Family: ***Vitaceae***

Taxon: ***Cissus quadrangularis***

Synonym: *Vitis quadrangularis (L.) Wall. ex Wight* ***Common Name*** veldt-grape
winged treebine

Questionaire : current 20090513 **Assessor:** Patti Clifford **Designation:** H(HPWRA)
Status: Assessor Approved **Data Entry Person:** Patti Clifford **WRA Score 12**

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)**	**High**
202	**Quality of climate match data**	**(0-low; 1-intermediate; 2-high) (See Appendix 2)**	**High**
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**	**y**
205	**Does the species have a history of repeated introductions outside its natural range?**	**y=-2, ?=-1, n=0**	
301	**Naturalized beyond native range**	**y = 1*multiplier (see Appendix 2), n= question 205**	**y**
302	**Garden/amenity/disturbance weed**	**n=0, y = 1*multiplier (see Appendix 2)**	**n**
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)**	**y**
305	**Congeneric weed**	**n=0, y = 1*multiplier (see Appendix 2)**	**y**
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**	**y**
405	**Toxic to animals**	**y=1, n=0**	
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**	**n**
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**	**y**

412	Forms dense thickets	y=1, n=0	n
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	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	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	n
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/m2)	y=1, n=-1	n
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: H(HPWRA) **WRA Score** 12

Supporting Data:

101	2010. WRA Specialist. Personal Communication.	No evidence.
201	2010. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	Native to: Africa - Egypt, Chad, Eritrea, Ethiopia, Somalia, Sudan, Kenya, Tanzania, Uganda, Cameroon, Central African Republic, Zaire, Benin, Cote D'Ivoire, Gambia, Mali Nigeria, Senegal, Angola, Malawi, Mozambique, Zimbabwe, South Africa, Swaziland; Asia-Temperate - Oman, Saudi Arabia, Yemen; Asia Tropical - Bangladesh, India, Pakistan, Sri Lanka, India, Myanmar, Thailand, Indonesia, Malaysia, Philippines.
202	2010. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	Native to: Africa - Egypt, Chad, Eritrea, Ethiopia, Somalia, Sudan, Kenya, Tanzania, Uganda, Cameroon, Central African Republic, Zaire, Benin, Cote D'Ivoire, Gambia, Mali Nigeria, Senegal, Angola, Malawi, Mozambique, Zimbabwe, South Africa, Swaziland; Asia-Temperate - Oman, Saudi Arabia, Yemen; Asia Tropical - Bangladesh, India, Pakistan, Sri Lanka, India, Myanmar, Thailand, Indonesia, Malaysia, Philippines.
203	2009. Dave's Garden. PlantFiles: veldt grape Cissus quadrangularis. Dave's Garden, http://davesgarden.com/guides/pf/go/54942/	USDA zone: 11.
203	2009. Desert Tropicals. Veld grape Cissus quadrangularis L.. Desert Tropicals, http://www.desert-tropicals.com/Plants/Vitaceae/Cissus_quadrangularis.html	USDA zones: 11-12.
204	2010. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	Native to: Africa - Egypt, Chad, Eritrea, Ethiopia, Somalia, Sudan, Kenya, Tanzania, Uganda, Cameroon, Central African Republic, Zaire, Benin, Cote D'Ivoire, Gambia, Mali Nigeria, Senegal, Angola, Malawi, Mozambique, Zimbabwe, South Africa, Swaziland; Asia-Temperate - Oman, Saudi Arabia, Yemen; Asia Tropical - Bangladesh, India, Pakistan, Sri Lanka, India, Myanmar, Thailand, Indonesia, Malaysia, Philippines.
205	2003. Binggeli, P.. Introduced and invasive plants in The natural history of Madagascar. University of Chicago Press, Chicago	Literature does not indicate repeated introductions. However consider the following: Cissus quadrangularis is found in degraded gallery forest in the south of the island of Madagascar along the Mandrare and Menarandra Rivers. This species smothers trees and prevents regeneration. It is a major problem in the forest of the Réserve Privée de Berenty. Regular control has been carried out, but eradication is considered to be impossible without serious damage to the native vegetation. This species is a serious threat to other lowland riparian forests.
205	2004. Vos, P.. Case studies on the status of invasive woody plant species in the western Indian Ocean 2. The Comoros Archipelago (Union of the Comoros and Mayotte). Forestry Department, Food and Agriculture Organization of the United Nations, Rome http:/	Cissus quadrangularis is an invasive weed in the Comoros Archipelago, where it threatens native biodiversity
205	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Grown as a novelty houseplant on mainland U.S.A. Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
301	2003. Binggeli, P.. Introduced and invasive plants in The natural history of Madagascar. University of Chicago Press, Chicago	Cissus quadrangularis is found in degraded gallery forest in the south of the island of Madagascar along the Mandrare and Menarandra Rivers. This species smothers trees and prevents regeneration. It is a major problem in the forest of the Réserve Privée de Berenty. Regular control has been carried out, but eradication is considered to be impossible without serious damage to the native vegetation. This species is a serious threat to other lowland riparian forests.
302	2007. Randall, R.P.. Global Compendium of Weeds. http://www.hear.org/gcw/	No evidence.
303	2007. Randall, R.P.. Global Compendium of Weeds. http://www.hear.org/gcw/	No evidence.
304	2003. Binggeli, P.. Introduced and invasive plants in The natural history of Madagascar. University of Chicago Press, Chicago	Cissus quadrangularis is found in degraded gallery forest in the south of the island of Madagascar along the Mandrare and Menarandra Rivers. This species smothers trees and prevents regeneration. It is a major problem in the forest of the Réserve Privée de Berenty. Regular control has been carried out, but eradication is considered to be impossible without serious damage to the native vegetation. This species is a serious threat to other lowland riparian forests.

304	2004. Vos, P.. Case studies on the status of invasive woody plant species in the western Indian Ocean 2. The Comoros Archipelago (Union of the Comoros and Mayotte). Forestry Department, Food and Agriculture Organization of the United Nations, Rome http:/	Cissus quadrangularis is an invasive weed in the Comoros Archipelago, where it threatens native biodiversity.
305	1996. Casamayour, R./Prieto, V.. Some observations on Cissus sicyoides (C. sicyoides) L. and its control in citrus crops. (Algunas observaciones sobre Cissus sicyoides L. su control en el cultivo de los citricos). Centro Agricola. 23: 16-24.	Cissus sicyoides is a weed in citrus crop in Cuba and subjected to control.
305	2003. French, J.V./Lonard, R.I./Everitt, J.H.. Cissus sicyoides C. Linnaeus (Vitaceae), a potential pest in the lower Rio Grande Valley, Texas. Subtropical Plant Science. 55: 72-74.	Cissus sicyoides is a weed in citrus crops in Texas, where it is manually removed. It is also invading a brushy area along a canal network.
401	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	A climber with succulent 4-winged stems that are deeply constricted at the nodes. It is usually leafless at maturity. The leaves are kidney-shaped to broadly heart-shaped, entire or 3-5 lobed
402	2010. WRA Specialist. Personal Communication.	Unknown.
403	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Not parasitic.
404	2004. Okoti, M./Ng'ethe, J.C./Ekaya, W.N., Mbuvi, D.M.. Land use, ecology and socio-economic changes in a pastoral production system. Journal of Human Ecology. 16: 83-89.	Much of the range in an area of Kakuma District of Kenya was covered with unpalatable plants of Cissus quadrangularis.
405	1985. Barakat, S.E.M./Adam, S.E.I./Maglad, M.A./Wasfi, I.A.. Effects of Cissus quadrangularis on goats and sheep in Sudan.. Revue-d'Elevage-et-de-Medecine-Veterinaire-des-Pays-Tropicau. 38: 185-194.http://www.fao.org/ag/AGA/AGAP/FRG/afris/Absts/291.HTM	Cissus quadrangularis is a medicinal plant in many African countries and is suspected of causing significant loss of livestock in the Sudan. The young animals were fed by stomach tube, ground stem solutions.
405	1985. Burkill, H.M.. Useful plants of West Tropical Africa vol 5. Royal Botanic Gardens, Kew http://plants.jstor.org/upwta/5_553	The whole plant, stem, woody parts, stem-ash are used for fish poisons.
405	2003. Chaudhary, B.L./Katewa, S.S./Jain, A./Galav, P.. Fodder plants of Mewar region of Rajasthan. Range Management and Agroforestry. 24: 18-22.	"An ethno botanical survey of fodder plants in Mewar region, Rajasthan, India, was conducted during the different seasons of 1998-2001. The ethnofodder uses of 60 plant species belonging to 32 families in Mewar region, Rajasthan, is presented. Certain species of fodder plants from the region were found under exploited. These species include: Acacia leucophloea, Aegle marmelos, Bauhinia racemosa, Bombax ceiba, Phoenix dactylifera, Ehretia laevis, Anethum graveolens, Ceropegia bulbosa, Celosia argentea, Cissus quadrangula, Ensete superbum, Lepidium sativum, Nymphaea nauchali, Sida acuta, Trichosanthes anguina [T. cucumerina] and Coix lacryma-jobi".
406	2010. WRA Specialist. Personal Communication.	Unknown.
407	1985. Burkill, H.M.. Useful plants of West Tropical Africa vol 5. Royal Botanic Gardens, Kew http://plants.jstor.org/upwta/5_553	Leaf and stem are used for medicines: cutaneous, subcutaneous parasitic infection; lactation stimulants (incl. veterinary). The root is used for pulmonary troubles, dropsy, swellings, oedema, gout and as a pain killer. The sap is used as a drink and the young shoots are used for sauces, condiments, spices, flavourings.
407	2005. Jainu, M./Shyamala Devi, C.S.. In vitro and in vivo evaluation of free-radical scavenging potential of Cissus quadrangularis. Pharmaceutical Biology. 43: 773-779.	Cissus quadrangularis (L.) (Vitaceae) is commonly known as "bone setter"; the plant is referred to as asthisamdhani in Sanskrit. The stout fleshy quandrangular stem of Cissus quadrangularis is an edible plant found throughout the hotter parts of India. Malaysia. West Africa, and Ceylon. The plant is frequently used as a common food item in India. The plant is used medicinally in the indigenous systems of medicine both in the Ayurvedic and Unani systems. The stem is alterative, anthelmintic. dyspeptic, digestive, tonic, analgesic in eye and ear diseases, used for irregular menstruation, asthma, piles, tumors, fractures of bones, wounds, and scurvy.

407	2007. Panthong, A./Supraditaporn, W./Kanjanapothi, D./Taesotikul, T./Reutrakul, V.. Analgesic, anti-inflammatory and venotonic effects of Cissus quadrangularis Linn.. Journal of Ethnopharmacology. 110: 264-270.	Cissus quadrangularis, a medicinal plant indigenous to Asia and Africa, is used for many ailments, especially for the treatment of hemorrhoid.
408	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Succulent stems.
409	2009. Dave's Garden. PlantFiles: veldt grape Cissus quadrangularis. Dave's Garden, http://davesgarden.com/guides/pf/go/54942/	Light shade.
409	2009. Desert Tropicals. Veld grape Cissus quadrangularis L.. Desert Tropicals, http://www.desert-tropicals.com/Plants/Vitaceae/Cissus_quadrangularis.html	Full sun to light shade.
410	2009. Dave's Garden. PlantFiles: veldt grape Cissus quadrangularis. Dave's Garden, http://davesgarden.com/guides/pf/go/54942/	Soil pH requirements: 6.1 to 6.5 (mildly acidic), 6.6 to 7.5 (neutral), 7.6 to 7.8 (mildly alkaline)
411	1985. Burkill, H.M.. Useful plants of West Tropical Africa vol 5. Royal Botanic Gardens, Kew http://plants.jstor.org/upwta/5_553	A lianescent plant, climbing 8 - 10 m over forest/jungle vegetation, or sprawling in the absence of any support on the ground.
411	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Cissus quadrangularis is a climber (vine).
411	2008. Gairola, Y./Tamta, B.P.. Hadjore (Cissus quadrangularis): an indigenous drug of India. International Journal of Forest Usufructs Management. 9: 34-40.	Perennial climber.
412	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Climbing vine.
501	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Terrestrial.
502	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Vitaceae.
503	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	A climber with succulent, conspicuously 4-winged stems up to 15' long that are deeply constricted at the nodes.
504	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	A climber with succulent, conspicuously 4-winged stems up to 15' long that are deeply constricted at the nodes.
601	2008. Gairola, Y./Tamta, B.P.. Hadjore (Cissus quadrangularis): an indigenous drug of India. International Journal of Forest Usufructs Management. 9: 34-40.	No evidence (1) Cissus quadrangularis occurs throughout the warmer parts of India and Ceylon and is distributed from tropical to sub-tropical regions.
602	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	All Cissus are easily propagated from cuttings, layering, and seeds.
602	2009. Dave's Garden. PlantFiles: veldt grape Cissus quadrangularis. Dave's Garden, http://davesgarden.com/guides/pf/go/54942/	Propagation from herbaceous stem cuttings, stooling or mound layering. This site gives this general statement. Plant does not set seed, flowers are sterile, or plants will not come true from seed.
604	2010. WRA Specialist. Personal Communication.	Unknown.

605	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Flowers 4-merous, bisexual. (insect pollination)
606	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Easily propagated by stem pieces that root readily.
606	2007. Timmons, S.A./ Gerrath, J.M./Posluszny, U.. Morphological and anatomical development in the Vitaceae. X. Comparative ontogeny and phylogenetic implications of Cissus quadrangularis L. Canadian journal of botany = Revue canadienne de botanique. 85: 8	Cissus quadrangularis produces adventitious roots at nodes and is easily propagated asexually by cutting or layering. Shoots of C. quadrangularis are easily detached from the plant at the nodes (a potential means of vegetative propagation) and the apex along with unexpanded nodes commonly aborts. The supernumerary buds are an essential means of continued growth. Since they form towards the shoot and away from the leaf, when part of the shoot is removed at the node, there is a lot of new space created towards which the buds can develop.
607	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Easily propagated by stem pieces that root readily.
607	2007. Timmons, S.A./ Gerrath, J.M./Posluszny, U.. Morphological and anatomical development in the Vitaceae. X. Comparative ontogeny and phylogenetic implications of Cissus quadrangularis L. Canadian journal of botany = Revue canadienne de botanique. 85: 8	Cissus quadrangularis produces adventitious roots at nodes and is easily propagated asexually by cutting or layering. Shoots of C. quadrangularis are easily detached from the plant at the nodes (a potential means of vegetative propagation) and the apex along with unexpanded nodes commonly aborts. The supernumerary buds are an essential means of continued growth. Since they form towards the shoot and away from the leaf, when part of the shoot is removed at the node, there is a lot of new space created towards which the buds can develop.
701	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Not growing in heavily trafficked areas. Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Grown as a novelty houseplant on mainland U.S.A. Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
702	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
702	2008. Gairola, Y./Tamta, B.P.. Hadjore (Cissus quadrangularis): an indigenous drug of India. International Journal of Forest Usufructs Management. 9: 34-40.	Cissus quadrangularis is often cultivated in gardens in India. "It is an important and widely used indigenous drug used in India, Burma, and Ceylon."
702	2009. Green Foundation. Medicinal plants nursery. Green Foundation, http://www.gfindia.org/aboutgf.html	The Green Foundation has Cissus quadrangularis available from its medicinal plants nursery.
702	2009. Spicewood Spines Succulent Nursery and Art Gallery. Cissus quadrangularis. Spicewood Spines Succulent Nursery and Art Gallery,	Spicewood Spines nursery in Texas sells Cissus quadrangularis.
703	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	No evidence. Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
704	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	[No adaptation for wind dispersal.] Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
705	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	(1) Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
706	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	The flowers are tiny, green tinged yellow or pink, followed by acrid, reddish black berries 0.25-0.33" in diameter.

707	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	No means of external attachment. (1) Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
708	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
801	2005. Staples, G. W./Herbst, D. R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI.	Acrid reddish black berries 0.25-0.33" in diameter. Seed usually 1 (rarely 2-4). Cissus quadrangularis thrives outdoors in hot, dry, sunny leeward areas and has escaped from cultivation near Koko Crater, Oahu.
802	2008. Gairola, Y./Tamta, B.P.. Hadjore (Cissus quadrangularis): an indigenous drug of India. International Journal of Forest Usufructs Management. 9: 34-40.	Unknown- Flowering and fruiting occur in January - February in southern India and May - August in northern India.
803	2010. WRA Specialist. Personal Communication.	Unknown.
804	2010. WRA Specialist. Personal Communication.	Unknown.
805	2010. WRA Specialist. Personal Communication.	Unknown.