

Family: *Bignoniaceae*

Taxon: *Parmentiera aculeata*

Synonym: *Crescentia aculeata* Kunth (basionym)
Parmentiera edulis DC.

Common Name: Cow-okra
Cucumber Tree
cuajilote

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation:	H(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score	9
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		y
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)		n
401	Produces spines, thorns or burrs		y=1, n=0		y
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		n
408	Creates a fire hazard in natural ecosystems		y=1, n=0		n
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0		y

411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets	y=1, n=0	y
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	
706	Propagules bird dispersed	y=1, n=-1	
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	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: H(HPWRA)

WRA Score **9**

Supporting Data:

101	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Is the species highly domesticated? No] No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	1973. Woodson, Jr., R.E./Schery, R.W./Gentry, A.H.. Flora of Panama. Part IX. Family 172. Bignoniaceae. Annals of the Missouri Botanical Garden. 60(3): 781-977.	[Species suited to tropical or subtropical climate(s)? 2-high] "Native to southern Mexico and northern Central America, the species is occasionally cultivated outside its range. Reported by Standley as cultivated in lowland Costa Rica, it is probably cultivated sporadically in Panama."
202	1973. Woodson, Jr., R.E./Schery, R.W./Gentry, A.H.. Flora of Panama. Part IX. Family 172. Bignoniaceae. Annals of the Missouri Botanical Garden. 60(3): 781-977.	[Quality of climate match data? 2-high] "Native to southern Mexico and northern Central America..."
203	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4. Fieldiana. 24: 1-466.	[Broad climate suitability (environmental versatility)? Yes] "Moist or dry thickets or lowland forest, often along rocky water- courses, chiefly at 1,200 m. or less" [Elevation range exceeds 1000 m, demonstrating environmental versatility]
203	2011. Top Tropicals. Parmentiera edulis, Parmentiera aculeata. Top Tropicals Botanical Garden, http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=parmentiera_edulis	[Broad climate suitability (environmental versatility)? Yes] "The tree is adapted to a wide range of climatic conditions but is most frequently found in high-rainfall forests where it grows spontaneously. "
204	1973. Woodson, Jr., R.E./Schery, R.W./Gentry, A.H.. Flora of Panama. Part IX. Family 172. Bignoniaceae. Annals of the Missouri Botanical Garden. 60(3): 781-977.	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Native to southern Mexico and northern Central America..."
205	1950. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 8, part 2. Revisions. Sijthoff & Noordhoff International Publishers, The Netherlands	[Does the species have a history of repeated introductions outside its natural range? Yes] "Distr. S. Mexico to northern Central America, cultivated elsewhere in the tropics; in Malesia rare: W. Java, Luzon, also seen from Cairns (N. Queensland)."
205	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Does the species have a history of repeated introductions outside its natural range? Yes] "Distribution. Mexico to Honduras, frequently in cultivation or in disturbed areas along roads or near habitations; naturalized in Queensland, Australia."
205	2000. Liogier, A.H./ Martorell, L.F.. Flora of Puerto Rico and adjacent islands: a systematic synopsis. La Editorial, UPR, San Juan, Puerto Rico	[Does the species have a history of repeated introductions outside its natural range? Yes] "Occasionally planted in gardens, rarely naturalized in Puerto Rico..."
205	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Does the species have a history of repeated introductions outside its natural range? Yes] "...occasionally cultivated outside its native range."
301	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Naturalized beyond native range? Yes] "Distribution. Mexico to Honduras, frequently in cultivation or in disturbed areas along roads or near habitations; naturalized in Queensland, Australia."
301	2000. Liogier, A.H./ Martorell, L.F.. Flora of Puerto Rico and adjacent islands: a systematic synopsis. La Editorial, UPR, San Juan, Puerto Rico	[Naturalized beyond native range? Yes] "Occasionally planted in gardens, rarely naturalized in Puerto Rico..."
301	2011. CSIRO. Australian Tropical Rainforest Plants [online database] - Parmentiera aculeata. http://keys.trin.org.au:8080/key-server/data/0e0f0504-0103-430d-8004-060d07080d04/media/Html/taxon/Parmentiera_aculeata.htm	[Naturalized beyond native range? Yes] "An introduced species, originally from Mexico and Central America, now naturalized in NEQ in the Cairns-Gordonvale area and cultivated occasionally on the Atherton Tableland. Probably introduced because of its edible fruits. Altitudinal range from sea level to 750 m. Found at old settlement sites and in disturbed areas of gallery forest."
302	2011. CSIRO. Australian Tropical Rainforest Plants [online database] - Parmentiera aculeata. http://keys.trin.org.au:8080/key-server/data/0e0f0504-0103-430d-8004-060d07080d04/media/Html/taxon/Parmentiera_aculeata.htm	[Garden/amenity/disturbance weed? A weed of disturbed areas with environmental impacts. See 3.04] "An introduced species, originally from Mexico and Central America, now naturalized in NEQ in the Cairns-Gordonvale area and cultivated occasionally on the Atherton Tableland. Probably introduced because of its edible fruits. Altitudinal range from sea level to 750 m. Found at old settlement sites and in disturbed areas of gallery forest."

303	1980. Lambert, D.H./Arnason, J.T.. Nutrient levels in corn and competing weed species in a first year milpa, Indian church, Belize, C.A.. <i>Plant and Soil</i> . 55(3): 415-427.	[Agricultural/forestry/horticultural weed? Potentially Yes] "Associated with shifting agriculture is a slow movement of people which makes it extremely difficult for governments to" develop long range land-use policies. In Belize the practice is known as 'milpa' agriculture and is commonly associated with the Maya Indian population...The species listed above represent only the pioneering species in a new milpa. Many of the important weeds are forest species, such as Piper amalago, Parmentiera aculeata, Guazuma ulmifolia, which have germinated from seed that had survived the burn. Surviving root systems occasionally produced vigorous suckers. The remaining species are not found in the forest... Table 2. Weed species present in Sites 1 and 4 at time of corn harvest ... [Table lists Parmentiera aculeata with no information on impacts or detrimental effects on yield]
304	2001. Werren, G.. <i>Environmental Weeds of the Wet Tropics Bioregion: Risk Assessment & Priority Ranking</i> . Rainforest CRC, Cairns, Australia http://www.wet Tropics.gov.au/res/downloads/Weeds.pdf	[Environmental weed? Yes] "trees that are invading slowly and/or more insidiously because they are 'sleepers' in the early stages of invasion or are more cryptic/less conspicuous – eg, Parmentiera aculeata, Mangifera indica, Flacourtia jangomas, Blighia sapida - that, while most have not yet necessarily caused serious ecological damage, pose major threats by virtue of their size, or in the case of some such as Cucumber Tree, can form dense monospecific stands displacing native species;"
304	2002. Invasive Species Council. <i>Wet Tropics Weeds top 500</i> . Feral Herald. 1: 5.	[Environmental weed? Yes] "Ten Worst Wet Tropics Weeds" [List includes Cucumber Vine (Parmentiera aculeata)]
304	2003. Grice, A.C./Setter, M.J.. <i>Weeds of Rainforests and Associated Ecosystems</i> . Cooperative Research Centre for Tropical Rainforest Ecology & Management. Rainforest CRC, Cairns	[Environmental weed? Yes] "A range of life forms presently form significant, often rampant, infestations within the rainforests and associated systems of the region. These comprise: ... trees such as African tulip (Spathodea campanulata), cucumber tree and mango along with small trees/shrubs such as Siam weed, mist-flower, praxelis (Eupatorium catarium) and Japanese sunflower (Tithonia diversifolia);..."
304	2006. Russell, T./Cutler, C./Walters, M.. <i>The new encyclopedia of American trees</i> . Hermes House, London, UK	[Environmental weed? Yes] "In Australia it has become a weed, posing a threat to the native flora."
304	2007. Poon, E./Westcott, D.A./Burrows, D./Webb, A.. <i>Assessment of research needs for the management of invasive species in the terrestrial and aquatic ecosystems of the Wet Tropics</i> . Reef & Rainforest Research Centre Ltd, Cairns	[Environmental weed? Yes] "Table 5. High priority newly emerging environmental weeds, recommended by the WT Conservation Strategy to be eradicated completely in the WTR (WTMA 2004)." [List includes Parmentiera aculeata]
304	2010. Queensland Government. <i>Fact sheet - Pest Plant: Cucumber Tree - Parmentiera aculeata (PP126)</i> . The State of Queensland (Department of Primary Industries and Fisheries), http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-Cucumber-	[Environmental weed? Yes] "It has invaded rainforest in some Far North Queensland catchments, outcompeting native rainforest trees and replacing native vegetation."
305	2007. Randall, R.P.. <i>Global Compendium of Weeds - Parmentiera cereifera</i> [Online Database]. http://www.hear.org/gcw/species/parmentiera_cereifera/	[Congeneric weed? No] Listed as a weed, but evidence of impacts not found
401	1973. Woodson, Jr., R.E./Schery, R.W./Gentry, A.H.. <i>Flora of Panama</i> . Part IX. Family 172. Bignoniaceae. <i>Annals of the Missouri Botanical Garden</i> . 60(3): 781-977.	[Produces spines, thorns or burrs? Yes] "Small tree, branchlets terete, the nodes armed with a thick thorn subtending each leaf...It is readily distinguished from the native species by its axillary spines."
402	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. <i>Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4</i> . <i>Fieldiana</i> . 24: 1-466.	[Allelopathic? No] "It is widely spread in cultivation in Guatemala,..." [Commonly cultivated tree with no mention of allelopathic properties]
403	1980. Gentry, A.H.. <i>Bignoniaceae: Part I (Crescentieae and Tourrettieae)</i> . <i>Flora Neotropica</i> . 25(1): 1-130.	[Parasitic? No] "Small tree to 10 m tall..." [Bignoniaceae]
404	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. <i>Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4</i> . <i>Fieldiana</i> . 24: 1-466.	[Unpalatable to grazing animals? No] "It is said to be eaten greedily by pigs where available.." [Fruits]

404	2008. Jiménez-Ferrer, G./Velasco-Pérez, R./Uribe Gómez, M./Soto-Pinto, L.. Livestock and local knowledge of fodder trees and shrubs in Lacandon rainforest, Chiapas, Mexico. <i>Zootecnia Tropical</i> . 26(3): 333-337.	[Unpalatable to grazing animals? No] "Knowledge and use of fodder trees and shrubs play an important role for designing more environmental-sound cattle systems as well as a significant function for farmer`s economy. This research aimed to document local knowledge on fodder trees and shrubs in Lacandona rainforest, Chiapas, Mexico. Participatory workshops were carried out, along with semi structured interviews, transect, and plant recollection. Communities with "ejido" land tenure of four agroecological zones were studied. A total of 28 fodder species were recorded, representing 16 botanical families. The species with the highest cultural importance index were <i>Gliricidia sepium</i> (4.6), <i>Brosimum alicastrum</i> (4.1), <i>Psidium guajava</i> (4.1), <i>Spondias bombin</i> (3.7) <i>Bursera simaruba</i> (3.5), <i>Cecropia obtusifolia</i> (3.1), <i>Byrsonima crassifolia</i> (2.9) <i>Parmentiera aculeata</i> (2.9), <i>Erythrina</i> sp (2.4), <i>Citrus sinensis</i> (2.3), <i>Cnidiscolum Chayamansa</i> (2.2), <i>Cedrela odorata</i> (2.1), <i>Bahuinia herrerae</i> (2.1), <i>Tithonia diversifolia</i> (2.1), and <i>Spondias purpurea</i> (2.0). Most of the species offered several uses besides forage, such as shade, food, fuelwood, live fence, medicinal and construction."
405	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. <i>Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4. Fieldiana</i> . 24: 1-466.	[Toxic to animals? No] "It is widely spread in cultivation in Guatemala, but the trees are not very numerous, since the fruit is not highly esteemed except in the very dry regions where there is often a shortage of fruits and other food. The fruit is fried or otherwise cooked before being eaten, and it is often stuffed with meat or other articles. It is said to be eaten greedily by pigs where available. At Aguacatan it was stated that the Indians employ the ripe fruit for making sweets." [No evidence]
406	2006. Howard, F.W./Pemberton, R.W./Hodges, G.S./Steinberg, B./McLean, D./Liu, H.. Host Plant Range of Lobate Lac Scale, <i>Paratachardina lobata</i> , in Florida. <i>Proceedings of the Florida State Horticultural Society</i> . 119: 398-408.	[Host for recognized pests and pathogens? Potentially. Unknown in Hawaii] "The lobate lac scale, <i>Paratachardina lobata</i> (Fig. 1) is an insect pest of woody plants that was found in Florida for the first time in 1999 (Hamon, 2001). This species is native to India and Sri Lanka (Chamberlin, 1923, 1925) and adventive in Florida and the Bahamas." [Parmentiera aculeata listed among host plants]
407	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. <i>Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4. Fieldiana</i> . 24: 1-466.	[Causes allergies or is otherwise toxic to humans? No] "It is widely spread in cultivation in Guatemala, but the trees are not very numerous, since the fruit is not highly esteemed except in the very dry regions where there is often a shortage of fruits and other food. The fruit is fried or otherwise cooked before being eaten, and it is often stuffed with meat or other articles. It is said to be eaten greedily by pigs where available. At Aguacatan it was stated that the Indians employ the ripe fruit for making sweets." [No evidence]
407	2011. Top Tropicals. <i>Parmentiera edulis</i> , <i>Parmentiera aculeata</i> . Top Tropicals Botanical Garden, http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=parmentiera_edulis	[Causes allergies or is otherwise toxic to humans? No] "The fibrous, ridged, fruit is 12" long and 2" wide. It resembles a greenish-yellow cucumber, it is juicy with a sweet flavor similar to sugar cane. Eaten either raw or cooked. The fruit is sometimes made into pickles or preserves. It is reported to be a good remedy for colds, and the roots are used as a diuretic." [No evidence]
408	1980. Gentry, A.H.. <i>Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica</i> . 25(1): 1-130.	[Creates a fire hazard in natural ecosystems? No] No evidence from native range
408	2001. Werren, G.. <i>Environmental Weeds of the Wet Tropics Bioregion: Risk Assessment & Priority Ranking</i> . Rainforest CRC, Cairns, Australia http://www.wettropics.gov.au/res/downloads/Weeds.pdf	[Creates a fire hazard in natural ecosystems? No] No evidence from introduced range
409	2003. Llamas, K.A.. <i>Tropical Flowering Plants</i> . Timber Press, Portland, OR	[Is a shade tolerant plant at some stage of its life cycle? Possibly No] "Full to part sun"
409	2009. Rauch, F.D./Weissich, P.R.. <i>Small Trees for the Tropical Landscape</i> . University of Hawaii Press, Honolulu, HI	[Is a shade tolerant plant at some stage of its life cycle? Possibly No] "Plant it in full sun in a well-drained soil."
410	2003. Llamas, K.A.. <i>Tropical Flowering Plants</i> . Timber Press, Portland, OR	[Tolerates a wide range of soil conditions? Yes] "Average to fertile, well-drained soil."
411	1980. Gentry, A.H.. <i>Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica</i> . 25(1): 1-130.	[Climbing or smothering growth habit? No] "Small tree to 10 m tall, branchlets terete, glabrous or slightly puberulous, the nodes armed with a thick thorn subtending each leaf."
412	2001. Werren, G.. <i>Environmental Weeds of the Wet Tropics Bioregion: Risk Assessment & Priority Ranking</i> . Rainforest CRC, Cairns, Australia http://www.wettropics.gov.au/res/downloads/Weeds.pdf	[Forms dense thickets? Yes] "...in the case of some such as Cucumber Tree, can form dense monospecific stands displacing native species;"

501	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Aquatic? No] "Small tree to 10 m tall..."
502	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Grass? No] Bignoniaceae
503	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Nitrogen fixing woody plant? No] Bignoniaceae
504	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Small tree to 10 m tall, branchlets terete, glabrous or slightly puberulous, the nodes armed with a thick thorn subtending each leaf."
601	2011. Roman-Danobeytia, F.J./Levy-Tacher, S.I./Aronson, J. et al.. Testing the Performance of Fourteen Native Tropical Tree Species in Two Abandoned Pastures of the Lacandon Rainforest Region of Chiapas, Mexico. Restoration Ecology. DOI: 10.1111/j.1526-10	[Evidence of substantial reproductive failure in native habitat? No] "Almost all the mid-successional species (Cei. pentandra, Spo. mombin, Sch. parahyba, Par. aculeata, Swi. macrophylla, and Sap. saponaria) showed slow growth but acceptable seedling survival rates in both the sites. These performances would be desirable to diversify the canopy structure and create a greater diversity of understory niches for wildlife and seedling recruitment..."
602	2011. Roman-Danobeytia, F.J./Levy-Tacher, S.I./Aronson, J. et al.. Testing the Performance of Fourteen Native Tropical Tree Species in Two Abandoned Pastures of the Lacandon Rainforest Region of Chiapas, Mexico. Restoration Ecology. DOI: 10.1111/j.1526-10	[Produces viable seed? Yes] "In site 1, good seedling survival (51–75%) was recorded for two of the three early-successional species (Mun. calabura and Aca. angustissima) as well as for five of the eight mid-successional species studied (Swi. macrophylla, Cei. pentandra, Par. aculeata,..."
603	2011. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2011. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	"Palmately compound-leaved neotropical Tecomeae progenitors also gave rise to the Crescentieae with evolution of an indehiscent fruit accompanied by bat pollination."
605	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Requires specialist pollinators? Yes] "white, bat-pollinated flowers, emerging from spathe-like calyxes;"
606	2004. Maldonado Mares, F./Vargas Simón, G./Molina Martínez, R.F./Sol Sánchez, A.. Frutales Tropicales de Tabasco. Tercera edición. Universidad Juárez Autónoma de Tabasco, Cárdenas, Mexico	[Reproduction by vegetative fragmentation? No] "Propagation. It is propagated by seed." [Translation from Spanish. No evidence of vegetative spread]
607	2009. Rauch, F.D./Weissich, P.R.. Small Trees for the Tropical Landscape. University of Hawaii Press, Honolulu, HI	[Minimum generative time (years)? Probably 4+] "...grows rather slowly to 30 feet or slightly more in height."
701	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Propagules likely to be dispersed unintentionally? No] "Fruit to 17 cm long, more than 3 cm in diam. when fresh, curved, costate with thick ribs; seeds small, thin, 3-4 mm long, 3 mm wide." [No evidence, and fruits relatively large & indehiscent. Unlikely to be inadvertently dispersed]
702	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4. Fieldiana. 24: 1-466.	[Propagules dispersed intentionally by people? Yes] "The tree is abundant on the dry hills between El Rancho and Salama, and less frequent in other dry regions. It is widely spread in cultivation in Guatemala, but the trees are not very numerous, since the fruit is not highly esteemed except in the very dry regions where there is often a shortage of fruits and other food."
702	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules dispersed intentionally by people? Yes] "It is native to Mexico and northern Central America and occasionally cultivated outside its native range."
703	1973. Woodson, Jr., R.E./Schery, R.W./Gentry, A.H.. Flora of Panama. Part IX. Family 172. Bignoniaceae. Annals of the Missouri Botanical Garden. 60(3): 781-977.	[Propagules likely to disperse as a produce contaminant? No] "Fruit to 17 cm long, more than 3 cm in diameter when fresh, curved, costate with thick ribs." [No evidence, and unlikely given large fruit size]
704	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Propagules adapted to wind dispersal? No] "Seeds of the great majority of Bignoniaceae are winged; even in a few indehiscent fruited genera like Parmentiera vestigial seed wings remain"

704	2009. Velázquez, J.R./Colín, P.S./García, G.J.. Frutos y semillas de árboles tropicales de México. Instituto Nacional de Ecología, Mexico	[Propagules adapted to wind dispersal? No] "Síndrome de dispersión: zoocoria" [Translation: Dispersal Syndrome: zoochory]
705	1974. Standley, P.C./Williams, L.O./Gibson, D.N.. Flora of Guatemala - Vol. 24 - Part X - Numbers 3 to 4. Fieldiana. 24: 1-466.	[Propagules water dispersed? Unknown] "Moist or dry thickets or lowland forest, often along rocky water-courses" [distribution along water courses suggests fruits and/or seeds may be moved by water although this is not the main mode of dispersal]
706	2011. Roman-Danobeytia, F.J./Levy-Tacher, S.I./Aronson, J. et al.. Testing the Performance of Fourteen Native Tropical Tree Species in Two Abandoned Pastures of the Lacandon Rainforest Region of Chiapas, Mexico. Restoration Ecology. DOI: 10.1111/j.1526-10	[Propagules bird dispersed? Potentially yes] "Table 1. Ecological and utilitarian characteristics of the 14 Lacandon rainforest tree species studied ... <i>Parmentiera aculeata</i> ... Seed dispersal vector ... Vertebrates" [Fleshy-fruited, although birds not specified]
707	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Propagules dispersed by other animals (externally)? No] "Fruit to 17 cm long, more than 3 cm in diam. when fresh, curved, costate with thick ribs; seeds small, thin, 3-4 mm long, 3 mm wide." [Fruits potentially carried by vertebrate dispersers, but no means of external attachment are present on fruits or seeds]
708	2008. Miceli-Méndez, C.L./Ferguson, B./Ramírez-Marcial, N.. Seed Dispersal by Cattle: Natural History & Applications to Neotropical Forest Restoration & Agroforestry. Pp 165-191 in R.W.Myster (ed). Post-Agricultural Succession in the Neotropics. Springer,	[Propagules survive passage through the gut? Yes] "Other bovinochorous species that may represent considerable forage resources in Chiapas include <i>Acacia farnesiana</i> , <i>Enterolobium cyclocarpum</i> , <i>Manilkara achras</i> , <i>Nopalea dejecta</i> , <i>Parmentiera aculeata</i> , <i>Pithecellobium</i> spp., <i>Prosopis juliflora</i> , <i>Psidium guajava</i> , <i>Senna atomaria</i> y <i>Senna spectabilis</i> ."
708	2009. Velázquez, J.R./Colín, P.S./García, G.J.. Frutos y semillas de árboles tropicales de México. Instituto Nacional de Ecología, Mexico	[Propagules survive passage through the gut? Yes] "Síndrome de dispersión: zoocoria" [Translation: Dispersal Syndrome: zoochory]
801	1980. Gentry, A.H.. Bignoniaceae: Part I (Crescentieae and Tourrettieae). Flora Neotropica. 25(1): 1-130.	[Prolific seed production (>1000/m ²)? Unknown] "Small tree to 10 m tall...Fruit to 17 cm long, more than 3 cm in diam. when fresh, curved, costate with thick ribs; seeds small, thin, 3-4 mm long, 3 mm wide." [No information on fruit/seed production per tree]
802	1992. Rico-Gray, V./García-Franco, J.G.. Vegetation and Soil Seed Bank of Successional Stages in Tropical Lowland Deciduous Forest. Journal of Vegetation Science. 3(5): 617-624.	[Evidence that a persistent propagule bank is formed (>1 yr)? Possibly Not] "Table 1. Abundance values for woody plants with dbh > 1.0 cm. p = present; * = in seed bank. S = Slashed; SB = Slashed-and-burned; 1 - 100: successional stages with years of regrowth." [P. aculeata not documented in seed bank, but persistence of seeds in soil unknown]
803	2010. Queensland Government. Fact sheet - Pest Plant: Cucumber Tree - <i>Parmentiera aculeata</i> (PP126). The State of Queensland (Department of Primary Industries and Fisheries), http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-Cucumber-	[Well controlled by herbicides? Unknown] "It is important to note that specific research on the use of herbicides to control cucumber tree has not been undertaken to date. Therefore, the treatment options outlined in Table 1 are suggestions only, based on registered controls for similar weeds in non agricultural areas and the specifications of PER11463. As such, their effectiveness cannot be guaranteed."
804	2010. Queensland Government. Fact sheet - Pest Plant: Cucumber Tree - <i>Parmentiera aculeata</i> (PP126). The State of Queensland (Department of Primary Industries and Fisheries), http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-Cucumber-	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Seedlings can be manually removed. If larger plants are cut down or ringbarked the stump must be treated with a suitable herbicide as the tree will otherwise reshoot."
805	2011. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]