**Taxon:** Corymbia ficifolia (F. Muell.) K. D. Hill & L. A. S. Johnson **Family:** Myrtaceae

**Common Name(s):** red-flower gum
red-flowering gum
scarlet-flowering gum

**Synonym(s):** Eucalyptus ficifolia F. Muell.

**Assessor:** Chuck Chimera **Status:** Assessor Approved **End Date:** 21 Feb 2018

**WRA Score:** **0.0** **Designation:** L **Rating:** Low Risk

**Keywords:** Naturalized Tree, Ornamental, Outcrossing, Wind-Dispersed, Coppices

| Qsn # | Question | Answer Option | Answer |
|---|---|---|---|
| 101 | Is the species highly domesticated? | y=-3, n=0 | n |
| 102 | Has the species become naturalized where grown? | | |
| 103 | Does the species have weedy races? | | |
| 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) | Intermediate |
| 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 | y |
| 302 | Garden/amenity/disturbance weed | n=0, y = 1*multiplier (see Appendix 2) | n |
| 303 | Agricultural/forestry/horticultural weed | n=0, y = 2*multiplier (see Appendix 2) | n |
| 304 | Environmental weed | n=0, y = 2*multiplier (see Appendix 2) | n |
| 305 | Congeneric weed | n=0, y = 1*multiplier (see Appendix 2) | y |
| 401 | Produces spines, thorns or burrs | y=1, n=0 | n |
| 402 | Allelopathic | | |
| 403 | Parasitic | y=1, n=0 | n |
| 404 | Unpalatable to grazing animals | y=1, n=-1 | y |
| 405 | Toxic to animals | y=1, n=0 | n |
| 406 | Host for recognized pests and pathogens | | |
| 407 | Causes allergies or is otherwise toxic to humans | y=1, n=0 | n |
| 408 | Creates a fire hazard in natural ecosystems | | |

| Qsn # | Question | Answer Option | Answer |
|---|---|---|---|
| 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 | 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 | n |
| 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 | | |
| 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) | | |
| 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 | y |
| 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) | | |

**Supporting Data:**

| Qsn # | Question | Answer |
|---|---|---|
| 101 | Is the species highly domesticated? | n |
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | [No evidence of domestication] "E. ficifolia occurs naturally in a restricted area on coastal sands near Albany in the south of Western Australia." |

| 102 | Has the species become naturalized where grown? | |
|---|---|---|
| | **Source(s)** | **Notes** |
| | WRA Specialist. 2018. Personal Communication | NA |

| 103 | Does the species have weedy races? | |
|---|---|---|
| | **Source(s)** | **Notes** |
| | WRA Specialist. 2018. Personal Communication | NA |

| 201 | Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical" | Intermediate |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "Latitude between 34°S and 35°S" |
| | USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 21 Feb 2018] | "Native<br>Australasia<br>Australia: Australia Western Australia" |

| 202 | Quality of climate match data | High |
|---|---|---|
| | **Source(s)** | **Notes** |
| | USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 21 Feb 2018] | |

| 203 | Broad climate suitability (environmental versatility) | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | "Climate: Altitudinal range: 20–160 m; Hottest/coldest months: 23–25°C/7–8°C; Frost incidence: low; Rainfall: 870–1300 mm per year, winter max." |

| Qsn # | Question | Answer |
|---|---|---|
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "Climatic amplitude (estimates)<br>- Altitude range: 0 - 150 m<br>- Mean annual rainfall: 900 - 1400 mm<br>- Rainfall regime: winter<br>- Dry season duration: 5 - 0 months<br>- Mean maximum temperature of hottest month: 0 - 24ºC<br>- Mean minimum temperature of coldest month: 8 - 0ºC<br>- Absolute minimum temperature: -1 - 0ºC" |

| 204 | Native or naturalized in regions with tropical or subtropical climates | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | "Native to southwestern Australia; in Hawai'i planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i. Over 55 trees planted between 1928 and 1955." |

| 205 | Does the species have a history of repeated introductions outside its natural range? | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "It has been widely planted as an ornamental in southern Australia and in countries with a mild temperate climate." |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | "Native to southwestern Australia; in Hawai'i planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i. Over 55 trees planted between 1928 and 1955." |

| 301 | Naturalized beyond native range | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Ritter, M. (2014). Field Guide to the Cultivated Eucalypts (Myrtaceae) and How to Identify Them. Annals of the Missouri Botanical Garden, 99(4), 642-687 | "Corymbia ficifolia ... Native to: South West Australia. Naturalized: Hawaii, New Zealand, South Africa." |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | "Native to southwestern Australia; in Hawai'i planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i. Over 55 trees planted between 1928 and 1955." |

| 302 | Garden/amenity/disturbance weed | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | "Invasive potential: No entries found" |
| | Dave's Garden. 2018. Corymbia Species, Red Flowering Gum, Scarlet Flowering Gum Tree - Corymbia ficifolia. https://davesgarden.com/guides/pf/go/48965/. [Accessed 21 Feb 2018] | "On Dec 17, 2013, Vestia from San Francisco, CA wrote: While this tree is very showy when in flower, it should not be planted as a street tree. The flowers drip large amounts of nectar on cars and sidewalks, Then the large woody seed pods are a hazard to cars when they drop, and to pedestrians who might trip on them. It should be used only in gardens and parks. " |

| Qsn # | Question | Answer |
|---|---|---|
| | Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall | No evidence |

| 303 | Agricultural/forestry/horticultural weed | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall | No evidence |

| 304 | Environmental weed | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Global Register of Introduced and Invasive Species. 2018. Corymbia ficifolia. http://griis.org. [Accessed 21 Feb 2018] | Introduced to Australia (outside natural range), India & South Africa, but No evidence of impacts reported from any of these locations |
| | Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall | No evidence |

| 305 | Congeneric weed | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CABI. 2018. Invasive Species Compendium. Wallingford , UK: CAB International. www.cabi.org/isc | "C. citriodora is a medium-sized to large tree that has been widely introduced in tropical and subtropical regions of the world to be used as an ornamental, in reforestation projects, and for production of timber, pulp, and essential oils (Doran, 1999; Orwa et al., 1999). It has escaped from cultivation and spread into new habitats, becoming naturalized and invasive in disturbed areas and open forests. Once established, this species has the potential to out-compete native vegetation through the production of allelopathic substances which completely inhibit the germination, growth and establishment of native plants (Nishimura et al., 1984; Evaristo et al., 2011). It also represents an environmental concern in invaded areas due to its' slow decomposition rate (Rezende et al., 2001), which also prevents the germination and growth of native species. Other concerns are related to the capability of C. corymbia to reduce ground water availability, modify soil nutrients and increase the risk of soil erosion (Schneider, 2003). " |
| | Randall, R. (2001). Garden thugs, a national list of invasive and potentially invasive garden plants. Plant Protection Quarterly, 16(4), 138-171 | Corymbia citriodora - Listed as an environmental weed of serious concern in Western Australia |

| 401 | Produces spines, thorns or burrs | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | [No evidence] "Straggly trees 8-12 m tall, bark gray, fibrous throughout. Adult leaves alternate, blades discolorous, broadly lanceolate or ovate, 7.5-15 cm long, 3-5 cm wide, apex acuminate, petioles l0-20 mm long." |

| 402 | Allelopathic | |
|---|---|---|

| Qsn # | Question | Answer |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Coppen, J.J.W. (2002). Eucalyptus: The Genus Eucalyptus. Taylor and Francis, London | [Unknown. No evidence found for C. ficifolia] "Trees of the genus Eucalyptus are frequently surrounded by a grass-free zone and this has led to a search for possible allelochemicals in Eucalyptus species. The results to date indicate that eucalypts may well be a practical, commercial source of such chemicals in the future. In its simplest form this might entail use of the powdered leaves as a natural herbicide. Alternatively, and with a greater understanding of their mode of action, the allelochemicals themselves or suitable derivatives could be used as selective herbicides." |

| 403 | Parasitic | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | "Red-flowering gum is a small to medium-sized tree, usually of poor form, of coastal and subcoastal forests and woodlands. It attains up to 10 m in height with a bole up to 60 cm dbh, although on very poor sites with massive granite rock near the soil surface, it is reduced to a low spreading shrub." [Myrtaceae. No evidence] |

| 404 | Unpalatable to grazing animals | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | SelecTree. "Corymbia ficifolia Tree Record." 1995-2018. https://selectree.calpoly.edu/tree-detail/corymbia-ficifolia. [Accessed 21 Feb 2018] | "Not Deer Palatable." |

| 405 | Toxic to animals | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Southern Woods Nursery. 2018. Corymbia ficifolia - Red-flowering Gum. https://www.southernwoods.co.nz/shop/corymbia-ficifolia/. [Accessed 21 Feb 2018] | "Non-poisonous to Animals" |
| | Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL | No evidence |

| 406 | Host for recognized pests and pathogens | |
|---|---|---|
| | **Source(s)** | **Notes** |

| Qsn # | Question | Answer |
|---|---|---|
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | Pests: Pests of Eucalyptus include psyllids, aphids, mealybugs, scales, mites, caterpillars and borers. Spraying with soap solution or appropriate chemical sprays will often suffice to control all but the borers. Borer damage may require the cutting out and destroying of infested stems and the removal of dying plants. Psyllids disfigure the tree and can be quite a problem. Diseases: Eucalyptus are resistant to armillaria root rot and to verticillium wilt. They are susceptible to powdery mildew and to Phytophthora cinnamoni and Phytophthora lateralis. Leaf spot and crown gall are Eucalyptus' major disease problems. Prune infected twigs and branches, and be sure to keep dead leaves and fruit cleaned up as plant refuse is usually the source of leaf spot disease." |

| 407 | Causes allergies or is otherwise toxic to humans | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL | No evidence |
| | Southern Woods Nursery. 2018. Corymbia ficifolia - Red-flowering Gum. https://www.southernwoods.co.nz/shop/corymbia-ficifolia/. [Accessed 21 Feb 2018] | Non-poisonous to Humans |

| 408 | Creates a fire hazard in natural ecosystems | |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Firewise Western Australia. 2012. Firewise Landscapes. Monday, 19 March 2012. http://firewisewa.blogspot.com/2012/03/firewise-landscapes-in-south-west-of.html. [Accessed 21 Feb 2018] | "The Red-flowering Gum, Corymbia ficifolia, comes from the south coast of Western Australia and is quite at home in California or other places with a similar climate. It has volatile oils in its leaves, drops copious leaves and small twigs over summer and is thus highly inflammable. It needs to be planted well away from the home and well maintained so that dry litter does not built up to become ground fuels for a bushfire" |
| | WRA Specialist. 2018. Personal Communication | Possibly Yes. Trees anecdotally reported to be highly flammable, but no evidence found of frequent fires or increased fire risk in natural ecosystems |

| 409 | Is a shade tolerant plant at some stage of its life cycle | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | SelecTree. "Corymbia ficifolia Tree Record." 1995-2018. https://selectree.calpoly.edu/tree-detail/corymbia-ficifolia. [Accessed 21 Feb 2018] | "Exposure Full Sun to Partial Shade." |
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | "Light requirement: tree grows in full sun" |

| Qsn # | Question | Answer |
|---|---|---|
| | Australian Native Plant Society. 2018. Corymbia ficifolia. http://anpsa.org.au/c-fic.html. [Accessed 21 Feb 2018] | "The species is best suited to temperate districts with low summer rainfall and humidity. It can be grown in sub-tropical areas in well drained, sunny positions but cannot be regarded as reliable in those areas." |

| 410 | Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island) | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "It tolerates a wide variety of soils and is reasonably drought and frost tolerant once past the sapling stage."<br><br>"Soil descriptors<br>- Soil texture: light; medium; heavy<br>- Soil drainage: free<br>- Soil reaction: acid<br>- Special soil tolerances: infertile" |
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | "Soil tolerances: clay; loam; sand; slightly alkaline; acidic; well-drained" |

| 411 | Climbing or smothering growth habit | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "Eucalyptus ficifolia is a small, straggly, much branched tree to 6-12 m tall, with a broad leafy crown. The bark of this species is light grey to dark brown, rough, fibrous and furrowed or somewhat tessellated and persistent over the trunk and branches." |

| 412 | Forms dense thickets | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | [No evidence from Hawaiian Islands] "Native to southwestern Australia; in Hawai'i planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i. Over 55 trees planted between 1928 and 1955." |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | [No evidence from native range] "Red-flowering gum forms low woodlands most commonly associated with open forests of marri (E. calophylla) and jarrah (E. marginata) with species such as banksias (B. grandis, B. ilicifolia) and casuarinas (Allocasuarina spp.) in the understorey. At Boulder Hill it is intermingled with Albany blackbutt (E. staeri), both being reduced to a 1.5 m tall shrub." |

| 501 | Aquatic | n |
|---|---|---|
| | **Source(s)** | **Notes** |

| Qsn # | Question | Answer |
|---|---|---|
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | [Terrestrial] "Red-flowering gum is a small to medium-sized tree, usually of poor form, of coastal and subcoastal forests and woodlands. It attains up to 10 m in height with a bole up to 60 cm dbh, although on very poor sites with massive granite rock near the soil surface, it is reduced to a low spreading shrub." |

| 502 | Grass | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 21 Feb 2018] | Family: Myrtaceae<br>Subfamily: Myrtoideae<br>Tribe: Eucalypteae |

| 503 | Nitrogen fixing woody plant | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 21 Feb 2018] | Family: Myrtaceae<br>Subfamily: Myrtoideae<br>Tribe: Eucalypteae |

| 504 | Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers) | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "Eucalyptus ficifolia is a small, straggly, much branched tree to6-12 m tall, with a broad leafy crown. The bark of this species is light grey to dark brown, rough, fibrous and furrowed or somewhat tessellated and persistent over the trunk and branches." |

| 601 | Evidence of substantial reproductive failure in native habitat | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Australian Native Plant Society. 2018. Corymbia ficifolia. http://anpsa.org.au/c-fic.html. [Accessed 21 Feb 2018] | "Conservation Status: Not considered to be at risk in the wild." |

| Qsn # | Question | Answer |
|---|---|---|
| 602 | **Produces viable seed** | **y** |
| | **Source(s)** | **Notes** |
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | "Propagation of Eucalyptus is by seed, using ripe seed capsules taken off trees." |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "Seed storage orthodox" |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | "Seeds terminally winged." ... "planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i. ' |

| 603 | **Hybridizes naturally** | **y** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "E. ficifolia var. alba Guilf. and E. ficifolia var. guilfoylei F. M. Bailey are names applied to individuals formed as a result of hybridization with E. calophylla i.e. = C. calophylla x C. ficifolia. They occur in cultivation and sometimes in the wild. Eucalyptus ptychocarpa x E. ficifolia is a new cultivated variety." |
| | Keighery, G. (2002). The enemy within: native environmental weeds of Western Australia. In 13th Australian Weeds Conference–Papers and Proceedings (pp. 93-95). Plant Protection Society, Perth | "In Kings Park, plantings of non-local forms and species of Acacia pulchella, Anigozanthos manglesii D.Don, Eucalyptus ficifolia F.Muell. (hybridizing with Marri, Eucalyptus calophylla R.Br.) and E. gomphocephala DC. have resulted in many hybrid genes present in these species (Coates et al. 2002)." |

| 604 | **Self-compatible or apomictic** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Eldridge, K., Davidson, J., Harwood, C., & Wyk, G. V. (1993). Eucalypt domestication and breeding. Clarendon Press, Oxford | "Cass Smith (1970) reported that E. ficifolia (subgenus Corymbia) is entirely cross-pollinated in nature." |
| | Coppen, J.J.W. (2002). Eucalyptus: The Genus Eucalyptus. Taylor and Francis, London | "Eucalypts have hermaphrodite, protandrous flowers and are pollinated by insects or birds (Griffin 1989a). They reproduce by a mixed mating system, with both outcrossing (where the pollen from one tree fertilises the flowers of another tree) and selfing (pollination of an individual tree or clone with its own pollen) (Moran 1992, Moran and Bell 1983). The proportions of outcrosses and inbreeds reported in seed collected from natural populations range from 45 per cent outcrossing in one population of E. pellita (House and Bell 1996) to 97 percent outcrossing in E. camaldulensis (P.A. Butcher pers. comm.)." |

| 605 | **Requires specialist pollinators** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |

| Qsn # | Question | Answer |
|---|---|---|
| | Phillips, R. D., Hopper, S. D., & Dixon, K. W. (2010). Pollination ecology and the possible impacts of environmental change in the Southwest Australian Biodiversity Hotspot. Philosophical Transactions of the Royal Society of London B: Biological Sciences, 365(1539), 517-528 | "Corymbia ficifolia (Myrtaceae) is pollinated by a variety of insects and honeyeaters (Meliphagidae), including the New Holland Honeyeater Phylidonyris novaehollandiae" |
| | Nicolson, S. W. (1994). Eucalyplus nectar: production, availability, composition and osmotic consequences for the larva of the eucalypt nectar fly, Drosophila flavohirta. South African Journal of Science, 90(2), 75-79 | "Nectar in the morphologically unspecialized flowers of Eucalyplus is easily accessible to a variety of pollinators - insects, birds and mammals. The flower colour and abundant nectar of E. ficifolia may attract birds as pollinators in its natural habitat, whereas the small volumes of nectar in scented , white flowers of E. cladocalyx would seem more suited to insect pollinators." |
| | Gibb, J. A. (2000). Activity of birds in the western Hutt hills, New Zealand. Notornis, 47(1), 13-35 | "Table 5 Fruit eaten and sources of nectar of silvereye (Zostemps lateralis), by month." [Eucalyptus ficifolia nectar taken in February] |
| | Saunders, M. (2016). Beyond the birds and the bees. Wildlife Australia, 53(2), 4-8 | "When they open, these Corymbia ficifolia blossoms are regarded as typical of bird-pollinated<br>flowers in their colour and structure (with the stigma too far above the stamens for small bees to brush against)" |
| | Martins, D. J. (2014). Our Friends the Pollinators: A Handbook of Pollinator Diversity and Conservation in East Africa. Nature Kenya, Nairobi, Kenya | "While these trees can be invasive and use a lot of water, in highlands where they are planted for timber, they support large numbers of honeybees. Eucalyptus ficifolia is one species that is especially attractive to honeybees." |

| 606 | Reproduction by vegetative fragmentation | n |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | "Propagation of Eucalyptus is by seed, using ripe seed capsules taken off trees." |

| 607 | Minimum generative time (years) | >3 |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CABI. 2018. Invasive Species Compendium. Wallingford , UK: CAB International. www.cabi.org/isc | "E. ficifolia is a relatively slow growing, coppicing species." |
| | Lewis, W.J. & Alexander, D.M. (2008). Grafting and Budding: A Practical Guide for Fruit and Nut Plants and Ornamentals. Landlinks Press, Collingwood, Australia | "Seedling Eucalyptus ficifolia takes 7-10 years to flower, while graftec trees can flower from two years after grafting." |

| Qsn # | Question | Answer |
|---|---|---|
| **701** | **Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)** | **n** |
| | **Source(s)** | **Notes** |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | "Fruits: Pedicellate, barrel-shaped to slightly urceolate, 2–4.2 × 2–3.1 cm; disc broad, descending; valves 4 or 5, deeply enclosed. Seeds ellipsoidal with a terminal wing that extends along both edges, dark brown to black, hilum subterminal and close to one edge." [No evidence. No means of external attachment] |

| 702 | **Propagules dispersed intentionally by people** | **y** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Gilman, E.F. & Watson, D.G. 1993. Eucalyptus ficifolia - Red-Flowering Gum. Fact Sheet ST-239. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. http://hort.ifas.ufl.edu/. [Accessed 21 Feb 2018] | "A native of Australia, Eucalyptus ficifolia grows best on the western coast of the United States and is seldom successful in the interior" ... "Availability: grown in small quantities by a small number of nurseries" |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | "in Hawai'i planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i" |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "It has been widely planted as an ornamental in southern Australia and in countries with a mild temperate climate." |

| 703 | **Propagules likely to disperse as a produce contaminant** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | WRA Specialist. 2018. Personal Communication | No evidence. Long time to maturity & use as an ornamental tree would likely minimize risk of seed contamination of crops |

| 704 | **Propagules adapted to wind dispersal** | **y** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Ritter, M. (2014). Field Guide to the Cultivated Eucalypts (Myrtaceae) and How to Identify Them. Annals of the Missouri Botanical Garden, 99(4), 642-687 | "Eucalypts have limited, short distance, wind-dispersed seeds" |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI. | "Fruit ovoid, subglobose, or urceolate, 20-35 mm long, 20-30 mm wide, valves included. Seeds terminally winged." |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | "Fruits: Pedicellate, barrel-shaped to slightly urceolate, 2–4.2 × 2–3.1 cm; disc broad, descending; valves 4 or 5, deeply enclosed. Seeds ellipsoidal with a terminal wing that extends along both edges, dark brown to black, hilum subterminal and close to one edge." |

| Qsn # | Question | Answer |
|---|---|---|
| **705** | **Propagules water dispersed** | |
| | **Source(s)** | **Notes** |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | "Some occurrences of red-flowering gum are on the fringes of swampy terrain, on poorly drained, grey sands." [Wind-dispersed seeds might be secondarily dispersed by water near riparian and aquatic habitats] |

| 706 | **Propagules bird dispersed** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Ritter, M. (2014). Field Guide to the Cultivated Eucalypts (Myrtaceae) and How to Identify Them. Annals of the Missouri Botanical Garden, 99(4), 642-687 | "Eucalypts have limited, short distance, wind-dispersed seeds" |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | "Fruits: Pedicellate, barrel-shaped to slightly urceolate, 2–4.2 × 2–3.1 cm; disc broad, descending; valves 4 or 5, deeply enclosed. Seeds ellipsoidal with a terminal wing that extends along both edges, dark brown to black, hilum subterminal and close to one edge." |

| 707 | **Propagules dispersed by other animals (externally)** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Ritter, M. (2014). Field Guide to the Cultivated Eucalypts (Myrtaceae) and How to Identify Them. Annals of the Missouri Botanical Garden, 99(4), 642-687 | "Eucalypts have limited, short distance, wind-dispersed seeds" |

| 708 | **Propagules survive passage through the gut** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | [Not fleshy-fruited. No evidence of consumption] "Fruits: Pedicellate, barrel-shaped to slightly urceolate, 2–4.2 × 2–3.1 cm; disc broad, descending; valves 4 or 5, deeply enclosed. Seeds ellipsoidal with a terminal wing that extends along both edges, dark brown to black, hilum subterminal and close to one edge." |

| 801 | **Prolific seed production (>1000/m2)** | |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Boland, D.J. , Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., McDonald, M.W. & Turner, J.D. 2006. Forest Trees of Australia. CSIRO Publishing, Collingwood, Australia | [Seed densities unknown] "Fruits: Pedicellate, barrel-shaped to slightly urceolate, 2–4.2 × 2–3.1 cm; disc broad, descending; valves 4 or 5, deeply enclosed. Seeds ellipsoidal with a terminal wing that extends along both edges, dark brown to black, hilum subterminal and close to one edge." |

| 802 | **Evidence that a persistent propagule bank is formed (>1 yr)** | **n** |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Florence, R.G. (2004). Ecology and Silviculture of Eucalypt Forests. CSIRO Publishing, Collingwood, Australia | "eucalypt seed ... will remain viable only a short time in soil, probably no more than 6-12 months." [Generic description] |

| Qsn # | Question | Answer |
|---|---|---|
| | Baskin, C.C. & Baskin, J.M. 2014. Seeds Ecology, Biogeography, and Evolution of Dormancy and Germination. Second Edition. Academic Press, San Francisco, CA | "TABLE 10.1 ... E. ficifolia - ND" [nondormant] |

| 803 | Well controlled by herbicides | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Dow AgroSciences Australia. 2014. Woody Weed Control Guide. www.dowagrosciences.com.au | "Corymbia spp. controlled using ACCESS herbicide by Basal bark and Cut stump (1:60 with diesel distillate) & ThinLine basal bark (1:9 with diesel distillate); using TORDON RegrowthMaster herbicide by Cut stump (1:20 with water + surfactant) and Stem injection (1:4 with water) |

| 804 | Tolerates, or benefits from, mutilation, cultivation, or fire | y |
|---|---|---|
| | **Source(s)** | **Notes** |
| | CAB International, 2005. Forestry Compendium. CAB International, Wallingford, UK | "- Ability to coppice; pollard" |

| 805 | Effective natural enemies present locally (e.g. introduced biocontrol agents) | |
|---|---|---|
| | **Source(s)** | **Notes** |
| | Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI. | [Unknown] "Native to southwestern Australia; in Hawai'i planted and apparently reproducing on Kaua'i, O'ahu, Maui, and Hawai'i. Over 55 trees planted between 1928 and 1955." |

**Summary of Risk Traits:**

High Risk / Undesirable Traits
• Grows and naturalized in regions with subtropical climates
• Naturalized on Kauai, Oahu, Maui & Hawaii (Hawaiian Islands), as well as in New Zealand, South Africa
• Other Corymbia species are invasive
• Unpalatable to grazing animals
• Tolerates many soil types
• Reproduces by seeds
• Hybridizes naturally
• Seeds dispersed by wind, possibly water & intentionally by people
• Able to coppice & resprout after cutting

Low Risk Traits
• No reports of negative impacts (other than possible landscape maintenance issues)
• Unarmed (no spines, thorns, or burrs)
• Optimal growth in full sun
• Ornamental
• Not reported to spread vegetatively
• Outcrossing in nature
• Seeds non-dormant, unlikely to form a persistent seed bank
• Herbicides provide effective control of Corymbia species