

Taxon: <i>Cyphostemma juttae</i> (Dinter & Gilg) Desc.	Family: Vitaceae
Common Name(s): Namibian grape tree grape wild grape	Synonym(s): <i>Cissus juttae</i> Dinter & Gilg

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 14 Sep 2016
WRA Score: -2.0	Designation: L	Rating: Low Risk

Keywords: Succulent Tree, Ornamental, Toxic, Fire-Resistant, Fleshy-Fruit

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
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	y
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)	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)	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		
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	y
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	y
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		

Qsn #	Question	Answer Option	Answer
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	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		
604	Self-compatible or apomictic		
605	Requires specialist pollinators		
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	>3
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		
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut		
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	[No evidence of domestication] "Rationale: Known from between 20 and 30 sub-populations and locations; no significant continuing decline in number of mature plants known. Habitat: North-facing rocky slopes of dolomite hills and mountains; open woodland; shrubland; grassland; well drained rocky, sandy-loam soil and sand (WIND, 2002); 1000–1200 m. Threats: Collecting and pachycaul trade potential threats but extent thereof unknown: sought after by succulent collectors, gardeners, landscapers. Additional notes: Locally very rare, occasional or common; stem sap said to be poisonous and has formed an ingredient in bushmen arrow poison; reasonable recruitment observed in one sub-population (WIND, 2002)."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2016. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2016. Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 14 Sep 2016]	"Native: Africa Southern Africa: Namibia"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 14 Sep 2016]	

Qsn #	Question	Answer
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Dave's Garden. 2016. Succulent Grape - <i>Cyphostemma juttae</i> . http://davesgarden.com/guides/pf/go/57851/ . [Accessed 14 Sep 2016]	"Hardiness: USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)"

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 14 Sep 2016]	"Native: Africa Southern Africa: Namibia"

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Dave's Garden. 2016. Succulent Grape - <i>Cyphostemma juttae</i> . http://davesgarden.com/guides/pf/go/57851/ . [Accessed 14 Sep 2016]	"This plant has been said to grow in the following regions: Apache Junction, Arizona Bostonia, California Carlsbad, California Clayton, California Encino, California Fallbrook, California Glen Avon, California Hayward, California Huntington Beach, California Long Beach, California Los Angeles, California Norwalk, California Orange, California Reseda, California San Leandro, California Simi Valley, California Thousand Oaks, California (2 reports) Tulare, California Vista, California Altamonte Springs, Florida"

301	Naturalized beyond native range	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence
	Wagner, W.L., Herbst, D.R.& Lorence, D.H. 2016. Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. http://botany.si.edu/ . [Accessed 14 Sep 2016]	No evidence to date

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

303	Agricultural/forestry/horticultural weed	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

305	Congeneric weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Voigt, W. 2002. <i>Cyphostemma juttae</i> (Dinter & Gilg) Desc. PlantZAfrica. SANBI. http://www.plantzafrica.com/plantcd/cyphastemjut.htm . [Accessed 14 Sep 2016]	"The tree grape is a slow-growing succulent with a huge swollen trunk (caudiciform)." ... "Leaves are large, shiny, ovate, fleshy and toothed and fall off during the winter months. Flowers are inconspicuous, but the large grape-like bunches of bright wine-coloured berries near the end of summer make this succulent a true showpiece for container and garden alike."

402	Allelopathic	n
	Source(s)	Notes
	WRA Specialist. 2016. Personal Communication	Unknown

403	Parasitic	n
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	"Erect, prostrate or climbing shrubs and herbs, sometimes with fleshy stems; hermaphrodite; tendrils leaf-opposed or 0, without adhesive disks." [Vitaceae. Generic Description of <i>Cyphostemma</i> . No evidence]

Qsn #	Question	Answer
404	Unpalatable to grazing animals	y
	Source(s)	Notes
	LLIFLE - Encyclopedia of living forms. 2016. <i>Cyphostemma juttae</i> . http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Vitaceae/11031/Cyphostemma_juttae . [Accessed 14 Sep 2016]	"The plant's acrid taste and poisonous qualities help keep hungry animals away."

405	Toxic to animals	y
	Source(s)	Notes
	Lamb, B. M. (2010). Succulents that Cope with Climatic Diversity: Part 1. <i>Cyphostemma juttae</i> & <i>Oreocereus doelzianus</i> variety <i>sericatus</i> . <i>Cactus and Succulent Journal</i> , 82(1), 16-18	"The poisonous fruits remain on the plant intact for lengthy periods, as birds will not touch them. Although they look superficially similar to the closely related grape, eating the fruit of <i>C. juttae</i> is not advisable!"

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	The Garden Geeks. 2016. <i>Cyphostemma juttae</i> . http://thegardengeeks.net/plant-guide/5113-cyphostemma_juttae . [Accessed 14 Sep 2016]	"Pests and Diseases: Mealybugs"

407	Causes allergies or is otherwise toxic to humans	y
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	"stem sap said to be poisonous and has formed an ingredient in bushmen arrow poison"
	Lamb, B. M. (2010). Succulents that Cope with Climatic Diversity: Part 1. <i>Cyphostemma juttae</i> & <i>Oreocereus doelzianus</i> variety <i>sericatus</i> . <i>Cactus and Succulent Journal</i> , 82(1), 16-18	"The poisonous fruits remain on the plant intact for lengthy periods, as birds will not touch them. Although they look superficially similar to the closely related grape, eating the fruit of <i>C. juttae</i> is not advisable!"
	LLIFLE - Encyclopedia of living forms. 2016. <i>Cyphostemma juttae</i> . http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Vitaceae/11031/Cyphostemma_juttae . [Accessed 14 Sep 2016]	"Warning: The grape-like berries are very decorative but unlike the edible grape they are poisonous."

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	"Short, thickset succulent tree." [Succulent habit resists fire]
	Dave's Garden. 2016. Succulent Grape - <i>Cyphostemma juttae</i> . http://davesgarden.com/guides/pf/go/57851/ . [Accessed 14 Sep 2016]	"This plant is fire-retardant"

Qsn #	Question	Answer
409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	LLIFLE - Encyclopedia of living forms. 2016. <i>Cyphostemma juttae</i> . http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Vitaceae/11031/Cyphostemma_juttae . [Accessed 14 Sep 2016]	"Exposure: It like lots of sun throughout the year." ... "it may need some afternoon shade in hot climates to avoid leaf burn."
	Dave's Garden. 2016. Succulent Grape - <i>Cyphostemma juttae</i> . http://davesgarden.com/guides/pf/go/57851/ . [Accessed 14 Sep 2016]	"Sun Exposure: Full Sun"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Voigt, W. 2002. <i>Cyphostemma juttae</i> (Dinter & Gilg) Desc. PlantZAfrica. SANBI. http://www.plantzafrica.com/plantcd/cyphastemjut.htm . [Accessed 14 Sep 2016]	"These plants fare best in a loamy or sandy soil where drainage is optimal. Adding plenty of river sand and general compost will greatly improve drainage in heavy clay soils. Soil quality can also be improved dramatically by lightly working some bone meal into the soil. Although smelly, the effect on soils is quite remarkable."
	Lamb, B. M. (2010). Succulents that Cope with Climatic Diversity: Part 1. <i>Cyphostemma juttae</i> & <i>Oreocereus doelzianus</i> variety <i>sericatus</i> . <i>Cactus and Succulent Journal</i> , 82(1), 16-18	"They are not at all fussy about soil, and I have always considered them easy to grow."

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Jean, R. V. & Barabé, D. (eds.). 1998. <i>Symmetry in Plants</i> . World Scientific, Singapore	" <i>C. juttae</i> is a succulent shrub-like plant, native to dry habitats in southwest Africa." ... "The above two species are unusual in the Vitaceae, not only for their architectural plan, but also because they are not vines."

412	Forms dense thickets	n
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	[No evidence] "Known from between 20 and 30 sub-populations and locations; no significant continuing decline in number of mature plants known. Habitat: North-facing rocky slopes of dolomite hills and mountains; open woodland; shrubland; grassland; well drained rocky, sandy-loam soil and sand (WIND, 2002); 1000–1200 m."

501	Aquatic	n
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	"Habitat: North-facing rocky slopes of dolomite hills and mountains; open woodland; shrubland; grassland; well drained rocky, sandy-loam soil and sand (WIND, 2002); 1000–1200 m."

Qsn #	Question	Answer
502	Grass	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 14 Sep 2016]	Family: Vitaceae Subfamily: Vitoideae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 14 Sep 2016]	Family: Vitaceae Subfamily: Vitoideae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	"Short, thickset succulent tree. Main stem up to 2 m high and 0.5 m in diameter, with few thick, short stems; shiny white bark, peeling in papery flakes. Petiole broadly winged. Leaves blue-green, undivided but deeply lobed on young plants, on older ones mostly divided into 3; middle leaflet ovate-elongated, roughly serrate-toothed, ca. 120–350 x 50–150 mm, the 2 lateral ones shorter, becoming broader towards base of stem, glabrous on top, with glands on veins of lower surface."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Klaassen, E. S., & Kwembeya, E. G. (2013). A Checklist of Namibian Indigenous and Naturalised Plants. Occasional Contributions, 5. National Botanical Research Institute, Windhoek, Namibia	"Cyphostemma juttae (Dinter & Gilg) Desc." ... "LC Least concern"
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	"Known from between 20 and 30 sub-populations and locations; no significant continuing decline in number of mature plants known."

602	Produces viable seed	y
	Source(s)	Notes
	Voigt, W. 2002. <i>Cyphostemma juttae</i> (Dinter & Gilg) Desc. PlantZAfrica. SANBI. http://www.plantzafrica.com/plantcd/cyphastemjut.htm . [Accessed 14 Sep 2016]	"The seeds of <i>Cyphostemma juttae</i> can be sown in winter. (June to August). Although they take a considerable time to germinate, success is almost guaranteed."

603	Hybridizes naturally	
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Qsn #	Question	Answer
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Unknown] "About 150 species, mainly in Africa and Madagascar, with a few species in India and Sri Lanka, extending into Thailand."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Molina, J. E. (2009). Evolution, Pollination Biology, and Biogeography of the Grape Relative <i>Leea</i> (Leeaceae, Vitales). PhD Dissertation. Rutgers University, New Brunswick, New Jersey	"The grape relatives, <i>Ampelopsis brevipedunculata</i> (Gerrath and Posluszny 1989), <i>Cayratia japonica</i> (Kakutani et al. 1989), <i>Cyphostemma</i> (Wilson et al. 2006), <i>Parthenocissus</i> (Wilson and Posluszny 2003), and <i>Rhoicissus digitata</i> (Gerrath et al. 2004) all lack a floral tube, like all other Vitaceae (Wen 2007a, b), and this may theoretically predispose them to self-pollination since the stamens and stigma simultaneously exist in the flower."

605	Requires specialist pollinators	
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Generic description. Unknown] "Flowers 4-merous, buds flask-shaped, more or less constricted near the middle; calyx truncate or 4-lobed; petals oblong, hooded at apex, deflexed after anthesis; filaments erect, not bending over the ovary; floral disk of 4 fleshy, truncate or conical glands, adnate to ovary but free from each other; style subulate, stigma slightly bifid or subentire or subcapitate."

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes
	Voigt, W. 2002. <i>Cyphostemma juttae</i> (Dinter & Gilg) Desc. PlantZAfrica. SANBI. http://www.plantzafrica.com/plantcd/cyphastemjut.htm . [Accessed 14 Sep 2016]	"Propagation can also be undertaken by means of cuttings. Cuttings or truncheons can be made in coarse river sand. Again it is important to water with caution especially when cuttings have rooted." [No evidence of natural vegetative spread]

607	Minimum generative time (years)	>3
	Source(s)	Notes
	A Digital Botanical Garden. 2016. <i>Cyphostemma juttae</i> , Vitaceae. Monday, August 30. http://digitalbotanicgarden.blogspot.com/2010/08/cyphostemma-juttae-vitaceae.html . [Accessed 14 Sep 2016]	[15+ years] "About 20 years ago a South Africa botanist gave me a few seeds of this strange succulent, <i>Cyphostemma juttae</i> , which grows in rocky, arid parts of Namibia. It has taken all that time for the seedling to reach this size - about 70 cm. tall - on my windowledge and since it can grow to 2.5 metres tall in the wild it's still got some way to go, although it's under less than ideal conditions, in a flower pot.. Every winter it sheds those succulent leaves completely, leaving only the swollen stem - known botanically as a caudex - then regrows leaves in late spring. It first flowered about five years ago, but this is the first year that the flowers have produced fruits."

Qsn #	Question	Answer
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	"Fruit globose, usually 1-seeded; seeds ovoid and rugose with a dorsal crest; endosperm M-shaped in cross section." [Generic description. No evidence & no means of external attachment]
702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Voigt, W. 2002. <i>Cyphostemma juttae</i> (Dinter & Gilg) Desc. PlantZAfrica. SANBI. http://www.plantzafrica.com/plantcd/cyphastemjut.htm . [Accessed 14 Sep 2016]	" <i>Cyphostemma juttae</i> is a very sought-after plant for the garden, as are other caudiciform plants such as baobabs, adeniums and tylecodons. They make superb container or open garden subjects in and around the garden, especially around swimming pools and courtyards. Because this species grows mainly in the summer, plants must be kept dry during the colder winter months. They are ideal accent plants for a rockery, or may be planted in a large container on a sunny protected patio."
703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	WRA Specialist. 2016. Personal Communication	No evidence. Unlikely given relatively slow growth rate, long time to maturity & fruit & seed morphology
704	Propagules adapted to wind dispersal	n
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	"Fruit globose, usually 1-seeded; seeds ovoid and rugose with a dorsal crest; endosperm"
705	Propagules water dispersed	n
	Source(s)	Notes
	Loots, S. 2005. Red Data Book of Namibian plants. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria and Windhoek	"Berries mostly red, one seeded, glabrous" ... "North-facing rocky slopes of dolomite hills and mountains; open woodland; shrubland; grassland; well drained rocky, sandy-loam soil and sand" [Unlikely given habit & habitat]
706	Propagules bird dispersed	
	Source(s)	Notes
	PlantFileonline. 2016. <i>Cyphostemma juttae</i> . http://plantfileonline.net/plants/plant_details/56 . [Accessed 14 Sep 2016]	"Bird Attractive Yes" [Contradicts other source]

Qsn #	Question	Answer
	Lamb, B. M. (2010). Succulents that Cope with Climatic Diversity: Part 1. <i>Cyphostemma juttae</i> & <i>Oreocereus doelzianus</i> variety <i>sericatus</i> . <i>Cactus and Succulent Journal</i> , 82(1), 16-18	"Both flower profusely and produce attractive clusters of small reddish fruits which, as they are poisonous, remain on the plants untouched by birds or other creatures."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	"Fruit globose, usually 1-seeded; seeds ovoid and rugose with a dorsal crest; endosperm M-shaped in cross section." [Generic description. No evidence & no means of external attachment]

708	Propagules survive passage through the gut	
	Source(s)	Notes
	PlantFileonline. 2016. <i>Cyphostemma juttae</i> . http://plantfileonline.net/plants/plant_details/56 . [Accessed 14 Sep 2016]	"Bird Attractive Yes" [Possible that seeds may survive passage through bird guts, although other sources suggest birds avoid the fruits due to toxicity]

801	Prolific seed production (>1000/m2)	
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	"Fruit globose, usually 1-seeded; seeds ovoid and rugose with a dorsal crest; endosperm M-shaped in cross section" [Probably no, but seed densities unknown]

802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	Royal Botanic Gardens Kew. (2016) Seed Information Database (SID). Version 7.1. http://data.kew.org/sid/ . [Accessed 14 Sep 2016]	"Storage Behaviour: No data available for species. Of 2 known taxa of genus <i>Cyphostemma</i> , 100.00% Orthodox"

803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. 2016. Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	Dave's Garden. 2016. Succulent Grape - <i>Cyphostemma juttae</i> . http://davesgarden.com/guides/pf/go/57851/ . [Accessed 14 Sep 2016]	"This plant is fire-retardant" [May tolerate fire]

Qsn #	Question	Answer
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. 2016. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Able to grow in tropical climates
- Unpalatable to animals
- Fruit toxic to animals & people
- Tolerates many soil types
- Reproduces by seed
- Seeds possibly dispersed by birds & intentionally by people

Low Risk Traits

- No reports of invasiveness or naturalization
- Unarmed (no spines, thorns or burrs)
- Ornamental
- Not reported to spread vegetatively
- Long time to reproductive maturity