

Family: *Taccaceae*

Taxon: *Tacca chantrieri*

Synonym: *Tacca macrantha* H. Limpr. [= *Tacca chantri*] **Common Name:** bat flower
cat's whiskers
devil flower

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: EVALUATE
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 5
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	y
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	
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)	
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	n
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	
405	Toxic to animals		y=1, n=0	
406	Host for recognized pests and pathogens		y=1, n=0	n
407	Causes allergies or is otherwise toxic to humans		y=1, n=0	
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	y
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	n

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	y
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	y
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	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	
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	
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 5

Supporting Data:

101	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Is the species highly domesticated? No] No evidence
101	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	[Is the species highly domesticated? No] No evidence
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Species suited to tropical or subtropical climate(s) 2- High] "...native to Myanmar (Burma) and Thailand..."
202	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Quality of climate match data 2-High] "...native to Myanmar (Burma) and Thailand..."
203	1987. Clay, H.F./Hubbard, J.C.. The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[Broad climate suitability (environmental versatility)? No] "This is a jungle plant: it grows best in shaded garden retreats, where its large leaves are damaged its large leaves are protected from damage by wind, rain, or falling debris."
203	2006. Larson, E.. Plant of the Week - October 13, 2006 - Bat-flower - <i>Tacca chantrieri</i> . Yale University, Marsh Botanical Gardens, www.yale.edu/marshgardens/documents/061013.pdf	[Broad climate suitability (environmental versatility)? No] " <i>Tacca</i> prefers the hot-house environment, is not hardy outdoors here, but also, because of its forest floor nativity prefers shade during the hottest months."
203	2012. Dave's Gardern. PlantFiles: Bat Flower, Cat's Whiskers, Devil Flower - <i>Tacca chantrieri</i> . http://davesgarden.com/guides/pf/go/54257/	[Broad climate suitability (environmental versatility)? No] "Hardiness: USDA Zone 11: above 4.5 °C (40 °F)"
204	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Native or naturalized in regions with tropical or subtropical climates? Yes] "...native to Myanmar (Burma) and Thailand..."
205	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Does the species have a history of repeated introductions outside its natural range? Yes] "...widely if not commonly cultivated as a novelty because of its unusual, bat-like flowers."
301	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	[Naturalized beyond native range? Potentially in Hawaiian Islands] "Propagation is by division of the tubers or from seeds, which are readily produced. Batflower has shown a limited tendency to spread from areas where it is planted to nearby beds. It should be monitored carefully so that a new weedy pest does not escape cultivation."
301	2005. Wagner, W.L./Herbst, D.R./Lorence, D.H.. Flora of the Hawaiian Islands website. Smithsonian Inst., Washington, D.C. http://botany.si.edu/pacificislandbiodiversity/hawaiianflora/index.htm	[Naturalized beyond native range? Not documented as naturalized]
301	2009. Chong, K.Y./Tan, H.T.W./Corlett, R.T.. A Checklist of the Total Vascular Plant Flora of Singapore: Native, Naturalized and Cultivated Species. Raffles Museum of Biodiversity Research, National University of Singapore, Singapore	[Naturalized beyond native range? No evidence in Singapore] " <i>Tacca chantrieri</i> André; Dioscoreaceae; cultivated only"
302	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	[Garden/amenity/disturbance weed? Potentially] "Propagation is by division of the tubers or from seeds, which are readily produced. Batflower has shown a limited tendency to spread from areas where it is planted to nearby beds. It should be monitored carefully so that a new weedy pest does not escape cultivation."
303	2007. Randall, R.P.. Global Compendium of Weeds - <i>Tacca chantrieri</i> [Online Database]. http://www.hear.org/gcw/species/tacca_chantrieri/	[Agricultural/forestry/horticultural weed? No] No evidence
304	2000. Staples, G.W./Herbst, D.R./Imada, C.T.. Survey of invasive or potentially invasive cultivated plants in Hawai'i. Bishop Museum Occasional Papers. 65: 1-35.	[Environmental weed? Potentially] Listed as a cultivation escape and potential invasive plant, although no documented evidence exists to date.
305	2007. Randall, R.P.. Global Compendium of Weeds - <i>Tacca leontopetaloides</i> [Online Database]. http://www.hear.org/gcw/species/tacca_leontopetaloides/	[Congeneric weed? Possibly] Listed as naturalized and as a weed, but evidence of impacts is lacking.

401	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Produces spines, thorns or burrs? No] "Distinguishable by the stemless herbaceous habit, leaves that are large, basal, and lanceolate to oblong, and dark green to black flowers with many long, filamentous bracts."
402	1991. Aerts, R.J./Snoeijer, W./van der Meijdena, E./Verpoorte, R.. Allelopathic inhibition of seed germination by Cinchona alkaloids?. Phytochemistry. 30(9): 2947–2951.	[Allelopathic? No] No evidence [Used as control to compare against Cinchona]
403	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Parasitic? No] "Herb, nearly stemless, to 70 cm high (28 in), growing from a rhizome." [Costaceae. Not parasitic]
404	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	[Unpalatable to grazing animals? Unknown] "The young leaves and inflorescences are eaten in curries and the rhizome is used medicinally in Thailand." [Palatable to humans, so possibly palatable to animals]
405	2012. Shoot Gardening. Tacca chantrieri (Bat flower). http://www.shootgardening.co.uk/plant/tacca-chantrieri	[Toxic to animals? Possibly] "Toxicity: All parts are toxic." [Evidence of animal toxicity not verified in peer-reviewed literature, although plants may have toxins or other chemicals that could harm animals if consumed]
406	1987. Clay, H.F./Hubbard, J.C.. The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[Host for recognized pests and pathogens? No] "To control thrips, use diazinon or malathion."
406	2012. Shoot Gardening. Tacca chantrieri (Bat flower). http://www.shootgardening.co.uk/plant/tacca-chantrieri	[Host for recognized pests and pathogens? No] "Pests: Generally pest free." ... "Diseases: Generally disease free."
407	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	[Causes allergies or is otherwise toxic to humans? No evidence] "The young leaves and inflorescences are eaten in curries and the rhizome is used medicinally in Thailand."
407	2010. Keardrit, K./Rujjanawate, C./Amornlerdpison, D.. Analgesic, antipyretic and anti-inflammatory effects of Tacca chantrieri Andre. Journal of Medicinal Plants Research. 4(19): 1991-1995.	[Causes allergies or is otherwise toxic to humans? No evidence] "Tacca chantrieri Andre is an indigenous perennial of the tropics which is used by local healers to relieve pains of the body and stomach, and as an antidote for food poisoning."
407	2012. Shoot Gardening. Tacca chantrieri (Bat flower). http://www.shootgardening.co.uk/plant/tacca-chantrieri	[Causes allergies or is otherwise toxic to humans? Possibly] "Toxicity: All parts are toxic." [Evidence of toxicity not verified in peer-reviewed literature, although plants may have toxins or other chemicals that could be harmful]
408	1987. Clay, H.F./Hubbard, J.C.. The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[Creates a fire hazard in natural ecosystems? No] "A low, herbaceous, evergreen plant..." ... "Requires a great deal of moisture and protection from sun and wind..." [No evidence, and unlikely given growth form and habitat]
409	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	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Batflower is easily cultivated in a shady spot with plenty of moisture and a humus-rich soil."
409	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in Tacca chantrieri (Taccaceae). American Journal of Botany. 92(3): 517-524.	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Tacca chantrieri inhabits moist and shaded understory habitats in tropical forests of SE Asia"
410	1987. Clay, H.F./Hubbard, J.C.. The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[Tolerates a wide range of soil conditions ? No] "grows best in humus-rich, well-watered, well-drained soil, in deep or partial shade."
411	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Climbing or smothering growth habit? No] "Herb, nearly stemless, to 70 cm high (28 in), growing from a rhizome."
412	1976. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 7, part 4. Sijthoff & Noordhoff International Publishers, Leiden, The Netherlands	[Forms dense thickets? No] "Primary and secondary forests, in Malaya at low altitude and on hills..." [No evidence]
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	[Forms dense thickets? No] No evidence from Hawaiian Islands

501	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Aquatic? No] "Moist but well-drained soils in partially shaded places are preferred." [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	[Grass? No] Costaceae
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	[Nitrogen fixing woody plant? No] Costaceae
504	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). American Journal of Botany. 92(3): 517-524.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? Yes] "Plants are 50-100 cm tall with tubers or creeping rhizomes and alternate, elliptic, entire leaves."
601	2006. Zhang, L./Li, Q.J./Li, H.T./Chen, J./Li, D.Z.. Genetic Diversity and Geographic Differentiation in <i>Tacca chantrieri</i> (Taccaceae): an Autonomous Selfing Plant with Showy Floral Display. Annals of Botany. 98: 449-457.	[Evidence of substantial reproductive failure in native habitat? No] "Its distribution has contracted due to overexploitation, habitat destruction, and forest fragmentation."
602	2000. Whistler, W.A.. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	[Produces viable seed? Yes] "Propagate by seeds or division."
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	[Produces viable seed? Yes] "Propagation is by division of the tubers or from seeds, which are readily produced."
602	2007. Fenster, C.B./Marten-Rodriguez, S.. Reproductive Assurance and the Evolution of Pollination Specialization. International Journal of Plant Sciences. 168(2): 215-228.	[Produces viable seed? Yes] " <i>Tacca chantrieri</i> is not only capable of setting seed without pollinators but actually does so in natural populations. Outcrossing estimates using genetic markers indicate that 86% of seeds in one population were derived from selfing."
603	2008. Zhang, L./Li, Q.-J.. <i>Tacca ampliplacenta</i> (Taccaceae), a New Species from Yunnan, China. Annales Botanici Fennici. 45(4): 311-314.	[Hybridizes naturally? Possibly] " <i>Tacca ampliplacenta</i> is possibly a hybrid between <i>T. chantrieri</i> and <i>T. integrifolia</i> , because <i>T. ampliplacenta</i> is distributed together with <i>T. chantrieri</i> in this region and some characters of <i>T. ampliplacenta</i> are shared by <i>T. chantrieri</i> and <i>T. integrifolia</i> from Medog, Tibet."
604	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). American Journal of Botany. 92(3): 517-524.	[Self-compatible or apomictic? Yes] " <i>Tacca</i> , a genus of tropical herbs, possesses near black flowers, conspicuous involucre bracts and whisker-like filiform bracteoles. These features have been assumed to function as a "deceit syndrome" in which reproductive structures resemble decaying organic material attracting flies that facilitate cross pollination (sapromyophily). We investigated pollination and mating in <i>Tacca chantrieri</i> populations from SW China to evaluate this assumption. Contrary to this expectation, populations were highly selfing. Pollinator visitation was infrequent and bagged flowers set abundant seed. Pollen loads on stigmas indicated autonomous self-pollination, some of which occurred prior to flower opening. The seed set of inflorescences with bracts and bracteoles removed was not significantly different from unmanipulated inflorescences, suggesting that these structures play a limited role in pollinator attraction, at least at our study sites. Pollen : ovule ratios averaged 49, a value expected in a highly selfing species. Selfing rates estimated in four populations using allozyme markers averaged 0.86 (range 0.76-0.94), thus corroborating this inference. Our results indicate that despite considerable investment in extravagant display, populations of <i>T. chantrieri</i> are highly selfing. We propose several hypotheses to resolve this paradox and argue that future studies of pollination syndromes would benefit by investigation of both pollination and mating biology."
604	2006. Larson, E.. Plant of the Week - October 13, 2006 - Bat-flower - <i>Tacca chantrieri</i> . Yale University, Marsh Botanical Gardens, www.yale.edu/marshgardens/documents/061013.pdf	[Self-compatible or apomictic? Yes] "They have been found to be self-pollinating: it is just that they also have mechanisms to provide for greater population diversity by attracting cross pollinators."

604	2006. Zhang, L./Li, Q.J./Li, H.T./Chen, J./Li, D.Z.. Genetic Diversity and Geographic Differentiation in <i>Tacca chantrieri</i> (Taccaceae): an Autonomous Selfing Plant with Showy Floral Display. <i>Annals of Botany</i> . 98: 449–457.	[Self-compatible or apomictic? Yes] "High levels of differentiation among populations and low levels of diversity within populations at large spatial scales are consistent with earlier small-scale studies of mating patterns detected by allozymes which showed that <i>T. chantrieri</i> populations are predominantly selfing. However, it appears that <i>T. chantrieri</i> has a mixed-mating system in which self fertilization predominates, but there is occasional outcrossing. Significant genetic differences between the two distinct regions might be attributed to vicariance along the Tanaka Line. Finally, possible mechanisms of geographic patterns based on genetic differentiation of <i>T. chantrieri</i> are discussed."
605	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). <i>American Journal of Botany</i> . 92(3): 517-524.	[Requires specialist pollinators? No] "The only genuine pollinators that we observed in either population were stingless bees (<i>Trigona</i> sp.) at WEV. These bees were observed collecting pollen and contacting both the stigma and anthers," ... "Despite possessing a suite of traits usually associated with sapromyophily, our investigations of <i>T. chantrieri</i> failed to reveal deceit pollination mediated by flies. Instead, our results indicate that populations of this species are predominantly selfing and that flowers have several traits that promote autonomous self-pollination." [Insect pollinated, but does not require pollinators to set seed]
606	2006. Larson, E.. Plant of the Week - October 13, 2006 - Bat-flower - <i>Tacca chantrieri</i> . Yale University, Marsh Botanical Gardens, www.yale.edu/marshgardens/documents/061013.pdf	[Reproduction by vegetative fragmentation? Yes] "They also propagate vegetatively if they are happy in their location."
607	2011. Cox, M.. <i>Grow Plants in Pots</i> . DK Publishing, New York, NY	[Minimum generative time (years)? 3] "After germination, which can take anywhere from one to nine months, move seedling into 3 in (7.5 cm) pots when large enough to handle; you should have a flowering plant within three years."
701	1976. Steenis, C.G.G.J. van (ed.). <i>Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 7, part 4</i> . Sijthoff & Noordhoff International Publishers, Leiden, The Netherlands	[Propagules likely to be dispersed unintentionally? No] "Dispersal. The ovoid or reniform, albuminous, ribbed or papillate seeds are smallish (c. 4 8 mm), with a fairly hard testa; they are freed in that the limping, decumbent, fruiting peduncle sags and deposits the fruit on the soil where it disintegrates; only in the continental SE. Asian species <i>T. plantaginea</i> the scape remains obvious erect and seeds are shed from a capsular fruit. How these seeds are dispersed over larger distances is unknown, but the more or less fleshy fruits will probably be eaten by ground animals; the raphe of the seed is distinct and fleshy. Some seeds must lead to new specimens at close range as <i>Taccas</i> are mostly found in groups of specimens."
702	2000. Whistler, W.A.. <i>Tropical Ornamentals: A Guide</i> . Timber Press, Portland, OR	[Propagules dispersed intentionally by people? Yes] "...widely if not commonly cultivated as a novelty because of its unusual, black, bat-like flowers."
703	2005. Staples, G.W./Herbst, D.R.. <i>A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places</i> . Bishop Museum Press, Honolulu, HI	[Propagules likely to disperse as a produce contaminant? Unknown] "Propagation is by division of the tubers or from seeds, which are readily produced. Batflower has shown a limited tendency to spread from areas where it is planted to nearby beds. It should be monitored carefully so that a new weedy pest does not escape cultivation." [No evidence, but has the potential to be spread in pots or soil of other ornamental plants with which it is grown]
704	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). <i>American Journal of Botany</i> . 92(3): 517-524.	[Propagules adapted to wind dispersal? No] " <i>Tacca</i> species produce fleshy fruits that are assumed to be animal dispersed by birds and small rodents (Saw, 1993)."
705	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). <i>American Journal of Botany</i> . 92(3): 517-524.	[Propagules water dispersed? No] " <i>Tacca</i> species produce fleshy fruits that are assumed to be animal dispersed by birds and small rodents (Saw, 1993)."
706	2000. Whistler, W.A.. <i>Tropical Ornamentals: A Guide</i> . Timber Press, Portland, OR	[Propagules bird dispersed? Yes] "Fruit ellipsoidal, berry-like, six-ribbed, 1.5-4 cm long (5/8-1 5/8 in)." [Fleshy-fruited, and presumably bird dispersed]
706	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). <i>American Journal of Botany</i> . 92(3): 517-524.	[Propagules bird dispersed? Yes] " <i>Tacca</i> species produce fleshy fruits that are assumed to be animal dispersed by birds and small rodents (Saw, 1993)."

707	1976. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 7, part 4. Sijthoff & Noordhoff International Publishers, Leiden, The Netherlands	[Propagules dispersed by other animals (externally)? No] "Fruit triangular to round on cross-section, 2-4 by 1-2 cm, (lustrous) green, deep orange-red, or purple. Seeds reniform, 3-4 by 2-3 by 1-1.5 mm, glabrous, brown, 9 14-ribbed." [Small seeded, but with no obvious means of external attachment]
707	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). American Journal of Botany. 92(3): 517-524.	[Propagules dispersed by other animals (externally)? No] "Tacca species produce fleshy fruits that are assumed to be animal dispersed by birds and small rodents (Saw, 1993)." [Adapted for consumption and internal dispersal]
708	2005. Zhang, L./Barrett, S.C.H./Gao, J.-Y./Chen, J./Cole, W.W./Liu, Y./Bai, Z.-L./Li, Q.-J.. Predicting Mating Patterns from Pollination Syndromes: The Case of "Sapromyophily" in <i>Tacca chantrieri</i> (Taccaceae). American Journal of Botany. 92(3): 517-524.	[Propagules survive passage through the gut? Yes] "Tacca species produce fleshy fruits that are assumed to be animal dispersed by birds and small rodents (Saw, 1993)."
801	2007. Fenster, C.B./Marten-Rodriguez, S.. Reproductive Assurance and the Evolution of Pollination Specialization. International Journal of Plant Sciences. 168(2): 215-228.	[Prolific seed production (>1000/m2)? Unknown] "Tacca chantrieri is not only capable of setting seed without pollinators but actually does so in natural populations. Outcrossing estimates using genetic markers indicate that 86% of seeds in one population were derived from selfing."
802	2002. Wen, B./He, H.-y./Yang, X.-y./Lan, Q.-y.. Characteristics of seed storage and germination of <i>Tacca chantrieri</i> . Journal of Plant Resources and Environment. DOI: CNKI:SUN:ZWZY.0.2002-03-003: .	[Evidence that a persistent propagule bank is formed (>1 yr)? Possibly] "The effects of illumination, temperature and soil moisture content on germination and storage of <i>Tacca chantrieri</i> Andre seeds were studied. The results indicated that <i>T. chantrieri</i> seeds were light-favored ones; the germination took place at a narrow temperature range and high soil moisture content, the optimum temperature was 25 30°C and the optimum soil moisture content 60%-70%. Dry storage was better way than ordinary storage for the seeds' vigor to maintenance while the conditions of high temperature with high humidity and low temperature with high humidity resulted to death of seeds. Because this kind of seed was tolerant to desiccation, low-temperature and storage, it could be conserved in seedbank for long-term purpose. For protection of this species, it was need to combine in situ conservation, ex situ conservation and seed conservation." [Manuscript in Chinese. Experiment suggests seeds may persist in seedbank, but unknown from field conditions.]
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species.
804	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	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown] "Propagation is by division of the tubers or from seeds, which are readily produced." [Possible that cutting up rhizomes or tubers may result in production of multiple plants]
805	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	[Effective natural enemies present locally (e.g. introduced biocontrol agents) Unknown] No evidence