

**Family:** *Araliaceae*

**Taxon:** *Osmoxylon lineare*

**Synonym:** *Boerlagiodendron lineare* Merr.

**Common Name:** miagos bush  
osmoxylon

**Questionnaire :** current 20090513  
**Status:** Assessor Approved

**Assessor:** Chuck Chimera  
**Data Entry Person:** Chuck Chimera

**Designation:** EVALUATE

**WRA Score 3**

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	?
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	
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	
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	
606	Reproduction by vegetative fragmentation	y=1, n=-1	
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	
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	
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m <sup>2</sup> )	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: EVALUATE

WRA Score 3

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**Supporting Data:**

101	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Is the species highly domesticated? No evidence]
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Species suited to tropical or subtropical climate(s) 2-High] "Distr. Malesia: Philippines (Luzon)."
202	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Quality of climate match data 2-High]
203	2012. Dave's Garden. PlantFiles: Miagos Bush - <i>Osmoxylon lineare</i> [Accessed 11 Oct 2012]. <a href="http://davesgarden.com/guides/pf/go/140762/">http://davesgarden.com/guides/pf/go/140762/</a>	[Broad climate suitability (environmental versatility)? No] "Hardiness: USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)"
204	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Distr. Malesia: Philippines (Luzon)."
205	2012. Dave's Garden. PlantFiles: Miagos Bush - <i>Osmoxylon lineare</i> [Accessed 11 Oct 2012]. <a href="http://davesgarden.com/guides/pf/go/140762/">http://davesgarden.com/guides/pf/go/140762/</a>	[Does the species have a history of repeated introductions outside its natural range?] "This plant has been said to grow in the following regions: Bonnie Lockwoodsetter North, Florida Mulberry, Florida Pembroke Pines, Florida Holualoa, Hawaii"
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	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[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	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Produces spines, thorns or burrs? No] "Unarmed, glabrous or tomentose shrubs or trees."
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Parasitic? No] "Glabrous, erect shrub, c. 3 m." [Araliaceae]
404	2012. 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	2012. 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	2012. Ngee Ann Polytechnic. Plant Findings - Shrubs - <i>Osmoxylon lineare</i> [Accessed 12 Oct 2012]. <a href="http://mobilearn.np.edu.sg/plantsnp/viewentry.aspx?entryID=103">http://mobilearn.np.edu.sg/plantsnp/viewentry.aspx?entryID=103</a>	[Host for recognized pests and pathogens Standard plant pests] "(scales, mealy bugs, sooty mould)"
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	2012. 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	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Creates a fire hazard in natural ecosystems? Unlikely] [No evidence that genus members are part of fire prone communities]
409	2012. Dave's Garden. PlantFiles: Miagos Bush - <i>Osmoxylon lineare</i> [Accessed 11 Oct 2012]. <a href="http://davesgarden.com/guides/pf/go/140762/">http://davesgarden.com/guides/pf/go/140762/</a>	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Sun Exposure: Sun to Partial Shade Light Shade Partial to Full Shade Full Shade"
409	2012. Top Tropicals. <i>Osmoxylon lineare</i> [Accessed 11 Oct 2012]. <a href="http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=osmoxylon_linear_e">http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=osmoxylon_linear_e</a>	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Tolerant to drought and wide range of light conditions, from full sun to deep shade."
410	2012. Dave's Garden. PlantFiles: Miagos Bush - <i>Osmoxylon lineare</i> [Accessed 11 Oct 2012]. <a href="http://davesgarden.com/guides/pf/go/140762/">http://davesgarden.com/guides/pf/go/140762/</a>	[Tolerates a wide range of soil conditions? Possibly. Basic to acidic] "Soil pH requirements: 5.6 to 6.0 (acidic) 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral)"
410	2012. Plant this. <i>Osmoxylon lineare</i> [Accessed 12 Oct 2012]. <a href="http://www.plantthis.com.au/plant-information.asp?gardener=19641&amp;tabview=design&amp;plantSpot=">http://www.plantthis.com.au/plant-information.asp?gardener=19641&amp;tabview=design&amp;plantSpot=</a>	[Tolerates a wide range of soil conditions? Possibly. Basic to acidic] "Soil: enriched soil, mildly acidic to mildly alkaline "
411	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Climbing or smothering growth habit? No] "Glabrous, erect shrub, c. 3 m."
412	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Forms dense thickets? Unknown] "Note. Apparently never re-collected. The original specimen is without field information. The foliage is similar to that of 15. <i>O. borneense</i> but with shorter petioles and fewer leaflets."
501	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Aquatic? No] Terrestrial
502	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Grass? No] Araliaceae
503	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Nitrogen fixing woody plant? No] Araliaceae

504	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Glabrous, erect shrub, c. 3 m. Leaves crowded near the ends of the branches; petiole 4-6 cm, the base with a small stipular ligule (5 mm long) and a few fimbriate crests; blade to 20 cm 0, digitately compound with 4-7 leaflets (or very deeply divided into as many lobes); leaflets linear-lanceolate, c. 1-1 V2 cm wide, the base decurrent on the winged petiolule, apex attenuated, margin thickened, denticulate especially above."
601	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Evidence of substantial reproductive failure in native habitat? Unknown]
602	2012. Ngee Ann Polytechnic. Plant Findings - Shrubs - <i>Osmoxylon lineare</i> [Accessed 12 Oct 2012]. <a href="http://mobilearn.np.edu.sg/plantsnp/viewentry.aspx?entryID=103">http://mobilearn.np.edu.sg/plantsnp/viewentry.aspx?entryID=103</a>	[Produces viable seed? Yes] "Propagation method: Stem cutting, seeds"
603	2012. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Self-compatible or apomictic? Unknown] "Inflorescence a terminal compound umbel ; peduncle short (c. 1 cm), bracteate; primary rays c. 10, 2-2 3/4 cm long, each ending in three branches; the central branch 4-5 mm long bearing a spherical head of numerous fimbriate bracts (sterile flowers fallen); the lateral branches 3-3 V2 cm long with a pair of minute fimbriate bracts about the middle, ending in a capitulum of c. 20 sessile flowers subtended by small fimbriate bracts, c. 7 mm 0. Calyx rim minute. Corolla and stamens unknown."
605	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Requires specialist pollinators? Possibly Yes. Bird-pollinated] "Flower biology. Little has been recorded about the floral biology of the family in Malesia, but Beccari's account (1878) of the 'false fruits' of <i>Osmoxylon</i> (including <i>Boerlagiodendron</i> ) serving to attract doves which are assumed to effect pollination has become a classic description and example of ornithophily."
606	2010. Tomlinson, P.B./Zimmerman, M. (eds.). Tropical Trees as Living Systems. Cambridge University Press, Cambridge, UK	[Reproduction by vegetative fragmentation? Unknown. Ability to spread vegetatively present in other species in genus] "Sucker shoots are produced prolifically from the roots of the rice-paper tree ( <i>Tetrapanax</i> ), and <i>Osmoxylon borneense</i> and related species spread to form extensive thickets on stream banks by rooting of their drooping branches."
607	2012. Plant this. <i>Osmoxylon lineare</i> [Accessed 12 Oct 2012]. <a href="http://www.plantthis.com.au/plant-information.asp?gardener=19641&amp;tabview=design&amp;plantSpot=">http://www.plantthis.com.au/plant-information.asp?gardener=19641&amp;tabview=design&amp;plantSpot=</a>	[Minimum generative time (years)? Unknown] "Growth rate: average"
701	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Unknown] "Fruit ovoid c. 3 mm long, 5-ridged (when dry)." [Fruits/seeds lack means of external attachment, although small size may enable them to get stuck in mud on boots, tires, clothing etc.]
702	2000. Rauch, F.D./Weissich, P.R.. Plants for tropical landscapes: a gardener's guide. University of Hawaii Press, Honolulu, HI	[Propagules dispersed intentionally by people? Yes] "An excellent foliage accent from the Philippines, <i>Osmoxylon</i> makes a unique facer or border plant, reaching 6 feet in height, and it does well in a container." [Ornamental]
702	2012. Top Tropicals. <i>Osmoxylon lineare</i> [Accessed 11 Oct 2012]. <a href="http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=osmoxylon_lineare">http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=osmoxylon_lineare</a>	[Propagules dispersed intentionally by people? Yes] "Rare tropical ornamental miniature tree valuable for exotic fine-cut leaves. Palmate compound leaves with leathery surface."
703	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules likely to disperse as a produce contaminant? Unlikely] "Fruit ovoid c. 3 mm long, 5-ridged (when dry)." [Not known to be grown with produce]
704	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules adapted to wind dispersal? No] [Genus] "Fruit subglobose (ribbed when dry) ; exocarp fleshy, endocarp crustaceous. Seeds compressed, endosperm smooth or wrinkled." [Species] "Fruit ovoid c. 3 mm long, 5-ridged (when dry)."

705	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules water dispersed? Probably No] "Fruit ovoid c. 3 mm long, 5-ridged (when dry)." [Adapted for consumption and internal dispersal]
706	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules bird dispersed? Presumably Yes] "Dispersal in the family takes place generally by fruit-fall; but as fruits are baccate or (more usually) drupaceous, they will also be eaten by birds (for the most part) and bats, as recorded by Ridley (1930) for Aralia, Hedera, and Schefflera. The black fruits of Schefflera sect. Brassia in New Guinea and Australia are especially popular with birds. The hooked mericarps of Harmsioplanax are exceptional." ... "Fruit ovoid c. 3 mm long, 5-ridged (when dry)."
706	2007. Wu, Z.Y./Raven, P.H./Hong, D.Y. (eds.). Flora of China. Vol. 13 (Clusiaceae through Araliaceae). Science Press and Missouri Botanical Garden Press, Beijing & St. Louis	[Propagules bird dispersed? Presumably Yes] "Fruit a drupe. Seeds triangular, endosperm smooth or wrinkled."
707	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules dispersed by other animals (externally)? Probably No] [Fruits/seeds lack means of external attachment, although small size may enable them to get stuck in mud on hooves or feet, or on fur]
708	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Propagules survive passage through the gut? Presumably Yes] "Seed germination is most likely after the seed having passed the gut of a bird or after mastication of the fruit by a bat." [Family Description] ... "Fruit ovoid c. 3 mm long, 5-ridged (when dry)." [Species Description]
801	1979. Steenis, C.G.G.J. van (ed.). Flora Malesiana. Series I, Spermatophyta: Flowering plants. Volume 9, part 1. Revisions. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn	[Prolific seed production (>1000/m <sup>2</sup> )? Unknown] "Inflorescence a terminal compound umbel ; peduncle short (c. 1 cm), bracteate; primary rays c. 10, 2-2 1/4 cm long, each ending in three branches; the central branch 4-5 mm long bearing a spherical head of numerous fimbriate bracts (sterile flowers fallen); the lateral branches 3-3 1/2 cm long with a pair of minute fimbriate bracts about the middle, ending in a capitulum of c. 20 sessile flowers subtended by small fimbriate bracts, c. 7 mm 0. Calyx rim minute. Corolla and stamens unknown. Ovary 5-celled. Fruit ovoid c. 3 mm long, 5-ridged (when dry). "
802	2008. Royal Botanic Gardens Kew. Seed Information Database (SID). Version 7.1. <a href="http://data.kew.org/sid/">http://data.kew.org/sid/</a>	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy of chemical control of this species
804	2009. Tropiclimber Cultivation information. Growing your <i>Osmoxylon lineare</i> [Accessed 12 Oct 2012]. <a href="http://www.members.westnet.com.au/wackos/PDFs/Growing%20your%20osmoxyton%20plant.pdf">http://www.members.westnet.com.au/wackos/PDFs/Growing%20your%20osmoxyton%20plant.pdf</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown. Tolerates pruning] " <i>Osmoxylon lineare</i> is a small shrub with graceful linear leaves and a dense habit. The flowers are fairly boring, I even clip them off as the fruits are not that attractive either. Ideally it should be kept cut back to no more than a metre, this keeps the foliage nice and compact. It is a good idea to tip prune your growing plant from a young age to form a good framework of branches."
805	2012. 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
- Shade tolerant
- Fleshy fruits presumably adapted for bird dispersal

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

- No reports of naturalization or invasiveness elsewhere
- Unarmed (no spines, thorns or burrs)
- Non-toxic
- Ornamental value