

Family: *Passifloraceae*

Taxon: *Passiflora suberosa*

Synonym: *Passiflora pallida* L.
Passiflora minima L.

Common Name: corky passionflower
corksystem passionflower
devil's pumpkin
indigo berry
Huehue haole
grain d'encre
uvilla

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: H(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	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	y
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)	
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	n
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	
408	Creates a fire hazard in natural ecosystems		y=1, n=0	y

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	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	y
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	y
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	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	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: H(HPWRA)

WRA Score 12

Supporting Data:

101	1958. Anonymous. Flora of Panama. Part VII. Fascicle I. Annals of the Missouri Botanical Garden. 45(1): 1-91.	[Is the species highly domesticated? No] No evidence
101	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Is the species highly domesticated? No] No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Species suited to tropical or subtropical climate(s)? 2-high] "Native to and very widespread in the American subtropics and tropics and the West Indies;"
202	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Quality of climate match data? 2-high] "Native to and very widespread in the American subtropics and tropics and the West Indies;"
203	2008. Steel, J./Kohout, M./Newell, G.. Climate change and potential distribution of weeds: Whither the weeds under climate change?. Department of Primary Industries, Frankston, Australia	[Broad climate suitability (environmental versatility)? No] "Whilst all climate change scenarios saw a southward shift and increase in area and quality of the climate match envelope for this species, at no stage did it encroach into Victoria. The leading edge of the climate envelope never reached as far south as Wollongong. Climatic conditions in Victoria do not appear to ever become suitable for the establishment and growth of this species...Little change in the size of the climate envelope. The species that showed little change in potential distribution were less homogenous than the increasing or decreasing groups. Passiflora suberosa and Prosopis pallida both lacked climatically suitable areas in Victoria under baseline conditions and under climate change their climate envelopes did not extend into Victoria either. P. pallida is declared noxious in Victoria and despite not appearing to be naturalised or present in the state, it is a WoNS, so its declaration in Victoria might be considered in the national interest. P. suberosa is not recorded as naturalised in Victoria, but it is likely to be present in gardens and unlikely to become weedy in Victoria under the climate change scenarios considered in this report." [restricted to tropical climates]
204	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to and very widespread in the American subtropics and tropics and the West Indies; In Hawaii naturalized in grassland, shrubland, open dry forest, and diverse mesic forest, and on exposed ridges, 0-610 m"
205	2010. Pacific Islands Ecosystems at Risk (PIER). Passiflora suberosa. http://www.hear.org/Pier/species/passiflora_suberosa.htm	[Does the species have a history of repeated introductions outside its natural range? Yes] Widespread distribution in tropical & subtropical regions.
301	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Naturalized beyond native range? Yes] "In Hawaii naturalized in grassland, shrubland, open dry forest, and diverse mesic forest, and on exposed ridges, 0-610 m"
301	2011. Weeds Australia. Weed Identification - Passiflora suberosa. Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[Naturalized beyond native range? Yes] "A troublesome weed in Melanesia, Hawaii, and now spreading in SE Asia, India and South Africa."
302	2007. Randall, R.P.. Global Compendium of Weeds - Passiflora suberosa [Online Database]. http://www.hear.org/gcw/species/passiflora_suberosa/	[Garden/amenity/disturbance weed? An Environmental Weed. See 3.04]
302	2011. Weeds Australia. Weed Identification - Passiflora suberosa. Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[[Garden/amenity/disturbance weed? A garden escape & invader of disturbed areas with negative impacts in the natural environment. See 3.04] "Notes: Garden escape, naturalised in open forest and disturbed land. "

303	2008. Steel, J./Kohout, M./Newell, G.. Climate change and potential distribution of weeds: Whither the weeds under climate change?. Department of Primary Industries, Frankston, Australia	[Agricultural/forestry/horticultural weed? Potentially] "P. suberosa is a vine that is native to South America and has become a weed in moist coastal and subcoastal areas of southern to northern Queensland and the Gulf area of the Northern Territory (Swarbrick 1981) and NSW (Andresen 2005). It has also invaded sugar and Eucalyptus plantations (Seeruttum, Barbe & Guamgoo 2005)." [impacts to forestry & agriculture unknown]
304	1985. Smith, C.W.. Impact of Alien Plants on Hawaii's Native Biota. Pp. 180-250 in Stone & Scott (eds.). Hawaii's terrestrial ecosystems: preservation & management. CPSU, Honolulu, HI	[Environmental weed? Yes] "An aggressive weed. It does best in the subcanopy layers where it smothers shrubs, small trees and the ground layer. In some areas it also smothers the upper canopy layer"
304	2002. Garrison, J.S.E./Rauzon, M.J./Duin, K.N./Wilcox, B.A.. Marine Corps Base Hawaii: Invasive Species Management Study. Final Report N47408-00-P-6207 p00005, Task 3. Sustainable Resources Group Int'l, Inc., Honolulu, HI	[Environmental weed? Yes] "There are several species of smothering plants in the shrubland, including ivy gourd, love-in-a-mist (<i>Passiflora foetida</i>), corky passionflower (<i>Passiflora suberosa</i>) and jasmine (<i>Jasminum fluminense</i>). All four species spread rapidly once established, covering and eventually killing the supporting trees and shrubs by shading them out. They are common in disturbed, lowland sites, and their seeds are dispersed by fruit-eating birds such as the Red vented Bulbul (<i>Pycnonotus cafer</i>), which are common at MCTAB. These noxious weeds should be controlled to the extent feasible, especially if they are found near wetlands or coastal areas."
304	2003. Motooka, P./Castro, L./Nelson, D./Nagai, G./Ching, L.. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI http://www.ctahr.hawaii.edu/invweed/weedsHi.html	[Environmental weed? Yes] "smothers tall trees in mesic forests"
304	2007. Department of Primary Industries and Fisheries. Fact sheet: invasive plants and animals - Corky passionflower <i>Passiflora suberosa</i> - Biosecurity Queensland. Queensland Government, http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IP	[Environmental weed? Yes] "Corky passionflower is a South American vine that is an aggressive invader. It is usually most successful in the sub-canopy, where it smothers small trees, shrubs and even the ground cover species. It has been observed smothering upper canopy species in some locations. It is recorded as a weed in a number of countries throughout the Pacific region."
304	2007. Richardson, M.. Species Assessment and Listing Priority Assignment Form - <i>Platydesma cornuta</i> var. <i>decurrens</i> . USFWS, Pacific Islands FWO, Honolulu, HI www.fws.gov/ecos/ajax/docs/candforms_pdf/r1/Q37V_P01.pdf	[Environmental weed? Yes] "Alien plant species are also a threat to <i>Platydesma cornuta</i> var. <i>decurrens</i> because they compete for light, space, and nutrients, and degrade habitat. The primary nonnative plant threats to <i>Platydesma cornuta</i> var. <i>decurrens</i> are <i>Ageratina riparia</i> (Hamakua pamakani), <i>Clidemia hirta</i> (Koster's curse), <i>Grevillea robusta</i> (silk oak), <i>Passiflora suberosa</i> (huehue haole), <i>Psidium cattleianum</i> , <i>Psidium guajava</i> (common guava), <i>Rubus argutus</i> (prickly Florida blackberry), <i>Schinus terebinthifolius</i> (Christmas berry), and <i>Toona ciliata</i> (Australian red cedar)."
304	2008. Blanfort, V./Orapa, W. (eds.). Ecology, Impacts & Management of Invasive Plant Species in Pastoral Areas.. Secretariat of the Pacific Community (SPC), Suva, Fiji Islands	[Environmental weed? Yes] "Invasive plants are one of the current threats to dry forests of New Caledonia. <i>Passiflora suberosa</i> is one of the main aggressive species originating from pasture areas. It's a vine that easily spreads in dry forests using its trailing stems."
305	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Congeneric weed? Yes] " <i>Passiflora tripartita</i> var. <i>mollissima</i> ...Where invasive, the plant forms dense curtains of trailing and climbing stems, completely smothering trees, shrubs and understorey plants. The altered structure and reduced species richness of invaded forests prevents forest regeneration and affects wildlife by reducing the abundance of food plants."
401	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawaii Press and Bishop Museum Press, Honolulu, HI.	[Produces spines, thorns or burrs? No] "Herbaceous vines; stems angles, striate. Leaves membranous, polymorphic, blades lanceolate to sometimes ovate, 2.8-10.7(-14) cm long, 1.4-4(-9) cm wide, entire or shallowly to deeply 3-lobed, pubescent or glabrous..."
402	1985. Smith, C.W.. Impact of Alien Plants on Hawaii's Native Biota. Pp. 180-250 in Stone & Scott (eds.). Hawaii's terrestrial ecosystems: preservation & management. CPSU, Honolulu, HI	[Allelopathic? No] Not listed among potential impacts.
402	1995. Cronk, Q.C.B./Fuller, J.L.. Plant invaders: the threat to natural ecosystems. Chapman and Hall, London, UK	[Allelopathic? No] Not listed among potential impacts.

402	2011. Weeds Australia. Weed Identification - <i>Passiflora suberosa</i> . Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[Allelopathic? No] Not listed among potential impacts.
403	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Parasitic? No] "Herbaceous vines" [Passifloraceae]
404	2008. Blanfort, V./Orapa, W. (eds.). Ecology, Impacts & Management of Invasive Plant Species in Pastoral Areas.. Secretariat of the Pacific Community (SPC), Suva, Fiji Islands	[Unpalatable to grazing animals? No] "The most widespread alien species in sclerophyll forests was <i>Passiflora suberosa</i> , found in all sites and in virtually all plots investigated during this study. The density of the stems of this vine reached high densities in several sites. There was an apparent relationship between the frequency of browse of this vine and the density of ungulates at a given sites, which indicates that this species is not very attractive to ungulates. If they are given the choice, Rusa deer and cattle would probably prefer other food plants, but almost all the stems were browsed on the sites which had very high densities of ungulates ... However, we have also seen that most of the alien plants were consumed by introduced ruminants, sometimes severely. Browsing by ruminants could therefore contribute to the control of the invasion of sclerophyll forests by some alien species. This hypothesis has been indirectly confirmed for <i>P. suberosa</i> in Tiéa (Pouembout), where this vine invaded large areas of the sclerophyll forest soon after an enclosure was erected to exclude ruminants from the area." [not preferred, but still palatable to some degree]
405	1981. Clark, D.A.. Foraging Patterns of Black Rats across a Desert-Montane Forest Gradient in the Galapagos Islands. <i>Biotropica</i> . 13(3): 182-194.	[Toxic to animals? No] "The rats' preferential feeding is further illustrated by their disproportionate usage of uncommon foods. While <i>Passiflora suberosa</i> fruits and flowers had been eaten by nearly all rats in the 1975 savannah sample, this plant occurred in no food quadrats, and I found only two small patches of it in the 5.1 ha grid."
405	2008. Blanfort, V./Orapa, W. (eds.). Ecology, Impacts & Management of Invasive Plant Species in Pastoral Areas.. Secretariat of the Pacific Community (SPC), Suva, Fiji Islands	[Toxic to animals? No] "The most widespread alien species in sclerophyll forests was <i>Passiflora suberosa</i> , found in all sites and in virtually all plots investigated during this study. The density of the stems of this vine reached high densities in several sites. There was an apparent relationship between the frequency of browse of this vine and the density of ungulates at a given sites, which indicates that this species is not very attractive to ungulates. If they are given the choice, Rusa deer and cattle would probably prefer other food plants, but almost all the stems were browsed on the sites which had very high densities of ungulates ... However, we have also seen that most of the alien plants were consumed by introduced ruminants, sometimes severely. Browsing by ruminants could therefore contribute to the control of the invasion of sclerophyll forests by some alien species. This hypothesis has been indirectly confirmed for <i>P. suberosa</i> in Tiéa (Pouembout), where this vine invaded large areas of the sclerophyll forest soon after an enclosure was erected to exclude ruminants from the area."
406	2011. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens? Probably not] Widespread weed, with well-documented impacts. Host of pests and pathogens not listed among negative effects.
407	2004. Ulmer, T./MacDougal, J. M.. <i>Passiflora: Passionflowers of the World</i> . Timber Press, Portland, OR	[Causes allergies or is otherwise toxic to humans? Questionably] No evidence
407	2011. Dave's Garden. PlantFiles: Cork-bark Passion Flower, Devil's Pumpkin, Indigo Berry, Corky Passionflower, Corkstem Passionflower - <i>Passiflora suberosa</i> . http://davesgarden.com/guides/pf/go/1197/	[Causes allergies or is otherwise toxic to humans? Questionably] "On Dec 26, 2009, BertieFox from Saumur France wrote: I've been growing this in a conservatory for the last five years, with low light levels. Apart from its novelty value (the tiny almost invisible flowers) it's invasive (seeds sprout everywhere in the border) and the fruit taste awful. I'm surprised to read the seed is poisonous as I've eaten about fifty fruit (individually, not in a session!) with no ill effects. One of our dogs loves them and goes around the vine biting them off, with no ill effects either."
407	2011. Weeds Australia. Weed Identification - <i>Passiflora suberosa</i> . Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[Causes allergies or is otherwise toxic to humans? Questionably] "Leaves, stems and green fruit are poisonous." [Almost all other references give no mention of toxic properties of this plant]

408	2002. Garrison, J.S.E./Rauzon, M.J./Duin, K.N./Wilcox, B.A.. Marine Corps Base Hawaii: Invasive Species Management Study. Final Report N47408-00-P-6207 p00005, Task 3. Sustainable Resources Group Int'l, Inc., Honolulu, HI	[Creates a fire hazard in natural ecosystems? Yes] "Corky passionflower (<i>Passiflora suberosa</i>) has properties similar to ivy gourd. It climbs up over established vegetation and shades it out, leaving dead plants in the understory. This can increase the fire hazard and erosion potential in an area."
409	2011. Gann, G.D./Abdo, M.E./Gann, J.W./Gann, Sr., G.D./Woodmansee, S.W./Bradley, K.A./Grahl, E./Hines, K.N.. Natives For Your Neighborhood - Corkystem passionflower. The Institute for Regional Conservation, Miami, FL http://www.regionalconservation.org	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Light Requirements: Light shade to full sun"
409	2011. Sanibel-Captiva Conservation Foundation. Native Florida Plants for Upland Communities. http://www.sccf.org/files/content/docs/Plants%20or%20Upland%20Communities.pdf	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Passiflora suberosa...Light Requirements ... full sun to full shade"
410	2011. Dave's Garden. PlantFiles: Cork-bark Passion Flower, Devil's Pumpkin, Indigo Berry, Corky Passionflower, Corkstem Passionflower - <i>Passiflora suberosa</i> . http://davesgarden.com/guides/pf/go/1197/	[Tolerates a wide range of soil conditions? Yes] "Soil pH requirements: 5.1 to 5.5 (strongly acidic) 5.6 to 6.0 (acidic) 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral) 7.6 to 7.8 (mildly alkaline) 7.9 to 8.5 (alkaline)"
410	2011. Gann, G.D./Abdo, M.E./Gann, J.W./Gann, Sr., G.D./Woodmansee, S.W./Bradley, K.A./Grahl, E./Hines, K.N.. Natives For Your Neighborhood - Corkystem passionflower. The Institute for Regional Conservation, Miami, FL http://www.regionalconservation.org	[Tolerates a wide range of soil conditions? Yes] "Soils: Moist, well-drained sandy or limestone soils, with or without humusy top layer."
411	1985. Smith, C.W.. Impact of Alien Plants on Hawaii's Native Biota. Pp. 180-250 in Stone & Scott (eds.). Hawaii's terrestrial ecosystems: preservation & management. CPSU, Honolulu, HI	[Climbing or smothering growth habit? Yes] "An aggressive weed. It does best in the subcanopy layers where it smothers shrubs, small trees and the ground layer. In some areas it also smothers the upper canopy layer"
411	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Climbing or smothering growth habit? Yes] "Herbaceous vines..."
411	2003. Motoooka, P./Castro, L./Nelson, D./Nagai, G./Ching,L.. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI http://www.ctahr.hawaii.edu/invweed/weedsHi.html	[Climbing or smothering growth habit? Yes] "smothers tall trees in mesic forests"
412	1985. Smith, C.W.. Impact of Alien Plants on Hawaii's Native Biota. Pp. 180-250 in Stone & Scott (eds.). Hawaii's terrestrial ecosystems: preservation & management. CPSU, Honolulu, HI	[Forms dense thickets? No] "An aggressive weed. It does best in the subcanopy layers where it smothers shrubs, small trees and the ground layer. In some areas it also smothers the upper canopy layer"
501	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Aquatic? No] "Herbaceous vine..." [terrestrial]
502	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Grass? No] Passifloraceae
503	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Nitrogen fixing woody plant? No] Passifloraceae
504	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Herbaceous vines..."

601	2008. Amela Garcia, M.T.. Breeding system and related floral features under natural and experimental conditions of <i>Passiflora suberosa</i> (Passifloraceae). <i>Boletín de la Sociedad Argentina de Botánica</i> . 43 (1-2): 83-93.	[Evidence of substantial reproductive failure in native habitat? No] "Summary: The breeding system, the floral characteristics and the visitors of the polymorphic <i>Passiflora suberosa</i> were studied in different natural populations of Corrientes and Misiones provinces, and at a partially-opened greenhouse in Buenos Aires. The different reproductive indexes calculated evidenced that, although it is highly self compatible, autogamy is partial. The reproductive efficiency was similar in the field and in the greenhouse. The major relative reproductive success obtained by induced self-pollination suggests that the reproductive output may be improved with the help of pollinations, either natural or artificial. Although the single flower and the blooming are inconspicuous, the floral characters may be involved in wasps attraction. The scarcity or even absence of pollinators (depending on the sites) seems to be compensated with the capacity of autogamy and the extended flowering period. The successful treatments performed in the greenhouse and the long period of time the fruits remain on the plants constitute stimulant features to cultivate this ornamental, medicinal, edible and tinctoreous species."
602	2003. Motooka, P./Castro, L./Nelson, D./Nagai, G./Ching, L.. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI http://www.ctahr.hawaii.edu/invweed/weedsHi.htm	[Produces viable seed? Yes] "Seeds spread by animals."
602	2007. Department of Primary Industries and Fisheries. Fact sheet: invasive plants and animals - Corky passionflower <i>Passiflora suberosa</i> - Biosecurity Queensland. Queensland Government, http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IP	[Produces viable seed? Yes] "Fruits are purple and are readily eaten by birds, aiding in considerable seed dispersal."
603	2004. Ulmer, T./MacDougal, J. M.. <i>Passiflora: Passionflowers of the World</i> . Timber Press, Portland, OR	[Hybridizes naturally? Unknown] " <i>P. suberosa</i> x <i>P. coriacea</i> " [cultivated hybrid documented, but unknown if <i>Passiflora suberosa</i> is able to hybridize naturally]
604	2008. Amela Garcia, M.T.. Breeding system and related floral features under natural and experimental conditions of <i>Passiflora suberosa</i> (Passifloraceae). <i>Boletín de la Sociedad Argentina de Botánica</i> . 43 (1-2): 83-93.	[Self-compatible or apomictic? Yes] "Summary: The breeding system, the floral characteristics and the visitors of the polymorphic <i>Passiflora suberosa</i> were studied in different natural populations of Corrientes and Misiones provinces, and at a partially-opened greenhouse in Buenos Aires. The different reproductive indexes calculated evidenced that, although it is highly self compatible, autogamy is partial. The reproductive efficiency was similar in the field and in the greenhouse. The major relative reproductive success obtained by induced self-pollination suggests that the reproductive output may be improved with the help of pollinations, either natural or artificial. Although the single flower and the blooming are inconspicuous, the floral characters may be involved in wasps attraction. The scarcity or even absence of pollinators (depending on the sites) seems to be compensated with the capacity of autogamy and the extended flowering period. The successful treatments performed in the greenhouse and the long period of time the fruits remain on the plants constitute stimulant features to cultivate this ornamental, medicinal, edible and tinctoreous species... <i>P. suberosa</i> would belong to class 2 (highly self-compatible) mentioned by Dafni (1992)."
605	2008. Amela Garcia, M.T.. Breeding system and related floral features under natural and experimental conditions of <i>Passiflora suberosa</i> (Passifloraceae). <i>Boletín de la Sociedad Argentina de Botánica</i> . 43 (1-2): 83-93.	[Requires specialist pollinators? No] "Although the single flower and the blooming are inconspicuous, the floral characters may be involved in wasps attraction. The scarcity or even absence of pollinators (depending on the sites) seems to be compensated with the capacity of autogamy and the extended flowering period...Koschnitzke & Sazima (1997) reported low frequency of pollinators' visits (wasps and small bees) of this species, even the study was carried out in a Brazilian preserve. Other observations on <i>P. suberosa</i> flower visitors restrict to the Galápagos isles. McMullen (1985) observed moderate activity of <i>X. darwini</i> on <i>P. suberosa</i> var. <i>galapagensis</i> in Santa Cruz, but it was not clarified if that activity resulted in pollination either. In Pinta, where there are no populations of <i>Xylocopa darwini</i> (the unique himenopteran in the archipelago), <i>P. suberosa</i> is a nectar source for the finch <i>Geospiza fuliginosa</i> during the dry season (Schluter, 1986)." [self-compatible, so specialist pollinators unnecessary]
606	2011. Weeds Australia. Weed Identification - <i>Passiflora suberosa</i> . Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[Reproduction by vegetative fragmentation? No] "Dispersal: Spread by bird-dispersed seed and via trailing stems." [No evidence that fragments will establish]

607	2011. Gann, G.D./Abdo, M.E./Gann, J.W./Gann, Sr., G.D./Woodmansee, S.W./Bradley, K.A./Grahl, E./Hines, K.N.. Natives For Your Neighborhood - Corkystem passionflower. The Institute for Regional Conservation, Miami, FL http://www.regionalconservation.org	[Minimum generative time (years)? 1] "Growth Rate: Fast [fast-growing vine presumably can reach reproductive maturity in one year]
701	2011. Weeds Australia. Weed Identification - Passiflora suberosa. Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[Propagules likely to be dispersed unintentionally? No] "Dispersal: Spread by bird-dispersed seed and via trailing stems." [unintentional dispersal facilitated by birds, possibly other animals, and vegetative spread]
702	2004. Ulmer, T./MacDougal, J. M.. Passiflora: Passionflowers of the World. Timber Press, Portland, OR	[Propagules dispersed intentionally by people? Yes] "Although Passiflora suberosa (Plate 143) produces very small, unspectacular, apetalous flowers, it is valued and cultivated by many enthusiasts."
702	2011. Gann, G.D./Abdo, M.E./Gann, J.W./Gann, Sr., G.D./Woodmansee, S.W./Bradley, K.A./Grahl, E./Hines, K.N.. Natives For Your Neighborhood - Corkystem passionflower. The Institute for Regional Conservation, Miami, FL http://www.regionalconservation.org	[Propagules dispersed intentionally by people? Yes] "Landscape Uses: Informal groundcover or low-climbing vine." [still propagated as an ornamental in some locations]
703	2011. Weeds Australia. Weed Identification - Passiflora suberosa. Australian Weeds Committee, http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=V18	[Propagules likely to disperse as a produce contaminant? No] "Dispersal: Spread by bird-dispersed seed and via trailing stems." [No evidence, and not generally grown with produce]
704	1958. Anonymous. Flora of Panama. Part VII. Fascicle I. Annals of the Missouri Botanical Garden. 45(1): 1-91.	[Propagules adapted to wind dispersal? No] "Fruit globose, deep purple, 0.5-1.5 cm. in diameter" [fleshy-fruited]
705	1958. Anonymous. Flora of Panama. Part VII. Fascicle I. Annals of the Missouri Botanical Garden. 45(1): 1-91.	"Fruit globose, deep purple, 0.5-1.5 cm. in diameter" [Although fruits could potentially float and be dispersed by water, they are adapted for dispersal by birds and other frugivorous animals]
706	1958. Anonymous. Flora of Panama. Part VII. Fascicle I. Annals of the Missouri Botanical Garden. 45(1): 1-91.	[Propagules bird dispersed? Yes] "Fruit globose, deep purple, 0.5-1.5 cm. in diameter" [fleshy-fruited]
706	2002. Garrison, J.S.E./Rauzon, M.J./Duin, K.N./Wilcox, B.A.. Marine Corps Base Hawaii: Invasive Species Management Study. Final Report N47408-00-P-6207 p00005, Task 3. Sustainable Resources Group Int'l, Inc., Honolulu, HI	[Propagules bird dispersed? Yes] "Corky passionflower (Passiflora suberosa) has properties similar to ivy gourd. It climbs up over established vegetation and shades it out, leaving dead plants in the understory. This can increase the fire hazard and erosion potential in an area. It is also bird-dispersed, and produces numerous small purple fruits. This species should be prevented from spreading into wetlands or coastal areas where it has the potential to smother desirable native vegetation."
706	2003. Garrison, J.S.E.. The role of alien tree plantations and avian seed-dispersers in native dry forest restoration in Hawaii. PhD. Dissertation. University of Hawaii, Honolulu, HI	[Propagules bird dispersed? Yes] "The plant species that had seeds distributed by the most bird species were Clidemia hirta (four bird species), Passiflora suberosa (four bird species), Psidium cattleianum (three species), and Schinus terebinthifolius (two species)."
706	2007. Department of Primary Industries and Fisheries. Fact sheet: invasive plants and animals - Corky passionflower Passiflora suberosa - Biosecurity Queensland. Queensland Government, http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IP	[Propagules bird dispersed? Yes] "Fruits are purple and are readily eaten by birds, aiding in considerable seed dispersal."
707	1958. Anonymous. Flora of Panama. Part VII. Fascicle I. Annals of the Missouri Botanical Garden. 45(1): 1-91.	[Propagules dispersed by other animals (externally)? No] "Fruit globose, deep purple, 0.5-1.5 cm. in diameter" [Although intact fruit may potentially be carried by animals, fruits and seeds have no means of external attachment, and seeds are primarily adapted for internal dispersal]
708	1958. Anonymous. Flora of Panama. Part VII. Fascicle I. Annals of the Missouri Botanical Garden. 45(1): 1-91.	[Propagules survive passage through the gut? Yes] "Fruit globose, deep purple, 0.5-1.5 cm. in diameter" [fleshy-fruited]
708	2003. Garrison, J.S.E.. The role of alien tree plantations and avian seed-dispersers in native dry forest restoration in Hawaii. PhD. Dissertation. University of Hawaii, Honolulu, HI	"Corky passionflower (Passiflora suberosa) and octopus tree (Schefflera actinophylla) were found in intermediate abundance in bird feces."

708	2003. Motooka, P./Castro, L./Nelson, D./Nagai, G./Ching, L.. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI http://www.ctahr.hawaii.edu/invweed/weedsHi.htm	[Propagules survive passage through the gut? Yes] "Seeds spread by animals" [presumably yes]
708	2007. Morrison, C./Osborne, T./Harlow, P.S./Thomas, N./Biciloa, P./Niukula, J.. Diet & habitat preferences of the Fijian crested iguana (<i>Brachylophus vitiensis</i>) on Yadua Taba, Fiji: implications for conservation. Australian Journal of Zoology. 55: 341-350	[Propagules survive passage through the gut? Yes] "The most common species in these studies were the fruit of <i>Passiflora suberosa</i> and leaves of <i>V. amicum</i> , <i>C. insularis</i> , <i>D. elliptica</i> , <i>M. tilifolius</i> and <i>H. tiliaceus</i> ."
801	2005. Bakutis, A.C.L.. Investigation seed dispersal and seed bank dynamics in Hawaiian mesic forest communities. MS Thesis. Dept. of Botany, University of Hawaii at Manoa, Honolulu, HI	[Prolific seed production (>1000/m ²)? Unlikely] "Table 2.3. Relative mean density (seeds/m ²) of 'not-dispersed' (Not-disp.) and 'dispersed' (Disp.) seed in total seed rain in all vegetation types and mean density (seeds/m ²) and relative mean density (seeds/m ²) of dispersed seeds per seed trap..." [Study documented seed rain of native and non-native seedlings. Highest density recorded for <i>Passiflora suberosa</i> = 81 seeds/m ²]
802	2008. Royal Botanic Gardens Kew. Seed Information Database (SID). Version 7.1. http://data.kew.org/sid/	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2003. Motooka, P./Castro, L./Nelson, D./Nagai, G./Ching, L.. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI http://www.ctahr.hawaii.edu/invweed/weedsHi.htm	[Well controlled by herbicides? Yes] "Probably sensitive to hormone-type herbicides but may require basal treatments to protect host plants. Young plants susceptible to drizzle application of glyphosate at 1 lb/acre."
803	2007. Bush Regeneration Team. Bush Regeneration Action Plan. McLeod's Shoot, Coorabell. Byron Shire Council, Mullumbimby, Australia http://www.byron.nsw.gov.au/files/publications/Bush_Regeneration_Action_Plan_for_Mcleods_Shoot.pdf	[Well controlled by herbicides? Yes] "Small infestations: Cut, scrape & paint stem with glyphosate & water at 1:1.5 or carefully hand pull or prise up seedlings & small vines. Larger infestations: use a combination of handweeding, pulling down vines and foliar spraying with glyphosate & water at 1:50 (20ml/L) + metsulfuron methyl & water at 1.5g/10L + non ionic surfactant + sticker. Avoid using glyphosate spray mix in areas with native grasses. The foliage on this vine has a very waxy coating therefore a penetrant & sticker oil is essential. Cover foliage well."
803	2007. Department of Primary Industries and Fisheries. Fact sheet: invasive plants and animals - Corky passionflower <i>Passiflora suberosa</i> - Biosecurity Queensland. Queensland Government, http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IP	[Well controlled by herbicides? Yes] "Corky passion flower can be treated with a herbicide...Cut stump glyphosate (360 g/L) 1 part product to 2 parts water (e.g. 10 mL in 20 mL water) PERMIT 7485 Apply in spring. Apply second application if necessary." [May require retreatment]
804	2007. Department of Primary Industries and Fisheries. Fact sheet: invasive plants and animals - Corky passionflower <i>Passiflora suberosa</i> - Biosecurity Queensland. Queensland Government, http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IP	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "The most reliable method of control for this species is hand pulling when the soil is moist. Care must be taken not to break the stem above the roots, or the plant will regenerate. The above-ground vegetative parts of the weed can be removed using a brush hook or similar tool."
805	2004. Markin, G.P./Nagata, R.F.. Host Suitability Studies of the Moth, <i>Pyrausta norella</i> , as a Control Agent of the Forest Weed Banana Poka, <i>Passiflora mollissima</i> (HBK) Bailey, in Hawaii. Proceedings of the Hawaiian Entomological Society	[Effective natural enemies present locally? Unknown] "The release of <i>P. norella</i> might pose a very small threat to 20 species of <i>Passiflora</i> in Hawaii (Neal 1965). All these species have been introduced, either for ornamentals (the plants bear showy flowers) or for their fruit. Several species, including <i>Passiflora foetida</i> L., <i>P. putchella</i> HBK, <i>P. suberosa</i> L., <i>P. laurifolia</i> L., and <i>P. subpeltata</i> Ortega, have escaped from cultivation and are now considered weeds (Haselwood et al., 1983). Ten of the most common species of <i>Passiflora</i> in Hawaii were included in this host test (Table 1). As expected, being closely related to banana poka, <i>P. norella</i> responded more positively to them than other species of plants."