

Assessment date 09/07/2021 Prepared by Sara McCann

<i>Elaeocarpus decipiens</i> Hemsl. - (Japanese blueberry) 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	3	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	3	
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?	?	
3.01	Naturalized beyond native range	n	-1
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	?	
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	n	-1
4.05	Toxic to animals	n	0
4.06	Host for recognised pests and pathogens	n	0
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	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	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	n	0
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	?	
6.04	Self-compatible or apomictic	?	
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	?	
6.07	Minimum generative time (years)	?	
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n	-1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	n	-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)	?	
8.01	Prolific seed production	?	
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	?	
8.03	Well controlled by herbicides	?	
8.04	Tolerates, or benefits from, mutilation or cultivation	?	
8.05	Effective natural enemies present in U.S.	?	
Total Score			0
Implemented Pacific Second Screening			NO
Risk Assessment Results			LOW

section	# questions answered	satisfy minimum?
A		10 yes
B		10 yes
C		14 yes
total		34 yes

	Justification	Reference
1.01	1. This species is one of the most cultivated within its genus, however, we found no evidence of domestication.	1. <i>Elaeocarpus decipiens</i> Hemsl. Trees and Shrubs Online. https://treesandshrubsonline.org/articles/elaecarpus/elaecarpus-decipiens/ (Accessed 9/7/2021).
1.02		
1.03		
2.01	1-3. Suitable for climate zones 9, 10, and 11, and may tolerate zone 8b.	1. <i>Elaeocarpus decipiens</i> /Japanese Blueberry Tree. One Plant Guide. http://www.onlineplantguide.com/Plant-Details/3053 (Accessed 9/7/2021) 2. Japanese Blueberry Tree. Dave's Garden. https://davesgarden.com/guides/pf/go/79574/#b (Accessed 9/7/2021). 3. <i>Elaeocarpus decipiens</i> . Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/elaecarpusdecipiens.html (Accessed 9/7/2021).
2.02	No computer analysis performed.	
2.03	1. In its native range, the taxon is present in Cfa, Cwa, and Aw. 2. "Japanese Blueberry is adaptable to many climates..."	1. <i>Elaeocarpus decipiens</i> Hemsl. Global Biodiversity Information Facility. https://www.gbif.org/species/7291057 (Accessed 9/7/2021). 2. <i>Elaeocarpus decipiens</i> . NC State Extension. https://plants.ces.ncsu.edu/plants/elaecarpus-decipiens/ (Accessed 9/7/2021).
2.04	1-2. <i>Elaeocarpus</i> has established in zones of 5 inches to 100+ inches of precipitation.	1. Annual Total Precipitation. Center for Sustainability and the Global Environment. https://nelson.wisc.edu/sage/data-and-models/atlas/maps.php?datasetid=34&includerelatedlinks=1&dataset=34 (Accessed 9/7/2021). 2. <i>Elaeocarpus decipiens</i> Hemsl. Global Biodiversity Information Facility. https://www.gbif.org/species/7291057 (Accessed 9/7/2021)
2.05		
3.01	We found no evidence of naturalization beyond its native range. 1. There are only 3 occurrences outside the species native range, in Florida (2 occurrences; preserved specimen) and in Louisiana (1 occurrence; human observation).	1. <i>Elaeocarpus decipiens</i> Hemsl. Global Biodiversity Information Facility. https://www.gbif.org/species/7291057 (Accessed 9/7/2021)
3.02	1. Fruits can be messy when they drop. But we found no evidence it is considered a disturbance.	1. Talhouk S.N. , Fabian M., Dagher R. (2015) <i>Elaeocarpus decipiens</i> . AUB Landscape Plant Database. https://landscapeplants.aub.edu.lb/Plants/GetPDF/4b215ad7-7a02-409a-874c-11e97b3d853b (Accessed 9/7/2021).
3.03	No evidence.	
3.04	No evidence.	
3.05	1. <i>Elaeocarpus angustifolius</i> is considered invasive in Hawaii and the Samoa Islands.	
4.01	1. "Mature bark is smooth and dark grey to brown with prominent, raised tan and brown lenticels. New growth emerges as a bright green." Botanical descriptions do not indicate spines, thorns, or burrs.	1. Pascoe, M. (2017) <i>Elaeocarpus decipiens</i> (Japanese Blueberry Tree). World Plants. https://www.worldplants.ca/display.php?id=7889 (Accessed 9/7/2021).
4.02	We found no information.	
4.03	1-2. Not in the parasitic families.	1. Walker, R. (2012) Parasitic Plants Database. http://www.omnisterra.com/bot/pp_home.cgi (Accessed 9/7/2021) 2. Nickent, D. (2019) Parasitic Plant Classification. https://parasiticplants.siu.edu/ListParasites.html (Accessed 9/7/2021)

4.04	1. Deer consume foliage.	1. <i>Elaeocarpus decipiens</i> . NC State Extension. https://plants.ces.ncsu.edu/plants/elaecarpus-decipiens/ (Accessed 9/7/2021)
4.05	No evidence.	
4.06	No evidence.	
4.07	No evidence.	
4.08	1. Fire-resistant.	1. Zhou ZiGui; Luo FuYu; Zhou XueChang; Zheng LinShui; Liu WenHao; Wang GengShou; Fu QuanYan; Zhou ZhaoHeng; Xu YingShan; Yang YouPing. (1996) Study on the fire resistance of 23 tree species. <i>Journal of Zhejiang Forestry Science and Technology</i> , 16:16-24.
4.09	1. Prefers full sun or partial shade.	1. Japanese Blueberry Tree. Dave's Garden. https://davesgarden.com/guides/pf/go/79574/#b (Accessed 9/7/2021).
4.10	No evidence.	
4.11	1. Taxon is a tree.	1. <i>Elaeocarpus decipiens</i> . NC State Extension. https://plants.ces.ncsu.edu/plants/elaecarpus-decipiens/ (Accessed 9/7/2021)
4.12	1. No evidence.	
5.01	1. Prefers well-draining soils.	1. Ritter, M. (2011) Striving for Diversity: Japanese Blueberry Tree. <i>Pacific Horticulture</i> . https://www.pacifichorticulture.org/articles/striving-for-diversity-japanese-blueberry-tree/ (Accessed 9/7/2021).
5.02	1. Taxon is an <i>Elaeocarpus</i> , not <i>Poaceae</i> .	1. Hua, G and Ya, Tang. (2006) Typification of <i>Elaeocarpus decipiens</i> (<i>Elaeocarpaceae</i>) and Its New Variety from Taiwan, China. <i>Novon: A Journal for Botanical Nomenclature</i> , 16, 59-60. http://flora.huh.harvard.edu/FOC/china/novon/novo-16-01-59.pdf (Accessed 9/7/2021).
5.03	No evidence.	
5.04	No evidence.	
6.01	No evidence.	
6.02	1. "Propagation is usually from seed, but germination may be very slow and erratic, requiring a long soak in water to overcome germination inhibitors (Ellison 1999), or even physical violence to crack the drupe (Forest Farmers Association 2000)"	1. <i>Elaeocarpus decipiens</i> Hemsl. <i>Trees and Shrubs Online</i> . https://treesandshrubsonline.org/articles/elaecarpus/elaecarpus-decipiens/ (Accessed 9/7/2021).
6.03	No evidence.	
6.04	We found no information.	
6.05	1. "Bees and butterflies are attracted to flower nectar."	1. <i>Elaeocarpus decipiens</i> . NC State Extension. https://plants.ces.ncsu.edu/plants/elaecarpus-decipiens/ (Accessed 9/7/2021)
6.06	1. Reproduces through stem cuttings	1. <i>Elaeocarpus decipiens</i> . Arizona State University. http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/elaecarpusdecipiens.html (Accessed 9/7/2021).
6.07	No evidence.	
7.01	No evidence.	
7.02	1. Dispersed intentionally through plant trade/nurseries for ornamental purposes.	1. <i>Elaeocarpus decipiens</i> (Japanese Blueberry). Tree World Wholesale. https://www.treeworldwholesale.com/product/elaecarpus-decipiens-japanese-blue-berry/ (Accessed 9/8/2021)
7.03	No evidence	

7.04	No evidence. Seeds may be too large.	
7.05	No evidence.	
7.06	1. Seeds are fleshy. 2. Some species of <i>Elaeocarpus</i> is known to be facilitated by animals. 3. Seeds attract birds. Seeds are fleshy so we default to "yes".	1. <i>Elaeocarpus decipiens</i> Hemsl. Trees and Shrubs Online. https://treesandshrubsonline.org/articles/elaecarpus/elaecarpus-decipiens/ (Accessed 9/7/2021). 2. Phoon, S.N. (2015) Systematics and biogeography of <i>Elaeocarpus</i> (<i>Elaeocarpaceae</i>). PhD thesis, Cook University. https://researchonline.jcu.edu.au/43783/1/43783-phoon-2015-thesis.pdf (Accessed 9/8/2021). 3. Japanese blueberry tree. SelecTree. https://selectree.calpoly.edu/tree-detail/elaecarpus-sylvestris (Accessed 9/8/2021)
7.07	No evidence. Seeds do not possess attachment mechanisms.	
7.08	1. Seeds are fleshy. 2. Some species of <i>Elaeocarpus</i> is known to be facilitated by animals. 3. While deer do browse the foliage, it is unknown if <i>E. decipiens</i> seeds can survive gut passage.	1. <i>Elaeocarpus decipiens</i> Hemsl. Trees and Shrubs Online. https://treesandshrubsonline.org/articles/elaecarpus/elaecarpus-decipiens/ (Accessed 9/7/2021). 2. Phoon, S.N. (2015) Systematics and biogeography of <i>Elaeocarpus</i> (<i>Elaeocarpaceae</i>). PhD thesis, Cook University. https://researchonline.jcu.edu.au/43783/1/43783-phoon-2015-thesis.pdf (Accessed 9/8/2021). 3. <i>Elaeocarpus decipiens</i> . NC State Extension. https://plants.ces.ncsu.edu/plants/elaecarpus-decipiens/ (Accessed 9/7/2021)
8.01	No evidence on seed production.	
8.02	No evidence.	
8.03	No evidence.	
8.04	No evidence.	
8.05	No evidence.	