>Weed Management Guide - Praxelis-Praxelis clematidea</i>. http://www.weeds.gov.au/publications/guidelines/alert/p-clematidea.html</p>	<p>1. "<i>Praxelis clematidea</i> secretes an odor that affects livestock and is not used as feed" 2. There is some evidence that it may be poisonous to stock and humans if ingested.</p>

4.05	<p>1. Veldkamp, J. F. 1999. <i>Eupatorium catarium</i>, a new name for <i>Eupatorium clematideum</i> Griseb., non Sch.Bip. (Compositae), a South American species naturalised and spreading in SE Asia and Queensland, Australia. <i>Gardens' Bulletin Singapore</i> 51:119-124. 2. Waterhouse, B. M. 2014. Do you have any pictures and information on <i>Praxelis</i>? Personal communication to A. Koop on February 16, 2014, from Barbara Waterhouse, Senior Botanist, Australian Department of Agriculture, Northern Australia Quarantine Strategy. 3. Pollock, S., A. Holland, W. D. Smith, and R. Price. 2004. New alien weed for Queensland: <i>Praxelis</i>: Queensland Herbarium alert sheet. Queensland Government, Queensland, Australia. 1 pp.</p>	<p>Unknown. "Anecdotal reports suggest that it may be poisonous to livestock and humans if ingested" (Veldkamp, 1999). The case for human toxicity in Veldkamp (1999) originated from a report of an elderly man in northern Queensland who routinely consumed herbal tea infused with <i>Ageratum conyzoides</i>. On one occasion he was hospitalized. It was suspected that he accidentally used <i>P. clematidea</i>, which is very similar to <i>A. conyzoides</i> (Waterhouse, 2014). Animal stock do not eat <i>P. clematidea</i> (Pollock et al., 2004), but this may be due to its odor and not toxicity.</p>
4.06		no evidence
4.07	<p>CRC Weed Management. Weed Management Guide - <i>Praxelis clematidea</i>. http://www.weeds.gov.au/publications/guidelines/alert/p-clematidea.html</p>	<p>Unknown. "There is some evidence that it may be poisonous to stock and humans if ingested."</p>
4.08		No evidence
4.09	<p>1. CRC Weed Management. 2003. Weed management guide: <i>Praxelis (Praxelis clematidea)</i>. Cooperative Research Centre (CRC) for Australian Weed Management, Australia. 6 pp. 2. Freire, S. E., G. Sancho, E. Urtubey, N. D. Bayon, and K. Liliana. 2005. Catalogue of Asteraceae of Chacoan Plain, Argentina. <i>Compositae Newsletter</i> 43:1-126.</p>	<p>1. "It tolerates partial shade to full sun but does not cope well under heavy shade" 2. " It occurs in open places in woods, along roads, and in borders of cultivated fields "</p>
4.10	<p>CRC Weed Management. 2003. Weed management guide: <i>Praxelis (Praxelis clematidea)</i>. Cooperative Research Centre (CRC) for Australian Weed Management, Australia. 4 pp.</p>	<p>"Able to survive on a range of soil types" but no evidence of specifically infertile soils.</p>
4.11	<p>1. Wunderlin, R. P., and P. F. Hansen. 2014. <i>Atlas of Florida Vascular Plants</i>. University of South Florida, Department of Biology, Institute for Systematic Botany. http://florida.plantatlas.usf.edu/Default.aspx. 2. Csurhes, S., and R. Edwards. 1998. Potential environmental weeds in Australia: Candidate species for preventative control. Queensland Department of Natural Resources, Australia. 202 pp.</p>	<p>1. "This species is neither a vine nor plant with a basal rosette. It is an herb with a woody base (suffrutescent) and grows to about 1.3 meters tall (Wunderlin and Hansen, 2014) 2. although most plants are slightly less than 1 meter tall (Csurhes and Edwards, 1998). "</p>

4.12	1. Holland, A. 2006. Praxelis (Praxelis clematidea R.M.King & H.Rob). Weed Spotters Newsletter Autumn(3):5-6. 2. "Dickman, S. 2014. Looking for information on Praxelis clematidea. Personal communication to A. Koop on February 12, 2014, from Stephen Dickman, Environmental Specialist, Hillsborough County, Florida, Parks, Recreation and Conservation Department. "	1. "It forms dense swards" 2. "Capable of producing many fertile seeds falling in close proximity to the parent plant. Eventually producing a robust swarm of flowering plants"
5.01	1. Abbott, J. R., C. L. White, and S. B. Davis. 2008. Praxelis clematidea (Asteraceae), a genus and species new for the flora of North America. Journal of the Botanical Research Institute of Texas 2(1):621-626. 2. Holland, A. 2006. Praxelis (Praxelis clematidea R.M.King & H.Rob). Weed Spotters Newsletter Autumn(3):5-6.	"Praxelis clematidea is not an aquatic. It is a terrestrial aster up to 1-1.3 meters tall (Abbott et al., 2008; Australian Weeds Committee, 2014; Holland, 2006). "
5.02	1. NGRP. 2014. Germplasm Resources Information Network (GRIN). United States Department of Agriculture, Agricultural Research Service, National Genetic Resources Program (NGRP). http://www.arsgrin.gov/cgi-bin/npgs/html/index.pl?language=en . (Archived at PERAL). 2. Australian Weeds Committee. 2014. Weed identification: Praxelis. Australian Weeds Committee. http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=0&region=all&card=H33 .	"This species is not a grass (NGRP, 2014). It is an annual to short-lived perennial aster (Abbott et al., 2008; Australian Weeds Committee, 2014; Holland, 2006). "
5.03	1. Martin, P. G., and J. M. Dowd. 1990. A protein sequence study of the dicotyledons and its relevance to the evolution of the legumes and nitrogen fixation. Australian Systematic Botany 3:91-100. 2. Martin, T. G., S. Campbell, and S. Grounds. 2006. Weeds of Australian rangelands. The Rangeland Journal 28(1):3-26.	no evidence of this occurring. This species is neither woody nor in a family known to contain nitrogenfixing species (Martin and Dowd, 1990).
5.04		no evidence
6.01		no evidence
6.02	Australian Weeds Committee. 2014. Weed identification: Praxelis. Australian Weeds Committee. http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=0&region=all&card=H33 . 2. Dickman, S. 2014. Stephen Dickman, Environmental Specialist, Hillsborough County, Florida, Parks, Recreation and Conservation Department.	1. "produces viable seeds" 2. "Spreads by seed"
6.03		unknown
6.04	Powell, A. M. 1985. Crossing data as generic criteria in the Asteraceae. Taxon 34(1):55-60.	" It forms dense patches (Dickman, 2014; U.F. Herbarium, 2014), is self-compatible (Powell, 1985), and readily resprouts after fire (English, 2014).

6.05	<p>1. Dickman, S. 2014. Looking for information on <i>Praxelis clematidea</i>. Personal communication to A. Koop on February 12, 2014, from Stephen Dickman, Environmental Specialist, Hillsborough County, Florida, Parks, Recreation and Conservation Department. 2. Ramírez, N. 2004. Ecology of pollination in a tropical Venezuelan savanna <i>Plant Ecology</i> 171:171-189.</p>	<p>1. "Praxelis clematidea attracts a range of pollinator" 2. "The congener <i>Praxelis pauciflora</i> is pollinated by bees and butterflies in Venezuela"</p>
6.06	<p>2003. CRC Weed Management. Weed Management Guide - <i>Praxelis</i>- <i>Praxelis clematidea</i>. http://www.weeds.gov.au/publications/guidelines/alert/p-clematidea.html</p>	<p>"Praxelis is also capable of vegetative growth, in which roots and new plantlets form along branches in contact with the soil."</p>
6.07	<p>1. Waterhouse, B. M. 2003. Know your enemy: Recent records of potentially serious weeds in northern Australia, Papua New Guinea and Papua (Indonesia). <i>Telopea</i> 10(1):477-485. 2. Waterhouse, B. M. 2014. Do you have any pictures and information on <i>Praxelis</i>? Personal communication to A. Koop on February 16, 2014, from Barbara Waterhouse, Senior Botanist, Australian Department of Agriculture, Northern Australia Quarantine Strategy. 3. Waterhouse, B. M., and A. A. Mitchell. 2012. Weeds of tropical Australia: How do they get here? Pages 9-12 in V. Eldershaw, (ed.). 18th Australian Weeds Conference Proceedings: Developing Solutions to Evolving Weed Problems. Weed Science Society of Victoria, Melbourne, Victoria, Australia 4. Laidlaw, M. 2013. <i>Praxelis</i> (<i>Praxelis clematidea</i>) – 20 years down the track. Weed Spotters' Network Queensland March:2-3.</p>	<p>It is an annual or short-lived perennial herb (Holland, 2006; Waterhouse, 2003; Weber et al., 2008). An annual (Csurhes and Edwards, 1998). "It can produce large numbers of seeds in as little as three or four months after germinating" (CRC Weed Management, 2003). Newly germinated seedlings can begin producing seeds in 4-8 weeks in tropical Queensland (Waterhouse, 2014). Because of the rapid life cycle, this species is very likely producing multiple generations in one year, particularly in more tropical latitudes (Waterhouse, 2014). One reference indicated that plants can reproduce vegetatively where branches come in contact with the soil (Laidlaw, 2013); however, we found no other information indicating or suggesting this is an important form of reproduction.</p>
7.01	<p>1. Australian Weeds Committee. 2014. Weed identification: <i>Praxelis</i>. Australian Weeds Committee. http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=0&region=all&card=H33. 2. Navie, S. 2014. Looking for information on <i>Praxelis clematidea</i>. Personal communication to A. Koop on February 5, 2014, from Sheldon Navie, consulting scientist with Technigro, which specializes in integrated vegetation management. 3. English, B. 2014. Information on <i>Praxelis clematidea</i>. Personal communication to B. Waterhouse on February 17, 2014, from Bernie English, Senior Extension Officer (Beef), Queensland Department of Agriculture, Fisheries and Forestry, Australia.</p>	<p>"Seeds are readily spread as contaminants of vehicles, building and landscaping materials and garden mulch" (Australian Weeds Committee, 2014; English, 2014; Holland, 2006; Waterhouse, 2003). Distributed long distances by trains and four-wheeled drive vehicles, and appears along railway lines, pipeline, and power line corridors in Queensland, Australia (Navie, 2014). Spread by vehicles and on clothing (Dickman, 2014). It is easily spread by machinery (English, 2014), presumably in mud clinging to the machinery.</p>
7.02		<p>well known as an unwanted weed, usually spreads unintentionally</p>

7.03	1. Scott, L. J., C. L. Lange, G. C. Graham, and D. K. Yeates. 1998. Genetic diversity and origin of siam weed (<i>Chromolaena odorata</i>) in Australia. <i>Weed Technology</i> 12:27-31. 2. English, B. 2014. Information on <i>Praxelis clematidea</i> . Personal communication to B. Waterhouse on February 17, 2014, from Bernie English, Senior Extension Officer (Beef), Queensland Department of Agriculture, Fisheries and Forestry, Australia.	1. It was likely introduced to Queensland, Australia as a contaminant of pasture seeds from Brazil (Scott et al., 1998; Waterhouse and Mitchell, 2012). 2. This species spreads in commercial sugarcane mulch in Queensland (English, 2014).
7.04	1. Weeds of Australia Biosecurity Queensland Edition https://keyserver.lucidcentral.org/weeds/data/media/Html/praxelis_clematidea.htm 2. Laidlaw, M. 2013. <i>Praxelis (Praxelis clematidea) – 20 years down the track</i> . Weed Spotters' Network Queensland March:2-3.	1. "These seeds are spread short distances by wind and water" 2. "The species is wind-dispersed "
7.05	1. Weeds of Australia Biosecurity Queensland Edition https://keyserver.lucidcentral.org/weeds/data/media/Html/praxelis_clematidea.htm 2. CRC Weed Management. 2003. <i>Weed management guide: Praxelis (Praxelis clematidea)</i> . Cooperative Research Centre (CRC) for Australian Weed Management, Australia. 6 pp.	1. "These seeds are spread short distances by wind and water" 2. Occurs along streambanks (Laidlaw, 2013; Waterhouse, 2003). Spread by flood waters (Laidlaw, 2013). Spread by water (CRC Weed Management, 2003).
7.06	1. CRC Weed Management. 2003. <i>Weed management guide: Praxelis (Praxelis clematidea)</i> . Cooperative Research Centre (CRC) for Australian Weed Management, Australia. 6 pp. 2. Zhengyi, W., P. H. Raven, and H. Deyuan. 2014. <i>Flora of China</i> . Missouri Botanical Garden Press. http://flora.huh.harvard.edu/china/ . (Archived at PERAL).	1. "The seeds possess a pappus of barbed bristles that can help them attach to feathers" 2. " Pappus setae are coarsely barbellate "
7.07	CRC Weed Management. 2003. <i>Weed management guide: Praxelis (Praxelis clematidea)</i> . Cooperative Research Centre (CRC) for Australian Weed Management, Australia. 6 pp.	"The seeds possess a pappus of barbed bristles that can help them attach to animal fur"
7.08		no evidence
8.01	1. Randall, J. M. 2007. <i>The Introduced Flora of Australia and its Weed Status</i> . CRC for Australian Weed Management, Department of Agriculture and Food, Western Australia, Australia. 528 pp. 2. Pollock, S., A. Holland, W. D. Smith, and R. Price. 2004. <i>New alien weed for Queensland: Praxelis: Queensland Herbarium alert sheet</i> . Queensland Government, Queensland, Australia. 1 pp.	1. "It can produce large numbers of seeds in as little as three or four months after germinating." 2. "Each plant produces hundreds of small black seeds."
8.02		unknown
8.03	Allen, S. 2013. <i>Praxelis clematidea</i> Family Asteraceae. <i>Weed Futures Determining Current and Future Weed Threats</i> . Macquarie University and the National Climate Change Adaptation Research Facility (NCCARF). 20 June 2018	"3% glyphosate mixture used at Hilochee Wildlife Management Area has been effective, but <i>Praxelis</i> response is similar to natalgrass—easy to kill, but the population quickly rebounds from seed. Multiple treatments needed"

8.04	<p>CRC Weed Management. 2003. Weed management guide: Praxelis (Praxelis clematidea). Cooperative Research Centre (CRC) for Australian Weed Management, Australia. 6 pp. "1. DAFWA. 2012. Praxelis (Praxelis clematidea). Department of Agriculture and Food Western Australia (DAFWA), Perth, Australia. 2 pp. 2. English, B. 2014. Information on Praxelis clematidea. Personal communication to B. Waterhouse on February 17, 2014, from Bernie English, Senior Extension Officer (Beef), Queensland Department of Agriculture, Fisheries and Forestry, Australia. "</p>	<p>"Because it can reproduce vegetatively where branches come in contact with soil it is able to respond well to mutilation" "1. It ""is very tolerant of fire and quickly shoots back from ground level if there is moisture"" 2. "" It forms dense patches (Dickman, 2014; U.F. Herbarium, 2014), is self-compatible (Powell, 1985), and readily resprouts after fire (English, 2014)."</p>
8.05		<p>no evidence of biological control being used for Praxelis clematidea</p>