

**Family:** *Rosaceae*

**Taxon:** *Rhaphiolepis umbellata*

**Synonym:** *Laurus umbellata* Thunb, (basionym)  
*Rhaphiolepis japonica* Seibold & Zucc.

**Common Name:** Japanese hawthorn  
yedda hawthorn

<b>Questionnaire :</b>	current 20090513	<b>Assessor:</b>	Patti Clifford	<b>Designation:</b> EVALUATE
<b>Status:</b>	Assessor Approved	<b>Data Entry Person:</b>	Patti Clifford	<b>WRA Score</b> 0
101	Is the species highly domesticated?		y=-3, n=0	n
102	Has the species become naturalized where grown?		y=1, n=-1	
103	Does the species have weedy races?		y=1, n=-1	
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"		(0-low; 1-intermediate; 2-high) (See Appendix 2)	Low
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate
203	Broad climate suitability (environmental versatility)		y=1, n=0	n
204	Native or naturalized in regions with tropical or subtropical climates		y=1, n=0	n
205	Does the species have a history of repeated introductions outside its natural range?		y=-2, ?=-1, n=0	n
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	y
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	n
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	n
405	Toxic to animals		y=1, n=0	n
406	Host for recognized pests and pathogens		y=1, n=0	
407	Causes allergies or is otherwise toxic to humans		y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		y=1, n=0	
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	y
411	Climbing or smothering growth habit		y=1, n=0	n

412	Forms dense thickets	y=1, n=0	
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	
706	Propagules bird dispersed	y=1, n=-1	y
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m <sup>2</sup> )	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: EVALUATE

WRA Score 0

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**Supporting Data:**

101	2011. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence of domestication that reduces invasive characteristics.
102	2011. WRA Specialist. Personal Communication.	[Has the species become naturalized where grown?] NA
103	2011. WRA Specialist. Personal Communication.	[Does the species have weedy races?] NA
201	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical?(0) Low] "Native range: Asia-temperate: China -Zhejiang; Japan -Honshu, Kyushu, Ryukyu Islands, Shikoku; South Korea-
202	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Quality of climate match data? (1) Intermediate] "Native range: Asia-temperate: China -Zhejiang; Japan -Honshu, Kyushu, Ryukyu Islands, Shikoku; South Korea-
203	2011. Dave's Garden. Plant Files: Indian hawthorn, yedda hawthorne, yeddo hawthorn, Rhabiolepis umbellata. <a href="http://davesgarden.com/guides/pf/go/57861/">http://davesgarden.com/guides/pf/go/57861/</a>	[Broad climate suitability (environmental versatility)? No] USDA zones: 7a-11.
203	2011. Floridata. Rhabiolepis umbellata. <a href="http://www.floridata.com/ref/r/rhap_umb.cfm">http://www.floridata.com/ref/r/rhap_umb.cfm</a>	[Broad climate suitability (environmental versatility)? No] USDA Zones: 8-11.
204	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Native or naturalized in regions with tropical or subtropical climates? No] "Native range: Asia-temperate: China -Zhejiang; Japan -Honshu, Kyushu, Ryukyu Islands, Shikoku; South Korea-
205	2011. WRA Specialist. Personal Communication.	[Does the species have a history of repeated introductions outside its natural range? No] No evidence of repeated introductions.
301	2011. WRA Specialist. Personal Communication.	[Naturalized beyond native range? No] No evidence.
302	2010. Waitakere City Council. Invasive or Environmental Weeds of Waitakere. <a href="http://www.waitakere.govt.nz/CnlSer/pw/plantweed/pdf/weedlist-env-inv.pdf">http://www.waitakere.govt.nz/CnlSer/pw/plantweed/pdf/weedlist-env-inv.pdf</a>	[Garden/amenity/disturbance weed? Yes] Rhabiolepis umbellata is considered an environmental weed in Waitakere, New Zealand. However no mention of impact or control.
303	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Agricultural/forestry/horticultural weed? No] No evidence of impact and control in agricultural situations.
304	2010. Waitakere City Council. Invasive or Environmental Weeds of Waitakere. <a href="http://www.waitakere.govt.nz/CnlSer/pw/plantweed/pdf/weedlist-env-inv.pdf">http://www.waitakere.govt.nz/CnlSer/pw/plantweed/pdf/weedlist-env-inv.pdf</a>	[Environmental weed? No] Rhabiolepis umbellata is considered an environmental weed in Waitakere, New Zealand. [scored 3.02. no mention of impact or control]
305	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Congeneric weed? No] No evidence of a congeneric weed.
401	2009. Cuizhi, G./Spongberg, S.A.. Flora of China Vol. 9 Rhabiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Produces spines, thorns or burrs? No] "Shrubs or small trees, 2–4 m tall. Branchlets blackish brown, terete, initially brown pubescent, glabrescent. Stipules not seen; petiole 5–10 mm, subglabrous; leaf blade greenish abaxially, dark green adaxially, narrowly elliptic, ovate, or obovate (2–)4–10 × (1.2–)2–4 cm, thickly leathery, reticulate veins conspicuous abaxially, adaxially slightly lustrous, base cuneate, margin entire or remotely crenate, slightly revolute, apex obtuse to slightly acute."
402	2011. WRA Specialist. Personal Communication.	[Allelopathic?] Unknown.
403	2009. Cuizhi, G./Spongberg, S.A.. Flora of China Vol. 9 Rhabiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Parasitic? No]. Rosaceae.

404	2002. Dirr, M.. Dirr's trees and shrubs for warm climates: an illustrated encyclopedia. Timber Press, Portland, OR	[Unpalatable to grazing animals? No] <i>Rhaphiolepis umbellata</i> suffers from deer browsing. It is occasionally referred to as deer candy.
405	2011. National Center for Biotechnology Information. PubMed. U.S. National Library of Medicine, Bethesda, Maryland <a href="http://www.ncbi.nlm.nih.gov/">http://www.ncbi.nlm.nih.gov/</a>	[Toxic to animals? No] No evidence of toxicity.
405	2011. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Toxic to animals? No] No evidence of toxicity.
406	2011. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens?] Unknown.
407	2011. National Center for Biotechnology Information. PubMed. U.S. National Library of Medicine, Bethesda, Maryland <a href="http://www.ncbi.nlm.nih.gov/">http://www.ncbi.nlm.nih.gov/</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2011. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
408	2011. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems?] Unknown.
409	2011. Floridata. <i>Rhaphiolepis umbellata</i> . <a href="http://www.floridata.com/ref/r/rhap_umb.cfm">http://www.floridata.com/ref/r/rhap_umb.cfm</a>	[Is a shade tolerant plant at some stage of its life cycle?] Sun to part shade.
409	2011. Plants For A Future Database. <i>Rhaphiolepis umbellata</i> - (Thunb.)Makino.. <a href="http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata">http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata</a>	[Is a shade tolerant plant at some stage of its life cycle?] Prefers sunny edge, dappled shade.
410	2011. Plants For A Future Database. <i>Rhaphiolepis umbellata</i> - (Thunb.)Makino.. <a href="http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata">http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] The plant prefers light (sandy), medium (loamy) and heavy (clay) soils and requires well-drained soil. The plant prefers acid, neutral and basic (alkaline) soils.
411	2009. Cuizhi, G./Spongberg, S.A.. Flora of China Vol. 9 <i>Rhaphiolepis umbellata</i> . <a href="http://www.efloras.org">www.efloras.org</a> ,	[Climbing or smothering growth habit? No] Shrubs or small trees, 2–4 m tall.
412	2011. Plants For A Future Database. <i>Rhaphiolepis umbellata</i> - (Thunb.)Makino.. <a href="http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata">http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata</a>	[Forms dense thickets?] [possibly] Habitat: thickets near the seashore. Can be used as an informal hedge.
412	2011. WRA Specialist. Personal Communication.	[Forms dense thickets?] Unknown.
501	2009. Cuizhi, G./Spongberg, S.A.. Flora of China Vol. 9 <i>Rhaphiolepis umbellata</i> . <a href="http://www.efloras.org">www.efloras.org</a> ,	[Aquatic? No] Terrestrial; shrub.
502	2009. Cuizhi, G./Spongberg, S.A.. Flora of China Vol. 9 <i>Rhaphiolepis umbellata</i> . <a href="http://www.efloras.org">www.efloras.org</a> ,	[Grass? No] Rosaceae.
503	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Nitrogen fixing woody plant? No] <i>Rhaphiolepis</i> (Rosaceae)
504	2009. Cuizhi, G./Spongberg, S.A.. Flora of China Vol. 9 <i>Rhaphiolepis umbellata</i> . <a href="http://www.efloras.org">www.efloras.org</a> ,	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] Shrub.
601	2011. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	2011. Floridata. <i>Rhaphiolepis umbellata</i> . <a href="http://www.floridata.com/ref/r/rhap_umb.cfm">http://www.floridata.com/ref/r/rhap_umb.cfm</a>	[Produces viable seed? Yes] Propagate by seed and cuttings.
603	2011. WRA Specialist. Personal Communication.	[Hybridizes naturally?] Unknown

604	2011. WRA Specialist. Personal Communication.	[Self-compatible or apomictic?] Unknown
605	2011. Plants For A Future Database. Raphiolepis umbellata - (Thunb.)Makino.. <a href="http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata">http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata</a>	[Requires specialist pollinators? No] The flowers are hermaphrodite (have both male and female organs) and are pollinated by Insects.
606	2011. WRA Specialist. Personal Communication.	[Reproduction by vegetative fragmentation? No] Propagate by seed and cuttings.
607	2011. Plants For A Future Database. Raphiolepis umbellata - (Thunb.)Makino.. <a href="http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata">http://www.faf.org/user/Plant.aspx?LatinName=Rhaphiolepis%20umbellata</a>	[Minimum generative time (years)?] Slow-growing.
607	2011. WRA Specialist. Personal Communication.	[Minimum generative time (years)?] Unknown.
701	2011. WRA Specialist. Personal Communication.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] No evidence of dispersal through human activities and no adaptations for unintentional dispersal.
702	2011. Dave's Garden. Plant Files: Indian hawthorn, yedda hawthorne, yeddo hawthorn, Raphiolepis umbellata. <a href="http://davesgarden.com/guides/pf/go/57861/">http://davesgarden.com/guides/pf/go/57861/</a>	[Propagules dispersed intentionally by people? Yes] Seven members of the Dave's Garden online plant exchange have or want Raphiolepis umbellata.
703	2011. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence of produce contamination.
704	2009. Cuizhi, G./Spongberb, S.A.. Flora of China Vol. 9 Raphiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Propagules adapted to wind dispersal? No] "Pome blackish purple, globose, 7–10 mm in diam., glaucescent; fruiting pedicel 2–5 mm, glabrous."
705	2009. Cuizhi, G./Spongberb, S.A.. Flora of China Vol. 9 Raphiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Propagules water dispersed?] Unknown.
706	2009. Cuizhi, G./Spongberb, S.A.. Flora of China Vol. 9 Raphiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Propagules bird dispersed? Yes] "Pome blackish purple, globose, 7–10 mm in diam., glaucescent; fruiting pedicel 2–5 mm, glabrous."
707	2009. Cuizhi, G./Spongberb, S.A.. Flora of China Vol. 9 Raphiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Propagules dispersed by other animals (externally)? No] "Pome blackish purple, globose, 7–10 mm in diam., glaucescent; fruiting pedicel 2–5 mm, glabrous." [no adaptation for external attachment]
708	2009. Cuizhi, G./Spongberb, S.A.. Flora of China Vol. 9 Raphiolepis umbellata. <a href="http://www.efloras.org">www.efloras.org</a> ,	[Propagules survive passage through the gut? Yes] "Pome blackish purple, globose, 7–10 mm in diam., glaucescent; fruiting pedicel 2–5 mm, glabrous."
801	2011. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m2)?] Unknown.
802	2011. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)?] Unknown.
803	2011. WRA Specialist. Personal Communication.	[Well controlled by herbicides?] Unknown.
804	2011. WRA Specialist. Personal Communication.	[Tolerates, or benefits from, mutilation, cultivation, or fire?] Unknown.
805	2011. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)?] Unknown.