

Family: *Meliaceae*

Taxon: *Swietenia macrophylla*

Synonym: *Swietenia candollei* Pittier

Common Name: Honduras mahogany
mahogany

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: EVALUATE
Status:	Assessor Approved	Data Entry Person:	HPWRA OrgData	WRA Score 4
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)	y
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	n
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	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	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	n

412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	y
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	>3
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed	y=1, n=-1	
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	n
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	n
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: EVALUATE

WRA Score 4

Supporting Data:

101	2011. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Species suited to tropical or subtropical climate(s) 2-high] "The genus <i>Swietenia</i> has a natural distribution from 20°N to 18°S in tropical America. <i>S. macrophylla</i> is the most widely distributed species occurring from the Atlantic regions of south-east Mexico, through Central America (Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama), northern South America (Colombia, Venezuela, Ecuador, Peru) and in an arc across the southern Amazon Basin, in Bolivia and Brazil (Lamb, 1966; Styles, 1981)."
202	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Quality of climate match data? 2-high] "The genus <i>Swietenia</i> has a natural distribution from 20°N to 18°S in tropical America. <i>S. macrophylla</i> is the most widely distributed species occurring from the Atlantic regions of south-east Mexico, through Central America (Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama), northern South America (Colombia, Venezuela, Ecuador, Peru) and in an arc across the southern Amazon Basin, in Bolivia and Brazil (Lamb, 1966; Styles, 1981)."
203	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Broad climate suitability (environmental versatility)? Yes] "The species has a very wide altitude range from near sea-level to 1500 m in Bolivia and Peru (Lamb, 1966). The wide geographical range and the ecological tolerance of <i>S. macrophylla</i> indicate that a number of biotype groups have developed taking advantages of a variety of habitats and changing environmental conditions (Lamb, 1966). Optimum conditions for the species appear to be an average annual rainfall of approximately 2000-4000 mm which may be uniformly distributed or with a dry season of up to four months, and a mean annual temperature range from 24-28°C (Ehrhart, 1992; Chaplin, 1993; Lamb, 1966)."
203	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Broad climate suitability (environmental versatility)? Yes] "At present, <i>S. macrophylla</i> is widespread throughout the tropics, found naturally in both tropical dry and tropical wet forest types. Within its ecological range, the optimum annual rainfall is between 1000 and 2500 mm with a dry period of 0–4 months (Lamb 1966). In Amazonian Ecuador and Peru, annual rainfall in this species' area has been reported at 3800 mm (Whitmore 1983). The reported optimum natural development for this species is under tropical dry forest conditions with an annual precipitation of 1000–2000 mm, a mean annual temperature of 24 °C and a potential evapotranspiration ratio of 1–2 (Lamb 1966). In Indonesia, <i>S. macrophylla</i> grows at elevations of 0–1500 m above sea level, in areas with a mean annual temperature of 20–28 °C, with the range in the coldest and warmest months being 11–22 °C and 22–30 °C, respectively (Soerianegara and Lemmens 1993)."
204	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Native or naturalized in regions with tropical or subtropical climates? Yes] "The genus <i>Swietenia</i> has a natural distribution from 20°N to 18°S in tropical America. <i>S. macrophylla</i> is the most widely distributed species occurring from the Atlantic regions of south-east Mexico, through Central America (Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama), northern South America (Colombia, Venezuela, Ecuador, Peru) and in an arc across the southern Amazon Basin, in Bolivia and Brazil (Lamb, 1966; Styles, 1981)."
204	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Native or naturalized in regions with tropical or subtropical climates? Yes] " <i>Swietenia macrophylla</i> grows naturally in Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru and Venezuela. However, it is nearly extinct in Ecuador, Colombia, Panama and Costa Rica; close to commercial extinction in Bolivia; declining in Mexico, Belize and Brazil; and in severe decline in Guatemala, Peru, Nicaragua and Honduras (Lugo 2002). The species has been extensively planted mainly in Southern Asia and the Pacific including India, Indonesia, Philippines and Sri Lanka (Soerianegara and Lemmens 1993). It has also been introduced into West Africa."
205	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Does the species have a history of repeated introductions outside its natural range? Yes] "Substantial areas have been planted in Indonesia, the South Pacific and Central America."

205	2011. Krisnawati, H./Kallio, M./Kanninen, M.. Swietenia macrophylla King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Does the species have a history of repeated introductions outside its natural range? Yes] "The largest plantations of <i>S. macrophylla</i> have been reported in South and Southeast Asia and the Pacific region. A significant proportion of the total area, most remarkably in Indonesia and the Philippines, was intended for protection of slopes and water catchments and may not be productive. In addition, <i>S. macrophylla</i> is widely used for avenue planting in some Asian countries including Indonesia, India and Sri Lanka. According to Mayhew and Newton (1998), the earliest recorded introduction of <i>S. macrophylla</i> into any country is to Indonesia in 1870 with seeds from India. It was then planted as an ornamental and cultivated in plantations in Java between 1897 and 1902."
301	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Naturalized beyond native range? Yes] "It was introduced in Puerto Rico about 1906(23) and has since become naturalized."
301	1998. Meidell, J.S./Oppenheimer, H.L./Bartlett, R.T.. New Plant Records from West Maui. Bishop Museum Occasional Papers. 56: 6-8.	[Naturalized beyond native range? Yes] "According to the Wagner et al. (1990), the genera <i>Melia</i> and <i>Toona</i> are the naturalized representatives of Meliaceae in this state, with the genus <i>Swietenia</i> reported as cultivated. However, the apparent naturalization on the island of O'ahu of <i>S. macrophylla</i> has been documented by a collection observed at BISH(Wood 5084). The historical records of Maui Pineapple Company indicate that <i>S. macrophylla</i> was planted within the Honokohau Arboretum in the mid-1920s and recent surveys of surrounding areas have produced observations of the significant proliferation of this taxon. Hundreds of vigorous individuals, ranging from seedlings to mature fruiting adults, have been noted in steep drainages of Honokohau Valley. It is often observed to be codominant with <i>Schinus terebinthifolius</i> and <i>Syzgium cumini</i> in disturbed Lowland Mesic Forest. Material examined: MAUI: Lahaina District, West Maui, 152 m, Honokohau Valley, 5 Jul 1997, Meidell & Oppenheimer 201 (BISH)."
301	2011. Norghauer, J.M./Martin, A.R./Mycroft, E.E./James, A./Thomas, S.C.. Island Invasion by a Threatened Tree Species: Evidence for Natural Enemy Release of Mahogany (<i>Swietenia macrophylla</i>) on Dominica, Lesser Antilles. PLoS ONE. 6(4): e18790.: doi:10.137	[Naturalized beyond native range? Yes] "Given its extensive planting globally, it is not surprising to learn that <i>Swietenia macrophylla</i> shows natural regeneration in some places, namely islands such as Hawaii and Puerto Rico [23,27], the Seychelles [8], as well as Sri Lanka and Trinidad [28] — but its spread beyond planted sites has never been rigorously demonstrated and it is unclear whether <i>Swietenia</i> spp. can invade adjacent habitats and possibly displace local plant species [9,13,28,29]. Prior assessments of the invasiveness of mahogany have been anecdotal, and have not explicitly considered the ERH."
302	2003. Grogan, J./Ashton, M.S./Galvao, J.. Big-leaf mahogany (<i>Swietenia macrophylla</i>) seedling survival and growth across a topographic gradient in southeast Para´, Brazil. Forest Ecology and Management. 186: 311–326.	[Garden/amenity/disturbance weed? No evidence from this study, but with the potential to act as a weed of disturbed areas] "A light demanding species with wind-dispersed orthodox seeds and no appreciable seedling bank in the forest understory (Lamb, 1966; Gullison and Hubbell, 1992), mahogany apparently requires a rare confluence of events—seed or seedling availability immediately following disturbance at large spatial scale—for successful regeneration. Management recommendations derived from these studies include mimicking natural disturbance regimes to encourage natural regeneration after logging, i.e., intensive interventions that could include high-volume timber extraction at local scales (Snook, 1996, 2003; Gullison et al., 1996)."
302	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Garden/amenity/disturbance weed? Yes. A disturbance adapted weed with potential environmental impacts] "A fast growing and shade tolerant tree that withstands pronounced periods of dry weather. It establishes well in disturbed sites and in secondary forests, becoming the dominant species and will suppress native plants. Seed production is prolific and seeds are dispersed by wind. The tree has some ability to sprout after cutting."
302	2004. Richardson, D.M./Binggeli, P./Schroth, G.. Invasive agroforestry trees: problems & solutions. Pp. 371-396 in Schroth, G. et al. (eds.) Agroforestry & biodiversity conservation in tropical landscapes. Island Press, Washington, D.C.	[Garden/amenity/disturbance weed? Yes. A disturbance adapted weed with potential environmental impacts] "In future agroforestry programs, experience with invasive plantation species must be taken into account to avoid introducing potentially invasive species into sensitive areas, such as buffer zones. For example, <i>Swietenia macrophylla</i> (mahogany, Meliaceae), is planted by farmers in association with fruit trees both in its native Amazonia and in Indonesia, where it is alien (Michon and de Foresta 1995); invasion by this species of native forests especially after disturbance (Commonwealth Agricultural Bureau International 2000) has been observed in Sri Lanka, Asia, and the Pacific Islands."
302	2011. World Agroforestry Center. Agroforestry Tree Database - <i>Swietenia macrophylla</i> . http://www.worldagroforestry.org/treedb2/AFTPDFS/Swietenia_macrophylla.pdf	[Garden/amenity/disturbance weed? Yes] "The species has some weed potential and may invade native forest communities, especially following disturbance. It should not be planted in close proximity to areas of high nature conservation significance."

303	2001. Hossain, M.K./Pasha, M.K.. Alien Invasive Plants in Bangladesh & Their Impacts on the Ecosystem. Pp 73-75 in Assessment & management of alien species that threaten ecosystems, habitats & species. SCBD, Montréal, Canada	[Agricultural/forestry/horticultural weed? No] "In 19th century the British people were mostly contributed to the introduction of some economically important forest plants from almost all the continents. The introduced species are <i>Tectona grandis</i> , <i>Albizia</i> spp., <i>Samanea saman</i> , <i>Xylocarpus kerrii</i> , and <i>Swietenia macrophylla</i> ." [Not considered a forest weed in Bangladesh]
303	2004. Dietz, H./Wirth, L.R./Buschmann, H.. Variation in herbivore damage to invasive and native woody plant species in open forest vegetation on Mahe', Seychelles. <i>Biological Invasions</i> . 6: 511–521.	[Agricultural/forestry/horticultural weed? No] "Table 1. The species surveyed and their status in the Seychelles (after Friedmann 1994). Mean SLA obtained from three mature leaves each of three individuals per species is also shown. Site no. refers to the sites where the species was sampled for the comparative survey (native vs invasive plants). See Figure 1 for the location of sites." [Swietenia macrophylla - Status = Introduced (non-invasive)]
304	1998. Richardson, D.M.. Forestry Trees as Invasive Aliens. <i>Conservation Biology</i> . 12(1): 18-26.	[Environmental weed? No] "Of the dominant tree genera used for commercial forestry, all except <i>Abies</i> , <i>Fagus</i> , <i>Gmelina</i> , and <i>Swietenia</i> are noted as alien invaders in recent synthesis volumes ... Options for the replacement of invasive with less invasive species seem limited in commercial forestry ... Besides attempting to control the densities of these species, conservation authorities are encouraging people to use other species, such as <i>Centrolobium paraense</i> , <i>Juglans neotropica</i> , <i>Swietenia macrophylla</i> , and <i>Tectona grandis</i> ." [S. macrophylla promoted as a non-invasive alternative]
304	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Environmental weed? Potentially. A disturbance adapted weed with potential environmental impacts] "A fast growing and shade tolerant tree that withstands pronounced periods of dry weather. It establishes well in disturbed sites and in secondary forests, becoming the dominant species and will suppress native plants. Seed production is prolific and seeds are dispersed by wind. The tree has some ability to sprout after cutting."
304	2010. Rana, M.P./Akhter, F.. Uses of Invasive Alien Plant Species in Rema-Kalenga Wildlife Sanctuary of Bangladesh. <i>Journal of Mountain Science</i> . 7: 380–385.	[Environmental weed? Not in Bangladesh] "Table 1 Various invasive alien plant species found in the Rema-Kalenga Wildlife Sanctuary, Bangladesh" [Swietenia macrophylla - Level of Invasion = ? No evidence of impacts from Bangladesh]
304	2011. Norghauer, J.M./Martin, A.R./Mycroft, E.E./James, A./Thomas, S.C.. Island Invasion by a Threatened Tree Species: Evidence for Natural Enemy Release of Mahogany (<i>Swietenia macrophylla</i>) on Dominica, Lesser Antilles. <i>PLoS ONE</i> . 6(4): e18790. doi:10.137	[Environmental weed? Not in Puerto Rico] "Like stands of African tulip, young and old plantations of <i>S. macrophylla</i> and <i>Pinus caribaea</i> also helped restore native biodiversity by providing key ecological functions, in the form of a 'nursery' canopy and litter fall, for re-colonization of less stress-tolerant native plants at human disturbed sites—understorey species richness of natives in a 50 yr old <i>S. macrophylla</i> plantation was close to that found in paired secondary forest of a similar age [59]. Hence, the view that introduced trees are detrimental to local flora (and fauna) need not always apply everywhere: indeed, the context of each case is crucial to keep in mind."
305	2007. Randall, R.P.. Global Compendium of Weeds - <i>Swietenia mahagoni</i> [Online Database]. http://www.hear.org/gcw/species/swietenia_mahagoni/	[Congeneric weed? Possibly] <i>Swietenia mahagoni</i> listed as naturalized and/or a weed in several locations
401	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Produces spines, thorns or burrs? No] " <i>S. macrophylla</i> is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m...The large pinnate leaves are 16-40 cm in length, and are arranged alternately and clustered at the ends of branchlets (Pennington et al., 1981). Generally, each leaf consists of 3- 6 pairs of opposite or occasionally subopposite leaflets (Lamb, 1966; Ehrhart, 1992). Leaflets are typically 9-14 x 3-5 cm, usually oblong to oblong-lanceolate or ovate-lanceolate, sometimes elliptic-ovate, slightly falcate, dark glossy above/lighter below and on slender petiolules 0.5-1.2 cm in length (Pennington et al., 1981). The first seedling leaves are simple (Ehrhart, 1992)."
402	1997. Pone, I.. Creating Foster Ecosystems to Accelerate Tropical Forest Regeneration. <i>Restoration and Reclamation Review</i> . 2(6): 1-4.	[Allelopathic? No] "Trees can be planted to alleviate these problems. Although tropical systems are complex and different situations may require different approaches, <i>Albizia lebbek</i> , <i>Pinus caribaea</i> , and <i>Swietenia macrophylla</i> have worked well as "foster" trees in Puerto Rico."
402	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. <i>Meliaceae</i> Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Allelopathic? No] "Honduras mahogany grows in association with many species across its broad range."
402	2011. World Agroforestry Center. Agroforestry Tree Database - <i>Swietenia macrophylla</i> . http://www.worldagroforestry.org/treedb2/AFTPDF/S/Swietenia_macrophylla.pdf	[Allelopathic? No] "Intercropping: The value of <i>S. macrophylla</i> as an undercrop for teak (<i>Tectona grandis</i>), to facilitate heavy thinning of the latter without exposing the soil to the risk of serious desiccation and erosion, is quite promising and worth great consideration. In Puerto Rico, farmers have planted <i>S. macrophylla</i> among subsistence crops such as corn, beans, bananas, sweet potatoes and cassava."

403	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Parasitic? No] "S. macrophylla is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m"
404	2011. Central Agricultural Research Institute. Tree fodder Resources. http://cari.res.in/Sub_DIC/fodder/Tree/Fodder_tree_resourceslist.asp	[Unpalatable to grazing animals? No] "A beautiful lofty evergreen fodder tree, whose seedlings are usually destroyed by deer and goats. Tree may be propagated by direct sowing, transplanting as well as stump planting."
405	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Toxic to animals? No] No evidence
405	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Toxic to animals? No] No evidence
406	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Host for recognized pests and pathogens? Possibly] "Shoot-borers, <i>Hypsipyla</i> spp. are the major limitation to artificial establishment of mahogany in Central and South America (Martorell, 1943; Ramirez-Sanchez, 1964; Bauer, 1987). <i>H. robusta</i> causes serious damage in nurseries and plantations in the Solomons (Chaplin, 1993). In Colombia, various silvicultural and agroforestry trials show no consistent successful methods of shoot-borer control (Vega, 1987). However, trials established in many parts of Central America proved that shoot borer damage can be partially controlled by cultural methods (Newton et al., 1992). A combination of silvicultural, biological and chemical control was proposed by Newton et al., (1992); and production of resistant plants through selection as the most effective method (Grijpma, 1976; Newton et al., 1992). The use of slow release/systemic insecticides has also shown promising results (Chaplin, 1993). In Fiji, ambrosia beetles (<i>Crossotarsus externedentatus</i> and <i>Platypus gerstaeckeri</i>) may attack living trees and cause variable, sometimes major, levels of pinhole damage. The small holes and associated staining may considerably reduce the value of the timber for decorative uses (Oliver, 1992). An ambrosia beetle (<i>Xylosandrus compactus</i>) has also been observed to cause damage in young stands in Puerto Rico (Bauer, 1987). Termites are potentially a major damage agent in mahogany plantings in Fiji."
406	2006. Joshi, R.C.. Invasive alien species (IAS): Concerns and status in the Philippines. Food & Fertilizer Technology Center, Taipei, Taiwan http://www.agnet.org/activities/sw/2006/589543823/paper-729213301.pdf	[Host for recognized pests and pathogens? Possibly] "Exotic tree species in the country that are considered invasive (at least because they are also host of insect pests includes: <i>Gmelina arborea</i> , <i>Acacia mangium</i> , <i>Eucalyptus camaldulensis</i> , <i>Swietenia macrophylla</i> . Forest tree species planted in the country were identified as bioinvasive based from local and international sources: There are eight species, namely: Mahogany (<i>Swietenia macrophylla</i>), Giant ipil-ipil (<i>Leucaena leucocephala</i>), Palosanto (<i>Triplaris cumingiana</i>), <i>Acacia/Auri</i> (<i>Acacia auriculiformis</i>), African tulip (<i>Spathodea companulata</i>), Aroma (<i>Aroma confusa</i>), Mesquita aroma (<i>Prosopis juliflorae</i>) and Paper mulberry (<i>Broussonetia papyrifera</i>)."
407	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Causes allergies or is otherwise toxic to humans? No] No evidence
407	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Causes allergies or is otherwise toxic to humans? No] No evidence
408	1996. Snook, L.K. Catastrophic disturbance, logging and the ecology of mahogany (<i>Swietenia macrophylla</i> King): grounds for listing a major tropical timber species in CITES. Botanical Journal of the Linnean Society. 122(1): 35-46.	[Creates a fire hazard in natural ecosystems? No] "Recent debate on whether or not mahogany (<i>Swietenia macrophylla</i> King) is threatened by the international timber trade has focused on the breadth of its range and estimates of the remaining stock of mahogany trees. These data are inadequate to reveal the status of mahogany populations, both because they are incomplete in areal extent and because they do not reveal population parameters such as the existence or density of young trees smaller than commercial size. However, there is sufficient information on the regeneration ecology of mahogany to indicate that under natural conditions this species regenerates in essentially even-aged stands after catastrophic disturbances destroy many or most trees, and, in the case of fires and flooding, saplings and seedlings as well. Adult mahoganies tend to survive these events, and regenerate by shedding seed onto the resulting gaps or clearings. This ecological strategy makes mahogany vulnerable to logging, first because juvenile mahoganies are not found in the understory, and secondly because logging operations shortcircuit mahogany regeneration processes by selectively removing almost all mahogany seed sources while leaving standing competing vegetation of other species. Listing of mahogany in CITES Appendix II could provide both a mechanism to fill in gaps in information and an incentive to change current practices in favour of silvicultural management to provide for regeneration of this valuable timber species in forests subjected to logging." [No evidence that trees increase fire hazard, despite susceptibility to fire]

409	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Is a shade tolerant plant at some stage of its life cycle? Seedlings are tolerant in Honduras] "Honduras mahogany, classified as an intolerant species, cannot survive deep shade. In the weak light under a dense tropical forest canopy, Honduras mahogany seedlings that do germinate usually fail to survive more than a few months. Under filtered light, seedlings may persist for many years, growing slowly in a suppressed condition. The most rapid growth is attained under complete sunlight with side protection. Seedlings respond rapidly to release from undergrowth and the overhead canopy (33). Mahogany plantations were shown to cycle nutrients efficiently and supported almost as many understory species as adjacent natural secondary forests (38)."
409	2001. De Costa, W.A.J.M./Hitinayake, H.M.G.S.B./Dharmawardena, I.U.. A physiological investigation into the invasive behaviour of some plant species in a mid-country forest reserve in Sri Lanka. J. Natn. Sci. Foundation Sri Lanka. 29(1 & 2): 35-50.	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Table 2 also shows that among the gap species, the two invasive species <i>Swietenia macrophylla</i> and <i>Costus speciosus</i> had significantly greater PnL values than the standard <i>Angiopteris</i> . Especially, it can be noted that <i>Swietenia</i> , which had a comparatively lower Pn under high light conditions (Table 1), had a high Pn under low light conditions. This should help <i>Swietenia</i> to survive and establish under low light conditions."
409	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Is a shade tolerant plant at some stage of its life cycle? Supposedly No. But see Thompson et al. 2007] " <i>S. macrophylla</i> is a light-demanding species (Lamb, 1966), and seedlings do not survive long under the shady conditions of the forest understorey or in felling gaps (Snook and MacLellen, 1996). However, young vigorous trees growing in full sunlight are very susceptible to attack by the shoot borer and more likely to succumb to drought. In the adult stage, mahogany trees almost invariably maintain their crowns above the surrounding forest, and are exposed to the intense tropical sun (Lamb, 1966)."
409	2007. Thompson, J./Lugo, A.E./Thomlinson, J. Land use history, hurricane disturbance, and the fate of introduced species in a subtropical wet forest in Puerto Rico. Plant Ecology. 192: 289-301.	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Although <i>Swietenia macrophylla</i> is light demanding and colonises after catastrophic disturbances (Snook 1996; Shono and Snook 2006), it is able to survive in shaded conditions for long periods of time (Medina et al. 2003)."
409	2011. World Agroforestry Center. Agroforestry Tree Database - <i>Swietenia macrophylla</i> . http://www.worldagroforestry.org/treedb2/AFTPDFS/Swietenia_macrophylla.pdf	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Young trees are fairly tolerant to shade, but conditions for optimum growth call for full overhead light combined with side protection."
410	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Tolerates a wide range of soil conditions? Yes] " <i>S. macrophylla</i> grows on a variety of soils which are well drained or at times subject to inundation (Pennington et al., 1981; Snook and MacLellen, 1996). Within its natural range the species is found growing on alluvial soils of considerable fertility, and soils derived from limestone, granite, andesite and other sedimentary, igneous or metamorphic rock formation (Lamb, 1966). It tolerates soils ranging from deep, poorly drained, acid clays of the wooded swamps, to the well drained alkaline soils of the limestone uplands (Lamb, 1966; Chaplin, 1993). While maximum development is attained on deep, fertile, moist, well-drained, neutral to mildly alkaline soils (Lamb, 1966; Ehrhart, 1992). The species may also become successfully established on rather poor soil conditions in Java, Fiji and tropical America. Soil descriptors - Soil texture: medium; heavy - Soil drainage: free; impeded; seasonally waterlogged - Soil reaction: acid; neutral; alkaline - Soil types: acid soils; alluvial soils; calcareous soils; clay soils; granite soils; lateritic soils; limestone soils; swamp soils; volcanic soils"
410	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Tolerates a wide range of soil conditions? Yes] " <i>Swietenia macrophylla</i> can tolerate a wide range of soils and environmental conditions. Within its natural range, it has been found on alluvial soils, volcanic soils, heavy clays, lateritic soils and soil derived from limestone, granite and other sedimentary, igneous or metamorphic rock formations (Whitmore 1992)."
411	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Climbing or smothering growth habit? No] " <i>S. macrophylla</i> is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m"
412	2011. World Agroforestry Center. Agroforestry Tree Database - <i>Swietenia macrophylla</i> . http://www.worldagroforestry.org/treedb2/AFTPDFS/Swietenia_macrophylla.pdf	[Forms dense thickets? No] "It occurs scattered or in small groups, but densities of more than 4-8 trees/ha are rarely encountered. In tropical America, it is among the pioneer species reoccupying degraded agricultural land."
501	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Aquatic? No] " <i>S. macrophylla</i> is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m" [Terrestrial]
502	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Grass? No] " <i>S. macrophylla</i> is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m" [Meliaceae]

503	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Nitrogen fixing woody plant? No] "S. macrophylla is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m" [Meliaceae]
504	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "S. macrophylla is an evergreen tree up to approximately 30-45 m, infrequently attaining a height of 50 m and d.b.h. of 2 m" [Meliaceae]
601	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Evidence of substantial reproductive failure in native habitat? No] "S. macrophylla is currently being exploited throughout much of its natural range, but detailed information is often lacking on the extent of native populations (US CITES proposal, 1992; Newton et al., 1994). Over exploitation threatens its continued existence in several parts of its natural range (Namkoong, 1991; Rodan et al., 1992; Snook and MacLellen, 1996). It was placed on CITES Appendix III by Costa Rica in 1995." [No evidence of substantial reproductive failure]
602	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Produces viable seed? Yes] "Details of seed collection, processing and storage are given by Nataniela et al. (1997). The seed should be stored at 3-7% moisture content at low temperatures (3°C ±2°C). Untreated seed is sown in a germination bed or in pots inside a lightly shaded germination house. Under favourable conditions of moisture supply, temperature, and available oxygen, seed germination starts within 10 days of planting and continues for approximately 20 days. When the first seed leaves appear, seedlings are ready for pricking-out into open nursery beds, pre prepared at a spacing of 15 x 20 cm. Immediately after pricking-out the seedlings require heavy shade, e.g. 70%, reducing to 30% after a week and full sun after 3-4 weeks (Chaplin, 1993). Striplings are ready for planting out after about 4 months when they are 30-50 cm in height. Conditioning is carried out by substantially reducing the leaf area and by root wrenching 14 days before planting (Chaplin, 1993). The nursery duration for potted seedlings is approximately 3-4 months."
602	2011. Krisnawati, H./Kallio, M./Kanninen, M.. Swietenia macrophylla King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Produces viable seed? Yes] "Swietenia macrophylla is propagated from seeds. The best outcomes can be achieved by using seeds from a mother tree in excellent form and health."
603	1998. Bauer, G.P./Francis, J.K.. Swietenia macrophylla King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Hybridizes naturally? Yes] "The Swietenia species freely hybridize. A spontaneous hybrid between S. macrophylla and S. mahagoni was found growing in Puerto Rico in 1935, with traits more or less midway between the two parent species (69). The F2 generation is reported to segregate into the parent species and the hybrid, according to the Mendelian ratio of 1:2:1 (41). Despite considerable variability, the hybrid has become important in forest plantings in the region."
603	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Hybridizes naturally? Yes] "Interspecific hybridization with S. mahoganii and S. humilis has also added to observed levels of variation in morphological traits and those of economic importance. Hybrid zones between S. macrophylla and S. humilis are thought to occur in native stands in Costa Rica, Guatemala and Mexico (Whitmore and Hinojosa, 1977; Styles, 1981), and such hybrid zones are likely to contain high levels of diversity (Helgason et al., 1996)."
604	2003. Loveless, M./Gullison, R.. Genetic Variation in Natural Mahogany Populations in Bolivia. Ecological Studies. 159(1): 9-28.	[Self-compatible or apomictic? Yes] "Pollination studies in natural populations of mahogany are not yet available, but big leaf mahogany is apparently also self-compatible, at least under experimental conditions (Lee 1967). The trees produce tens of thousands of flowers in an interval of a few weeks (Grogan and Loveless, personal observation) and thus have considerable opportunity to self-pollinate. The fact that, under these conditions, virtually all the seeds are outcrossed suggests that selfing is not the favored mode of pollination."
604	2011. World Agroforestry Center. Agroforestry Tree Database - Swietenia macrophylla. http://www.worldagroforestry.org/treedb2/AFTPDFS/Swietenia_macrophylla.pdf	[Self-compatible or apomictic? Yes] "Flowering mahogany trees have male and female flowers (about 10 times as many male as female flowers, often only the central flower of a cyme is female), but the flowers of both sexes are similar. Trees are sometimes functionally dioecious. In mixed inflorescences, male flowers open 1st, but self-pollination may occur."
605	1998. Bauer, G.P./Francis, J.K.. Swietenia macrophylla King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Requires specialist pollinators? No] "The genus Swietenia is monoecious with structurally perfect but functionally imperfect flowers. Trees bear both functionally staminate and functionally pistillate flowers, usually in different inflorescences (35, 72). It is believed that Meliaceae is pollinated primarily by bees and moths (59)."
605	2010. Grogan, J./Schulze, M./Galvao, J.. Survival, growth and reproduction by big-leaf mahogany (Swietenia macrophylla) in open clearing vs. forested conditions in Brazil. New Forests. 40: 335-347.	[Requires specialist pollinators? No] "Small bees and butterflies thought to pollinate mahogany flowers are capable of moving across open space between forest fragments and isolated trees (White et al. 2002)."

606	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Reproduction by vegetative fragmentation? No] "Vegetative Reproduction. - Honduras mahogany can be propagated by cuttings in the nursery. A low percentage of woody cuttings will root in moist soil without any treatment (73). Seventy-percent rooting was achieved with woody cuttings 25 cm long and 5 cm in diameter treated with IBA (indolbuteric acid) (6)." [No evidence that tree spreads by vegetative means]
606	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Reproduction by vegetative fragmentation? No] " <i>Swietenia macrophylla</i> is propagated from seeds. The best outcomes can be achieved by using seeds from a mother tree in excellent form and health."
607	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Minimum generative time (years)? 12 years] "Under favourable conditions <i>S. macrophylla</i> trees may flower and start to produce seed after 12 years growth."
607	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Minimum generative time (years)? 10+ years] "Flowering and fruiting regularly occur annually from 10 to 15 years of age. Flowering and fruiting seasons differ according to geographical location. For example, in the central and northern parts of South America, the tree blooms from April to June, and the fruits ripen from January to March of the following year (Schmidt and Jøker 2000). In Indonesia, the flowering months are usually between July and September and the fruiting season is between December and February. Flowering usually takes place when trees are leafless or just coming into new leaf shortly before the rainy season. The fruits ripen during the dry season, when the trees begin to lose part of their foliage and the warm air dries the fruits and promotes dehiscence (Mayhew and Newton 1998)."
701	2011. World Agroforestry Center. Agroforestry Tree Database - <i>Swietenia macrophylla</i> . http://www.worldagroforestry.org/treedb2/AFTPDFS/Swietenia_macrophylla.pdf	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit a woody capsule resembling a large inverted club, about 12.5 x 7.5 cm, erect...Seeds have a thin, taillike wing that makes them rotate when they fall; they are thus dispersed by wind as far as 500 m from the parent tree." [Fruit & seeds relatively large & not likely to be dispersed inadvertently by human-mediated assistance. No means of external attachment]
702	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Propagules dispersed intentionally by people? Yes] " <i>S. macrophylla</i> has been cultivated throughout the lowland humid and sub-humid tropics. The species has been widely planted in south and south-east Asia, the Pacific Islands, the Caribbean and tropical Africa (Streets, 1962; Evans, 1982, Ehrhart, 1992; Thaman and Whistler, 1996). Substantial areas of plantation have been established in Indonesia, Fiji and parts of Central America."
703	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Propagules likely to disperse as a produce contaminant? No] "The fruits are large (12-15 x 6-8 cm), woody, erect, capsules, oblong to slightly sub globulus (Gullison et al., 1996; Ehrhart, 1992). The outer valves are thick and becoming woody with a coriaceous surface when mature. When dry, the 4 or 5 valved fruits split open from the base, or from the base and the apex simultaneously. The centre of the fruit is a thick, woody 5 angled columella extending to the apex from which the seeds hang pendulous by their wing, leaving conspicuous seed scars after their release. There are usually about 35-45 winged seeds per fruit (Ehrhart, 1992). Seeds are chestnut coloured and 7.5-12 cm in length (Pennington et al., 1981)." [No evidence, and unlikely given large fruit & seed size]
704	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Propagules adapted to wind dispersal? Yes] "Wind is the most important seed dispersal agent. A large tree disperses its seeds over an area of about 4 ha on the leeward side."
704	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Propagules adapted to wind dispersal? Yes] "The fruits are large (12-15 x 6-8 cm), woody, erect, capsules, oblong to slightly sub globulus (Gullison et al., 1996; Ehrhart, 1992). The outer valves are thick and becoming woody with a coriaceous surface when mature. When dry, the 4 or 5 valved fruits split open from the base, or from the base and the apex simultaneously. The centre of the fruit is a thick, woody 5 angled columella extending to the apex from which the seeds hang pendulous by their wing, leaving conspicuous seed scars after their release. There are usually about 35-45 winged seeds per fruit (Ehrhart, 1992). Seeds are chestnut coloured and 7.5-12 cm in length (Pennington et al., 1981)...Dry windy weather provides the most suitable conditions for opening of the mature fruit and dispersal of the winged seed, as well as dispersal of the flower pollen (Lamb, 1966)."
705	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Propagules water dispersed? Possibly] "Since seed dispersal occurs just before the rainy season, it is probable that flood waters play an important role in seed dispersal in some areas."

706	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Propagules bird dispersed? No] "Mammals and birds are not known to be important factors in dispersal. However, they sometimes eat and destroy the seeds, thus preventing their spread (33)."
707	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Propagules dispersed by other animals (externally)? No] "The fruits (Figure 3) are capsular, oblong or ovoid, 11.6–38.7 cm in length, 6.7–12.0 cm in diameter and light grey to brown with 4–5 valves. Each fruit contains 22–71 developed seeds (Figure 4). The seeds are samaroid (Figure 5), bulky at their base, 7–12 cm long and 2–2.5 cm wide including the wing (Soerianegara and Lemmens 1993)." [The seeds are adapted for wind dispersal and lack a means of external attachment to animals]
708	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Propagules survive passage through the gut? No] "Mammals and birds are not known to be important factors in dispersal. However, they sometimes eat and destroy the seeds, thus preventing their spread (33)."
708	2009. Cámara-Cabrales, L /Kelty, M.J .. Seed dispersal of big-leaf mahogany (<i>Swietenia macrophylla</i>) and its role in natural forest management in the Yucatán Peninsula, Mexico. Journal of Tropical Forest Science. 21(3): 235–245.	[Propagules survive passage through the gut? No] "Seed on the forest floor can be destroyed by a large number of seed predators, including mammals, invertebrates and fungal pathogens. In this study, seed predation was observed only 5–25 days after all seeds were dispersed."
801	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Prolific seed production (>1000/m ²)? No] "The fruits are large (12-15 x 6-8 cm) ... There are usually about 35-45 winged seeds per fruit (Ehrhart, 1992). Seeds are chestnut coloured and 7.5-12 cm in length (Pennington et al., 1981)". [22.2 to 28.6 fruits to reach a density larger than 1000 seeds/m ² ; which is not likely with its large fruits.]
801	2009. Cámara-Cabrales, L /Kelty, M.J .. Seed dispersal of big-leaf mahogany (<i>Swietenia macrophylla</i>) and its role in natural forest management in the Yucatán Peninsula, Mexico. Journal of Tropical Forest Science. 21(3): 235–245.	[Prolific seed production (>1000/m ²)? No] "For high-dispersal directions, the large trees had 3 to 4.5 seed m ⁻² within 20 m of the stem and a mean of > 1 seed m ⁻² extending to 45 m from the stem, with the density approaching zero at 60 m. The high-dispersal curve for the small tree class (r ² = 0.83) showed somewhat greater seed densities (4 to 6 seeds m ⁻²) close to the tree, but seed density declined more steeply with distance, so a mean of > 1 seed m ⁻² extended only to 30 m from the stem and approached zero just beyond 50 m."
802	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Evidence that a persistent propagule bank is formed (>1 yr)? No] "Mahogany seeds do not retain their viability beyond any rainy season and there is no soil seed bank."
803	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Well controlled by herbicides? Unknown] "Specific control methods for this species are not available. Seedlings and saplings may be hand pulled or dug out. Larger trees are cut and the cut stumps treated with herbicide."
804	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family.. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Honduras mahogany saplings, poles, and small sawlog trees coppice when cut." [Ability to coppice when cut]
804	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Tolerates, or benefits from, mutilation, cultivation, or fire? With fire, it depends on age of trees] "Young mahogany are very sensitive to fire. Mature trees are more fire resistant and control burning may be used to reduce competing vegetation and create conditions favourable for natural reproduction (Lamb, 1966)."
805	1998. Meidell, J.S./Oppenheimer, H.L./Bartlett, R.T.. New Plant Records from West Maui. Bishop Museum Occasional Papers. 56: 6-8.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unlikely] "The historical records of Maui Pineapple Company indicate that <i>S. macrophylla</i> was planted within the Honokohau Arboretum in the mid-1920s and recent surveys of surrounding areas have produced observations of the significant proliferation of this taxon. Hundreds of vigorous individuals, ranging from seedlings to mature fruiting adults, have been noted in steep drainages of Honokohau Valley. It is often observed to be codominant with <i>Schinus terebinthifolius</i> and <i>Syzygium cumini</i> in disturbed Lowland Mesic Forest." [Ability to spread, absence of native Meliaceae, and desirability of mahogany as a forestry tree suggest that no natural enemies are present in the Hawaiian Islands]