

Key Words: Evaluate; Tropical Palm, Ornamental, Thicket-forming, Bird-dispersed

**Family:** *Areaceae*

**Taxon:** *Asterogyne martiana*

**Synonym:** *Asterogyne minor* Burret  
*Geonoma martiana* H. Wendl.  
*Geonoma trifurcata* Oerst.

**Common Name:** pata de gallo  
 capoca

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score	1
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	?
301	Naturalized beyond native range			y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed			n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed			n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed			n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed			n=0, y = 1*multiplier (see Appendix 2)	n
401	Produces spines, thorns or burrs			y=1, n=0	n
402	Allelopathic			y=1, n=0	
403	Parasitic			y=1, n=0	n
404	Unpalatable to grazing animals			y=1, n=-1	
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	y
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)			y=1, n=0	

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

Designation: EVALUATE

WRA Score **1**

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**Supporting Data:**

101	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Is the species highly domesticated? No evidence]
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Species suited to tropical or subtropical climate(s) 2-High] "Widespread in Central America: Belize (El Cayo, Stann Creek, Toledo), Guatemala (Izabal), Honduras (Atlantida, Colon, Cortes, Gracias a Dios, Santa Barbara), Nicaragua (Chontales, Jiinotega, Matagalpa, Rio San Juan, Zelaya), Costa Rica (Alajuela, Cartago, Heredia, Limon, Puntarenas, San Jose), Panama (Bocas del Toro, Chiriquf, Coclé, Colon, Darien. Panama. San Blas, Veraguas), and in northwestern South America: Colombia (Antioquia, Choco, Cordoba, Nariño, Valle del Cauca), Ecuador (Esmeraldas)"
202	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Quality of climate match data 2-High]
203	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Broad climate suitability (environmental versatility)? Yes] "Common in the understory of the lowland and mountain rain forests, in flooded and nonflooded areas; from sea level to 1400 m, but normally below 600 m." [Elevation range exceeds 1000 m; environmentally versatile]
204	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Five species are recognized in this treatment: one of them ( <i>Asterogyne martiana</i> ) is widely distributed from Belize in Central America to northern Ecuador"
205	2003. Riffle, R.L./Craft, P.. An Encyclopedia of Cultivated Palms. Timber Press, Portland, OR.	[Does the species have a history of repeated introductions outside its natural range? Uncertain if cultivated outdoors, or more commonly as a specimen plant] "Until it is old, it is wonderful along a curving shady path or as a large groundcover in partial shade. It is one of the best candidates for homes, greenhouses, atriums, or conservatories if given high relative humidity and bright light."
205	2006. Wong, M.. Palms for Hawai'i Landscapes. Landscape Nov. 2006 L-19. College of Tropical Agriculture and Human Resources, UH Manoa, Honolulu, HI	[Does the species have a history of repeated introductions outside its natural range?? Possibly not in Hawaii] "In addition, <i>Asterogyne martiana</i> (Fig. 35), <i>Johannesteijsmannia altifrons</i> (Fig. 36), and <i>Pinanga kuhlii</i> are particularly attractive, but they are not easy to find."
205	2013. Dave's Gardern. PlantFiles: Pata de Gallo - <i>Asterogyne martiana</i> . <a href="http://davesgarden.com/guides/pf/go/66207/">http://davesgarden.com/guides/pf/go/66207/</a> [Accessed 16 Jan 2013]	[Does the species have a history of repeated introductions outside its natural range?] "This plant has been said to grow in the following regions: Loxahatchee, Florida Ainaloa, Hawaii Hilo, Hawaii"
301	2007. Randall, R.P.. The introduced flora of Australia and its weed status. CRC for Australian Weed Management, Glen Osmond, Australia	[Naturalized beyond native range? No evidence in Australia]
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]
301	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Naturalized beyond native range? No evidence]
302	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Garden/amenity/disturbance weed? No evidence]
303	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Agricultural/forestry/horticultural weed? No evidence]
304	2013. WRA Specialist. Personal Communication.	[Environmental weed? No evidence]

305	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Congeneric weed? No evidence]
401	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Produces spines, thorns or burrs? No] "Small to medium-sized, solitary, unarmed, pleoanthic, monoecious palm."
402	2013. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Parasitic? No] Arecaceae
404	2013. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]
405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals? No evidence]
405	2013. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Toxic to animals? No evidence]
406	2013. EPPO Global Database. Pathway Pests for <i>Asterogyne martiana</i> . <a href="http://gd3.eppo.int/organism.php/QGYMA/pathway_pest">http://gd3.eppo.int/organism.php/QGYMA/pathway_pest</a> [Accessed 17 Jan 2013]	[Host for recognized pests and pathogens? Potentially] "Pathway Pests for <i>Asterogyne martiana</i> " ... " Coconut cadang-cadang viroid (as Arecaceae) Coconut lethal yellowing phytoplasma (as Arecaceae) Paysandisia archon (as Arecaceae) Rhynchophorus ferrugineus (as Arecaceae) Rhynchophorus palmarum (as Arecaceae)"
407	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Causes allergies or is otherwise toxic to humans? No evidence]
407	2013. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Causes allergies or is otherwise toxic to humans? No evidence]
408	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). <i>Brittonia</i> . 55(4): 326-356.	[Creates a fire hazard in natural ecosystems? No] "Common in the understory of the lowland and mountain rain forests, in flooded and nonflooded areas" [Unlikely given wet forest habitat]
409	1985. Chazdon, R.L.. Leaf Display, Canopy Structure, and Light Interception of Two Understory Palm Species. <i>American Journal of Botany</i> . 72(10): 1493-1502.	[Is a shade tolerant plant at some stage of its life cycle? Yes] " <i>Asterogyne martiana</i> H. Wendl. ex Burret and <i>Geonoma cuneata</i> H. Wendl. ex Spruce are shade tolerant dwarf palms that reach heights of 1-2 m."
409	2008. Gargiullo, M.B./Magnuson, B.L./Kimball, L.D.. A Field Guide to Plants of Costa Rica. Oxford University Press US, New York, NY	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Habitat: Wet forest understories."
410	2003. Riffle, R.L./Craft, P.. An Encyclopedia of Cultivated Palms. Timber Press, Portland, OR.	[Tolerates a wide range of soil conditions?] "This species is unusually sensitive to waterlogged soils, in which the roots often rot. It needs a humus-rich medium and partial shade..."
410	2013. Plant This. <i>Asterogyne martiana</i> . <a href="http://www.planthis.com.au/plant-information.asp?gardener=9379">http://www.planthis.com.au/plant-information.asp?gardener=9379</a> [Accessed 16 Jan 2013]	[Tolerates a wide range of soil conditions?] "Soil Moisture: constantly moist; Soil: enriched soil, mildly acidic to mildly alkaline"
411	1937. Standley, P.C./Dahlgren, B.E.. Flora of Costa Rica - Vol. 18 - Part I. <i>Fieldiana</i> . 18: 1-398.	[Climbing or smothering growth habit? No] "A dwarf palm, as much as 2 meters high, the trunk 4-5 cm. thick;..."

411	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Climbing or smothering growth habit? No] "Stem solitary, erect, sometimes basally decumbent, 0.4-1.6(-3) m tall, 2.5-5 diam., dull brown to orange, not branched; internodes (1-)2.5-3 cm long; aerial roots forming an irregular basal cone, each root 4-8 cm long, 0.3-0.4 cm diam.; pneumatodes brownish cream-colored, conical, to 1 mm long. Leaves (6-)12-20, yellowish red when young, green when mature, the old ones sometimes persistent; sheath (8-) 11-16(-38) X 3 cm, with reddish brown tomentum, longitudinally splitting, the margins slightly fibrous; petiole (4-)20-68(-75) X 0.5-1.5 cm, keeled to channeled adaxially, rounded to angled abaxially, almost glabrous to densely brown tomentose, toward the base slightly fibrous at margins; midvein (33-)55- 79(-108) X 0.2-0.7 cm, greenish yellow, glabrous or with pinkish brown tomentum, slightly keeled adaxially, rounded abaxially; blade 0.4-1.3 X 0.15-0.3 m, light to dark green, deeply bifid at apex for 18-32 cm; primary veins 28-40 per side, emerging at 20-35? angle at midvein, prominent at both surfaces of blade, yellow when dry."
412	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Forms dense thickets? Possibly Yes] "The five species of <i>Asterogyne</i> are distributed in Central America and northern South America (Fig. 4). They are understory palms; <i>A. martiana</i> and <i>A. ramosa</i> occasionally are dominant in that stratum of the forest." ... " <i>Asterogyne martiana</i> grows from Belize to northern Ecuador, usually forming large stands in the understory of the lowland nonflooded rain forest, but sometimes also along streamlets and seasonally flooded patches of forest. It has also been collected in the cloud forests of Costa Rica and Colombia, sometimes to 1400 m."
412	2010. Young, T.P./Peffer, E.. "Recalcitrant understory layers" revisited: arrested succession and the long life-spans of clonal mid-successional species. Canadian Journal of Forest Research. 40(6): 1184-1188.	[Forms dense thickets? Yes] "Table 1. Species reported to suppress forest regeneration, and their growth forms..." [ <i>Asterogyne martiana</i> : Clonal or thicket forming = Yes]
501	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Aquatic? No] "Common in the understory of the lowland and mountain rain forests, in flooded and nonflooded areas"
502	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Grass? No] Arecaceae
503	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Nitrogen fixing woody plant? No] Arecaceae
504	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Small to medium-sized, solitary, unarmed, pleonanthic, monoecious palm."
601	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Evidence of substantial reproductive failure in native habitat? No] " <i>Asterogyne martiana</i> is a widespread species considered to be nonthreatened in Central America and Colombia (Bernal, 1989)."
602	2001. Ellison, D./Ellison, A.. Cultivated Palms of the World. UNSW Press, Sydney.	[Produces viable seed? Yes] "The maturing fruit is purplish and fresh seed germinates in 2 to 4 months."
603	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Hybridizes naturally? Unknown. No discussion of hybridization in the genus revision]
604	1986. Henderson, A.. A Review of Pollination Studies in the Palmae. Botanical Review. 52: 221-259.	[Self-compatible or apomictic? Unknown] "Schmid (1970a, 1970b) reported on pollination of <i>Asterogyne martiana</i> (Wendl.) Wendl. ex Hemsley. Inflorescences were protandrous" [Protandrous flowers might minimize self-pollination]
605	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Requires specialist pollinators? No evidence] "Several structural features of <i>Asterogyne</i> flowers suggest insect pollination." ... "Insect pollination of <i>Asterogyne martiana</i> was discussed by Schmid (1970b). In two populations in Costa Rica, he found insects of five different orders visiting the flowers; syrphid flies probing for nectar were considered effective pollinators for the species. The flies also visited staminate flowers to eat pollen. Syrphid flies have also been reported by de Nevers & Henderson 6323 to visit flowers of <i>A. martiana</i> in Panama. Ants (Formicidae, Hymenoptera) were reported by Schmid (1970b) to visit inflorescences of <i>A. martiana</i> (Fig. 7E) and were observed by the first author in staminate anthesis in <i>A. spicata</i> ."

606	2001. Ellison, D./Ellison, A.. Cultivated Palms of the World. UNSW Press, Sydney.	[Reproduction by vegetative fragmentation? No] "A common, small, bushy palm with undivided leaves, it usually has a slender, solitary trunk, but occasionally may send up a few suckers."
606	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Reproduction by vegetative fragmentation? No] "Stems of <i>Asterogyne</i> are solitary and mostly erect; only <i>A. martiana</i> and <i>A. yaracuyense</i> may be slightly decumbent at the base."
607	2013. Palmpedia. <i>Asterogyne martiana</i> . <a href="http://www.palmpedia.net/wiki/Asterogyne_martiana">http://www.palmpedia.net/wiki/Asterogyne_martiana</a> [Accessed 17 Jan 2013]	[Minimum generative time (years)? Unknown. Probably >4 years] "Growth Rate: Slow"
701	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit ellipsoid to ellipsoid-ovoid, 0.8-1.2 cm long, 0.4-0.7 cm diam.; epicarp orange to red when young, purplish black at maturity; seed ellipsoid, 0.7-0.8 cm long, 0.4-0.5 cm diam." [Unlikely as fruits and seeds are relatively large and lack means of external attachment]
702	2003. Riffle, R.L./Craft, P.. An Encyclopedia of Cultivated Palms. Timber Press, Portland, OR.	[Propagules dispersed intentionally by people? Yes] Ornamental
703	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules likely to disperse as a produce contaminant? No evidence] "Fruit ellipsoid to ellipsoid-ovoid, 0.8-1.2 cm long, 0.4-0.7 cm diam.; epicarp orange to red when young, purplish black at maturity; seed ellipsoid, 0.7-0.8 cm long, 0.4-0.5 cm diam." [Unlikely, as fruits and seeds are relatively large, and palms are not grown with other produce]
704	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules adapted to wind dispersal? No] "Fruit ellipsoid to ellipsoid-ovoid, 0.8-1.2 cm long, 0.4-0.7 cm diam.; epicarp orange to red when young, purplish black at maturity; seed ellipsoid, 0.7-0.8 cm long, 0.4-0.5 cm diam."
705	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules water dispersed?] "...sometimes also along streamlets and seasonally flooded patches of forest." [Fleshy-fruited and adapted for frugivory, but distribution suggest possible water as a secondary dispersal vector]
706	1985. Moermond, T.C./Denslow, J.S.. Neotropical Avian Frugivores: Patterns of Behavior, Morphology, and Nutrition, with Consequences for Fruit Selection. Ornithological Monographs. 36: 865-897.	[Propagules bird dispersed? Yes] "In other cases fruits eaten piecemeal are first carried away from the plant, and the seeds thus dispersed to some degree, e.g., <i>Tersina viridis</i> eating large fruits (Schaefer 1953), <i>Trogon massena</i> eating large lauraceous fruits in captivity (Santana C, Moermond, and Denslow, unpubl. data), <i>Ramphastos sulfuratus</i> and <i>Pteroglossus torquatus</i> eating <i>Swartzia cubensis</i> fruits, and <i>Euphonia gouldi</i> eating <i>Asterogyne martiana</i> fruits (pers. observ.)."
706	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules bird dispersed? Presumably Yes] "Dispersal of the fruits has never been studied, but the ripe, dark purplish, black, or garnet red fruits contrasting with the brown, reddish brown, reddish, or salmon to pink rachillae suggest bird dispersal."
707	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules dispersed by other animals (externally)? No. Adapted for internal dispersal] "Dispersal of the fruits has never been studied, but the ripe, dark purplish, black, or garnet red fruits contrasting with the brown, reddish brown, reddish, or salmon to pink rachillae suggest bird dispersal."
708	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Propagules survive passage through the gut? Presumably Yes] "Dispersal of the fruits has never been studied, but the ripe, dark purplish, black, or garnet red fruits contrasting with the brown, reddish brown, reddish, or salmon to pink rachillae suggest bird dispersal."
801	2003. Stauffer, F.W./Asmussen, C.B./Henderson, A./Endress, P.K.. A Revision of <i>Asterogyne</i> (Arecaceae: Arecoideae: Geonomeae). Brittonia. 55(4): 326-356.	[Prolific seed production (>1000/m <sup>2</sup> )? Probably Not. Relatively small-statured palm with single-seeded fruit] "Stem solitary, erect, sometimes basally decumbent, 0.4-1.6(-3) m tall..." "... "Fruit ellipsoid to ellipsoid-ovoid, 0.8- 1.2 cm long, 0.4-0.7 cm diam.; epicarp orange to red when young, purplish black at maturity; seed ellipsoid, 0.7-0.8 cm long, 0.4-0.5 cm diam."
803	2013. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species
804	1994. Vandermeer, J.. Effects of Hurricane Joan on the Palms of the Caribbean Coast Rainforest of Nicaragua. Principes. 38(4): 182-189.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Possibly hurricane resistant] "The principal result of this study is that the understory palm flora was not greatly affected by the hurricane." ... "This result is not really surprising given the natural history of the species concerned. Almost all appear to be particularly resistant to physical damage. <i>Asterogyne martiana</i> has a single flexible trunk, and it is frequently seen in other forests with the trunk angled strongly or even bent, reflecting the effect of past damage."
805	2013. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## **Summary of Risk Traits**

### **High Risk / Undesirable Traits**

- Thrives in tropical climates
- Can grow from sea level to 1400 m elevation within native range
- Shade tolerant (potential to establish in intact forest understory)
- Thicket-forming
- Fleshy fruit adapted for bird dispersal

### **Low Risk / Desirable Traits**

- No records of naturalization or invasiveness elsewhere
- Unarmed
- Non-toxic
- Landscaping and ornamental value