

Key Words: Evaluate, Possibly Naturalizing, Ornamental Tree, Coastal, Water & bird-dispersed

Family: *Sapotaceae*

Taxon: *Mimusops caffra*

Synonym: *Mimusops revoluta* Hochst.

Common Name: coastal red milkwood

Mimusops revoluta Baill.

Kaukenia caffra (E.Mey. ex A.DC.) Kuntze

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score	2
101	Is the species highly domesticated?		y=-3, n=0		n
102	Has the species become naturalized where grown?		y=1, n=-1		
103	Does the species have weedy races?		y=1, n=-1		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"		(0-low; 1-intermediate; 2-high) (See Appendix 2)		High
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)		High
203	Broad climate suitability (environmental versatility)		y=1, n=0		n
204	Native or naturalized in regions with tropical or subtropical climates		y=1, n=0		y
205	Does the species have a history of repeated introductions outside its natural range?		y=-2, ?=-1, n=0		y
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205		
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)		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)		
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		n
405	Toxic to animals		y=1, n=0		n
406	Host for recognized pests and pathogens		y=1, n=0		y
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		n
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0		n

411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets	y=1, n=0	
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	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	>3
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	y
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	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: EVALUATE

WRA Score 2

Supporting Data:

101	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Is the species highly domesticated? No evidence]
101	2013. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] This species has not been in cultivation for at least 20 generations nor has it diverged from wild varieties.
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	1972. Palmer, E./Pitman, N.. Trees of Southern Africa. Vol. 3. Balkema, Cape Town, South Africa	[Species suited to tropical or subtropical climate(s) 2-High] "Mimusops L. Three South African species belong to this almost entirely African genus of 30 to 40 species ... The South African species occur from the eastern Cape to the Transvaal and are often abundant and conspicuous. Mimusops caffra E. Mey. Ex DC. Is indeed one of the commonest trees along the coast from the Kowie to Lourenco Marques, and as this and the other two species bear bright coloured edible fruits they are widely known by their common if not by their botanical names."
201	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Species suited to tropical or subtropical climate(s) 2-High] "...occurs along the coasts of Mozambique and eastern South Africa."
202	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Quality of climate match data 2-High]
203	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Broad climate suitability (environmental versatility)? No] "Mimusops caffra occurs in coastal thickets on sand dunes, where it rarely exceeds 5 m tall and where its foliage suffers under salt spray and sea winds. It may be dominant in sheltered coastal forest behind the littoral zone, where it can reach 20 m in height." [Restricted to low elevation tropics]
203	2009. Hall, G./Woodborne, S./Pienaar, M.. Rainfall control of the $\delta^{13}C$ ratios of <i>Mimusops caffra</i> from KwaZulu-Natal, South Africa. The Holocene. 19(2): 251–260.	[Broad climate suitability (environmental versatility)? No] "It is found in the tropics and subtropics at low altitudes and is restricted to the eastern coast of southern Africa from Mozambique, along the KwaZulu-Natal coastline, through the Transkei and into the Eastern Cape."
204	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Native or naturalized in regions with tropical or subtropical climates? Yes] "...occurs along the coasts of Mozambique and eastern South Africa."
205	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Does the species have a history of repeated introductions outside its natural range? Yes] "Mimusops caffra is planted in South Africa and the United States as an ornamental tree"
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 from Australia]
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 of naturalization worldwide]
301	2013. Parker, J.. BIISC Early Detection Botanist. Pers. Comm. 10 Jan 2013.	[Naturalized beyond native range? Potentially on Hawaii Island] " we found two new naturalizing species near Hilo: <i>Parkia speciosa</i> , and <i>Mimusops caffra</i> . We're actually not sure on the exact species yet,..."
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	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Environmental weed? No evidence]

305	2006. Tassin, J./Riviere, J.-N./Cazanove, M./Bruzzese, E.. Ranking of invasive woody plant species for management on Reunion Island. <i>Weed Research</i> . 46: 388–403.	[Congeneric weed? Potentially] <i>Mimusops coriacea</i> and <i>Mimusops elengi</i> listed in "Table 1 Woody non-indigenous plants to Reunion Island and their invasive status" with the descriptions as follows "known as a coloniser in Reunion Island" and "known on databases as a coloniser in at least one other country"
305	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Congeneric weed? No] <i>Mimusops balata</i> , <i>M. coriaceae</i> and <i>M. elengi</i> listed as naturalized, but no evidence of negative impacts are reported
401	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Produces spines, thorns or burrs? No evidence] "Shrub or small to medium-sized tree up to 15(–20) m tall, containing latex; bole up to 50 cm in diameter, often gnarled or twisted; bark thin, wrinkled longitudinally, dark grey; young branches densely pubescent. Leaves arranged spirally, more or less in tufts at the ends of branches, simple and entire; stipules absent; petiole 0.5–1.5 cm long; blade cordate to narrowly obovate, 3–9 cm × 1.5–4.5 cm, cuneate at base, notched or rounded at apex, thickened and revolute at margins, leathery, pubescent below, with many indistinct lateral veins."
402	2013. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2013. USDA APHIS. Parasitic plant genera list. http://www.aphis.usda.gov/plant_health/permits/organism/downloads/parasitic_plant_genera.pdf	[Parasitic? No evidence]
404	2000. De Boer, W.F./Ntumi, C.P./Correia, A.U./Mafuca, J.M.. Diet and distribution of elephant in the Maputo Elephant Reserve, Mozambique. <i>African Journal of Ecology</i> . 38: 188–201.	[Unpalatable to grazing animals? No] "Table 2 Plant species' composition (%) of faecal samples collected in different seasons and habitats." [<i>Mimusops caffra</i> included in a list of plants browsed by elephants]
404	2006. Prins, H.H.T./De Boer, W.F./Van Oeveren, H./Correia, A./Mafuca, J./Olf, H.. Co-existence and niche segregation of three small bovid species in southern Mozambique. <i>African Journal of Ecology</i> . 44(2): 186-198.	[Unpalatable to grazing animals? No] <i>Mimusops caffra</i> included in "Table 2 Diet composition of the three small bovid species per season, and sample sizes" [<i>M. caffra</i> consumed by all three bovid species. Diet items are presumably foliage, as table does not list fruit as the diet item]
405	1998. Riffle, R.L.. The Tropical Look - An Encyclopedia of Dramatic Landscape Plants. Timber Press, Portland, OR	[Toxic to animals? No evidence] "A genus of 60 trees and large shrubs in the Old World tropics. All have nontoxic milky sap..."
405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals? No evidence]
406	2002. Copeland, R.S./Wharton, R.A./Luke, Q./De Meyer, M.. Indigenous Hosts of <i>Ceratitis capitata</i> (Diptera:Tephritidae) in Kenya. <i>Annals of the Entomological Society of America</i> . 95(6): 672-694.	[Host for recognized pests and pathogens? Yes] The Mediterranean fruit fly, or medfly, <i>Ceratitis capitata</i> , is among the most important pests of cultivated fruits ... Medflies were reared from fruits of 55 species of plants, 51 of them indigenous [<i>Mimusops caffra</i> appears in a table of these species]; 46 of these species represent previously unknown hosts in Africa" In addition, <i>M. caffra</i> appears in a table noting its country of origin (South Africa) under the caption "Countries with medfly positive samples"
407	1998. Riffle, R.L.. The Tropical Look - An Encyclopedia of Dramatic Landscape Plants. Timber Press, Portland, OR	[Causes allergies or is otherwise toxic to humans? No evidence] "A genus of 60 trees and large shrubs in the Old World tropics. All have nontoxic milky sap..."
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]
408	1985. Pammenter, N.W./Berjak, M./Macdonald, I.A.W.. Regeneration of a Natal coastal dune forest after fire. <i>South African Journal of Botany</i> . 51(6): 453-459.	[Creates a fire hazard in natural ecosystems? No. eliminated from burned areas] Three years after a fire in the Mlalazi Nature Reserve near Mtunzini, <i>Trema orientalis</i> contributed >70 per cent of the regenerating burnt forest, but the main canopy tree of the unburnt community, <i>Mimusops caffra</i> , was absent from the burnt area
408	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Creates a fire hazard in natural ecosystems? No evidence]
409	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Is a shade tolerant plant at some stage of its life cycle? No] "It can be planted in full sun and is ideal for coastal areas."

410	2013. Cook Woods. Mixed Species Bowl Blanks. https://www.cookwoods.com/lumber-site/shop/category/mixed-species-bowl-blanks/?s_so=title [Accessed 22 Jan 2013]	[Tolerates a wide range of soil conditions? No] "Mimusops caffra, or Red milkwood grows in the sandy soils of the Southeastern African coast."
410	2013. The Haven Hotel. Tree Spotting. http://www.havenhotel.co.za/index.php/things-to-do/25-flora [Accessed 22 Jan 2013]	[Tolerates a wide range of soil conditions? No] "Coastal Red Milkwood (<i>Mimusops caffra</i>). This species is only found on sandy soils close to the sea."
410	2013. WITBOS Indigenous Nursery. <i>Mimusops caffra</i> . http://witbos.co.za/plant.aspx?plant=mimusops-caffra [Accessed 22 Jan 2013]	[Tolerates a wide range of soil conditions? No] "Prefers sandy soil, ideal for coastal gardens."
411	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Climbing or smothering growth habit? No] "Shrub or small to medium-sized tree up to 15(–20) m tall..."
412	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Forms dense thickets? Possibly Yes] " <i>Mimusops caffra</i> occurs in coastal thickets on sand dunes, where it rarely exceeds 5 m tall and where its foliage suffers under salt spray and sea winds. It may be dominant in sheltered coastal forest behind the littoral zone, where it can reach 20 m in height."
501	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Aquatic? No] " <i>Mimusops caffra</i> occurs in coastal thickets on sand dunes, where it rarely exceeds 5 m tall and where its foliage suffers under salt spray and sea winds." [Terrestrial]
502	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Grass? No] Sapotaceae
503	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Nitrogen fixing woody plant? No] Sapotaceae
504	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Shrub or small to medium-sized tree up to 15(–20) m tall..."
601	1972. Palmer, E./Pitman, N.. Trees of Southern Africa. Vol. 3. Balkema, Cape Town, South Africa	[Evidence of substantial reproductive failure in native habitat? No] "From Port Alfred and Bathurst to Lourenco Marques, this is one of the most common coastal trees forming a large proportion - up to 75% in parts - of coastal and dune forest and flourishing even within reach of the salt spray. It is a tree well known to Durban residents for it grows in numbers along the coast roads north and south, and is the dominant tree, for example, at LaLucia ... Certainly the tree grows readily in the wild."
601	2003. Palgrave, K.C./Drummond, R.B./Moll, E.J./Palgrave, M.C.. Trees of Southern Africa. 3rd Edition. Struik Publishers, Cape Town/Johannesburg	[Evidence of substantial reproductive failure in native habitat? No] "Its natural habitat is dune forest from the high tide mark in KwaZulu-Natal and the former Transkei region. It is also found in Mozambique . This tree is common from Port Alfred and Bathurst in Eastern Cape to Maputo in Mozambique . It forms up to 75% of the coastal and dune forest and flourishes even within reach of the salty sea sprays. It is found in abundance in Durban as it grows along coastal roads to the north and south."
602	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Produces viable seed? Yes] "Propagation of <i>Mimusops caffra</i> is by seed."
603	2013. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	1940. East, E.M.. The distribution of self-sterility in the flowering plants. Proceedings of the American Philosophical Society. 82: 449-518.	[Self-compatible or apomictic? Probably Yes] "I suspect, through investigations of species in <i>Achras</i> , <i>Calocarpum</i> , <i>Chrysophyllum</i> , <i>Dipholis</i> , <i>Lucuma</i> , <i>Malacantha</i> , <i>Mimusops</i> , and <i>Pouteria</i> , that the entire family is self-fertile, although insect pollinated in the main, and sometimes protogynous."

605	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Requires specialist pollinators? No] "Flowers in fascicles of up to 8 in the leaf axils, bisexual, regular; pedicel 1.5–3 cm long; sepals in 2 whorls of 4; corolla whitish, with a short tube and 8 lobes each with 2 appendages divided almost to the base into 2 narrowly triangular lobes, c. 8 mm long; stamens 8, alternating with 8 hairy staminodes; ovary superior, 8-celled." [Unlikely, based on its native range where it is a dominant component (up to 75%) of coastal sand dune and inland forest vegetation]
606	2003. EcoPort (Contributor:Rihana Botha). <i>Mimusops caffra</i> . http://ecoport.org/ep?Plant=48460&entityType=PL****&entityDisplayCategory=full [Accessed 23 Jan 2013]	[Reproduction by vegetative fragmentation? Yes. Spreads vegetatively] "The red milkwood is sometimes called the 'walking tree', because growing on the sand as it does, it is easily blown over and where it touches the ground it roots to from new trees. (Coates Palgrave, 2002)"
606	2013. Cook Woods. Mixed Species Bowl Blanks. https://www.cookwoods.com/lumber-site/shop/category/mixed-species-bowl-blanks/?s_so=title [Accessed 22 Jan 2013]	[Reproduction by vegetative fragmentation? Yes] "This small, unkempt looking tree that can have multiple contact points with the ground and interestingly can re-connect with the soil and grow again after being blown down. Hence the name "walking tree" as the trees can have the appearance of walking along the coastline." ... "This is a unique African species that looks like the tree is walking across the beach. It sends down branches into the sand which then root and repeat the process usually downwind from the prevailing wind."
607	2002. Cooke, J.A./Johnson, M.S.. Ecological restoration of land with particular reference to the mining of metals and industrial minerals: A review of theory and practice. <i>Environmental Reviews</i> . 10(1): 41-71.	[Minimum generative time (years)? Probably 4+] "11 to 16 years" [Publication documents time to reach a mature forest community, but does not indicate whether <i>M. caffra</i> takes this many years to reach reproductive maturity]
607	2003. EcoPort (Contributor:Rihana Botha). <i>Mimusops caffra</i> . http://ecoport.org/ep?Plant=48460&entityType=PL****&entityDisplayCategory=full [Accessed 23 Jan 2013]	[Minimum generative time (years)? Probably 4+] "It is relatively slow growing from seed (Pooley, 1994)"
701	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit an ovoid berry up to 2.5 cm × 1.5 cm, orange to red when ripe, 1 seeded. Seed 1–1.5 cm long, with small circular basal scar." [Fruits and seeds are large and conspicuous and, thus, unlikely to be transported by accident. They do not have hooks to attach to a potential disperser]
702	1995. Sheat, B./Schofield, G.. Complete Gardening in Southern Africa. Struik Publishers, Cape Town, South Africa	[Propagules dispersed intentionally by people? Yes] "A lovely evergreen for exposed maritime conditions, being a common part of dune forests along the eastern seaboard. Leaves are obovate, rigid and leathery, blue-green above and paler below. Star-like cream flowers about 10 mm across are produced during spring and summer, followed by fleshy, ovoid fruits which turn red when ripe. Pleasantly sweet, they are enjoyed by both man and birds. Frost sensitive"
703	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Propagules likely to disperse as a produce contaminant? No evidence] "Fruit an ovoid berry up to 2.5 cm × 1.5 cm, orange to red when ripe, 1-seeded. Seed 1–1.5 cm long, with small circular basal scar." [Fruits and seeds are large and conspicuous and, thus, unlikely to be transported by accident]
704	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Propagules adapted to wind dispersal? No] "Fruit an ovoid berry up to 2.5 cm × 1.5 cm, orange to red when ripe, 1-seeded. Seed 1–1.5 cm long, with small circular basal scar." [Fleshy-fruited. No adaptations for wind dispersal]
705	2003. Palgrave, K.C./Drummond, R.B./Moll, E.J./Palgrave, M.C.. Trees of Southern Africa. 3rd Edition. Struik Publishers, Cape Town/Johannesburg	[Propagules water dispersed? Yes] "The seeds are dispersed by water and are often washed up in quantities on the beaches."
705	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Propagules water dispersed? Yes] "The seeds are dispersed by water and probably also by fruit-eating animals."
706	1995. Sheat, B./Schofield, G.. Complete Gardening in Southern Africa. Struik Publishers, Cape Town, South Africa	[Propagules bird dispersed? Yes] "Star-like cream flowers about 10 mm across are produced during spring and summer, followed by fleshy, ovoid fruits which turn red when ripe. Pleasantly sweet, they are enjoyed by both man and birds."
706	2010. Mann, C.F./Cheke, R.A.. Sunbirds: A Guide to the Sunbirds, Flowerpeckers, Spiderhunters and Sugarbirds of the World. A&C Black, London, UK	[Propagules bird dispersed? Yes] "Collared Sunbird" ... "Known food-plants...fruits of <i>Macaranga</i> sp., <i>Macrorungia pubinervis</i> , <i>Mimusops caffra</i> ..."

706	2012. Wilson, A.-L./Downs, C.T.. Fruit nutritional composition and non-nutritive traits of indigenous South African tree species. South African Journal of Botany. 78: 30-36.	[Propagules bird dispersed? Yes] "Frugivorous animals play a major role in dispersing tropical, and to a lesser extent, temperate tree species. In order to attract potential seed dispersers, plants generally offer a reward of fleshy fruit pulp. Criteria for fruit choice by avian frugivores are influenced by a number of nonnutritive (e.g. fruit size and colour) factors; and nutritional composition of the fruit." [Mimusops caffra possesses a red, fleshy-fruit]
707	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Propagules dispersed by other animals (externally)? No] "Fruit an ovoid berry up to 2.5 cm x 1.5 cm, orange to red when ripe, 1 seeded. Seed 1–1.5 cm long, with small circular basal scar." [Seeds/fruits have no hooks or barbs for attachment to a potential disperser]
708	1972. Palmer, E./Pitman, N.. Trees of Southern Africa. Vol. 3. Balkema, Cape Town, South Africa	[Propagules survive passage through the gut? Yes] "They are edible with an agreeable flavour and are the staple food of monkeys along the coast of Natal and Zululand. Cape Parrots in the coastal forests of the eastern Cape are particularly fond of them, as are other species such as Black-bellied Glossy Starlings and Yellow-streaked Bulbuls, while bushpigs also devour them."
708	2006. South African National Biodiversity Institute. PlantzAfrica.com - Mimusops caffra. http://www.plantzfrica.com/plantklm/mimusopcaf.htm [Accessed 22 Jan 2013]	[Propagules survive passage through the gut? Yes] "The red or orange-red fruits are the staple food of the monkeys along the coastal forests of KwaZulu-Natal . Cape parrots in the coastal forests of the Eastern Cape are also fond of the fruit. Blackbellied glossy starlings, Yellowstreaked bulbuls and bushpigs also eat the fruit. Monkeys in particular spread the seed. "
708	2007. Roberts, P.D./Somers, M.J./White, R.M./Nel, J.A.J.. Diet of the South African large-spotted genet <i>Genetta tigrina</i> (Carnivora, Viverridae) in a coastal dune forest. Acta Theriologica. 52(1): 45–53.	[Propagules survive passage through the gut? Yes] "Fruit remains in scats were noticeably seasonal but not significantly so, with <i>Ziziphus mucronata</i> consumed most in winter/spring, to be replaced largely by <i>Mimusops caffra</i> in summer and by a combination of these two in autumn, while other species were eaten less frequently but again were represented according to their individual accessibility." ... "High values for fruit remains were found in beach scats, due at least partly to the presence of species such as <i>Mimusops caffra</i> , <i>Sideroxylon inerme</i> and <i>Diospyros dichrophylla</i> in the dune forest and by the campsite respectively. Only three <i>Mimusops caffra</i> seeds of over 100 from all species found appeared chewed. The remainder showed little or no damage from passage through the alimentary tract."
708	2012. Wilson, A.-L./Downs, C.T.. Food intake rates, assimilation efficiency, and transit times of Knysna (<i>Tauraco corythaix</i>) Turacos fed South African indigenous fruit. Journal of Ornithology. 153: 285–290.	[Propagules survive passage through the gut? Yes] "...we measured the assimilation efficiencies of fruits of six indigenous tree species for an avian frugivore, the Knysna Turaco (<i>Tauraco corythaix</i>). We predicted that the Turacos would process these indigenous fruits efficiently and have fast transit rates and high intake rates irrespective of species." ... "Ficus sur had the fastest digesta transit time (12.4 ± 0.8 min, n = 6) while <i>Mimusops caffra</i> had the slowest digesta transit time (28.3 ± 2.8 min, n = 6)."
801	2008. Louppe, D./Oteng-Amoako, A.A./Brink, M.. Timbers 1: volume 7 of Plant Resources of Tropical Africa. PROTA, Wageningen, Netherlands	[Prolific seed production (>1000/m ²)? Unlikely each fruit contains only one seed] "Shrub or small to medium-sized tree up to 15(–20) m tall" ... "Fruit an ovoid berry up to 2.5 cm x 1.5 cm, orange to red when ripe, 1 seeded. Seed 1–1.5 cm long, with small circular basal scar."
802	2000. Farnsworth, E.. The Ecology and Physiology of Viviparous and Recalcitrant Seeds. Annual Review of Ecology and Systematics. 31: 107-138.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown] "TABLE 1 Plant species with recalcitrant or viviparous seeds" [" <i>Mimusops</i> sp" listed with recalcitrant seeds]
803	2013. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species.
804	2007. Nzunda, E.F./Griffiths, M.E./Lawes, M.J.. Resprouting versus Turning up of Leaning Trees in a Subtropical Coastal Dune Forest in South Africa. Journal of Tropical Ecology. 23(3): 289-296.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Abstract: To survive, leaning trees on steep slopes with loose substrate can either resprout or turn upward to regain the normal vertical orientation of the growing tip." ... "Table 1 . Sample sizes of tree species in relation to leaning, resprouting , turning up of the stem and whether the primary stem is dead or not." [Mimusops caffra reported to resprout without leaning, as well as from leaning trees]
804	2011. Nzunda, E.F.. Sprouting, succession and tree species diversity in a South African coastal dune forest. Journal of Tropical Ecology. 27: 195-203.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Mimusops caffra showed a high frequency of replacement of old shoot segments using trunk sprouts as shown by differences in colour and pattern of the bark between old abandoned segment and new growing segment. This strategy could contribute to high stem persistence of <i>M. caffra</i> as discussed above."
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

- Possibly naturalizing in Hilo, Hawaii
- Thrives in tropical climates
- Host of the Mediterranean fruit fly
- May form dense thickets
- Possibly self-compatible
- Can spread vegetatively by branches that touch & root into the ground
- Seeds dispersed by water, birds and mammals

Low Risk / Desirable Traits

- No reports of invasiveness elsewhere
- Unarmed (no spines, thorns or burrs)
- Palatable to browsing animals
- Non-toxic
- Prefers sandy soils & full sun (may limit spread beyond coastal settings)
- Slow growth rate & long time to maturity
- Landscaping and ornamental value
- Timber tree