Eucalyptus macarthurii (Camden Woollybutt, Paddy's River Box) -- FLORIDA		Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to FL climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	y	2
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	?	
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	?	
4.05	Toxic to animals	n	0
4.06	Host for recognised pests and pathogens	?	
4.07	Causes allergies or is otherwise toxic to humans	n	0
4.08	Creates a fire hazard in natural ecosystems	?	
4.09	Is a shade tolerant plant at some stage of its life cycle	?	
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	n	0
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	y	1
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	?	
6.04	Self-compatible or apomictic	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	?	
6.07	Minimum generative time (years)		

Completed: July 2012

7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	?	
7.05	Propagules water dispersed	?	
7.06	Propagules bird dispersed	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	?	
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides	y	-1
8.04	Tolerates, or benefits from, mutilation or cultivation	y	1
8.05	Effective natural enemies present in U.S.		
	Total Score	**5**	
	Implemented Pacific Second Screening	**Yes**	
	Risk Assessment Results	**Evaluate**	

	Reference	Source data
1.01		Cultivated, but no evidence of selection for reduced weediness.
1.02		
1.03		
2.01	1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948 [Accessed: 8/11/2010]). 2. The Global Compendium of Weeds: Eucalyptus macarthurii H. Deane & Maiden (http://hear.org/gcw/html/index.html [Accessed: 8/11/2010]). 3. New South Wales Flora Online (http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Eucalyptus~macarthurii [Accessed: 8/11/2010]). 4. Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Volume II. Indigenous Tracheophyta - Monocotyledons except Graminae. First electronic ed., Landcare Research, June 2004. Transcr. A.D. Wilton and I.M.L. Andres. (http://FloraSeries.LandcareResearch.co.nz. [Accessed 20 July 2004]). 5. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif) 6. Hughs, L. 2005. NSW Scientific Committee - final determination. *Eucalyptus macarthurii* (a tree) - vunerable species listing (http://www.environment.nsw.gov.au/determinations/EucalyptusMacarthuriiVulSpListing.htm [Accessed: 8/11/2010]). 7. Boland, D. J. et al. 2006. Forest Trees of Australia. CSIRO Publishing. Collingwood, Victoria.	**No computer analysis was performed.** 1. Distributional range: native to New South Wales Australia. 2. Origin: native to Australia. 3. Distribution and occurrence: Native to NSW. 4. Has been recorded in the Waikato and collected wild from the Kaingaroa State Forest near Rotorua. It has been widely planted in shelter belts in many cooler parts of N.Z. 5. All South African states are in NAPPFAST Hardiness Zones 9, 10, which are equivolent to USDA/Arbor Day Hardiness Zones 8, 9 [north and central Florida]). 6. *Eucalyptus macarthurii* has a moderately restricted distribution. It is currently recorded from the Moss Vale District to Kanangra Boyd National Park. In the Southern Highlands it occurs mainly on private land, often as isolated individuals in, or on the edges, of paddocks. Isolated stands occur in the north west part of the range on the Boyd Plateau. The only known record in the conservation estate is within Kanangra Boyd National Park. 7. Has a restricted natural occuruence in the Central and Southern Tablelands of NSW form the southern Blue Mountains to Goulburn. It can be readily observed occurring in pure stands along Paddys River just north of Marulan and Penrose State Forest.
2.02		**No computer analysis was performed**. Native range is well known; refer to 2.01 source data.
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Refer to all references in question 2.01.	1. Distribution in the native and cultivated ranges is very widespread, so there are most likely at least 3 climatic groups.
2.04	1. Australia's Virtual Herbarium. 2009. http://chah.gov.au/avh/index.jsp. Accessed: 30 April 2012. 2. Boland, D. J. et al. 2006. Forest Trees of Australia. CSIRO Publishing. Collingwood, Victoria.	1. Natural habitat: Receives 400-1600 mm (15.7"-63") of rainfall per year. 2. Natural habitat: Receives 800-1100 mm (31.5"-43.3") of rainfall per year, uniform.

2.05	1. Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Volume II. Indigenous Tracheophyta - Monocotyledons except Graminae. First electronic edition, Landcare Research, June 2004. Transcr. A.D. Wilton and I.M.L. Andres. (http://FloraSeries.LandcareResearch.co.nz. [Accessed 20 July 2004]). 2. Ritter, M. & J. Yost. 2009. Diversity, reproduction, and potential for invasiveness of Eucalyptus in California. Madroño 56(3): 155-167. 3. Little, K.M. & G.J. van den Berg. 2007. Comparison of different herbicides for single stem *Eucalyptus macarthurii* cut stump control. Journal of Tropical Forest Science 19(1): 13-17. 4. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]).	1. It has been widely planted in shelter belts in many cooler parts of NZ. 2. The prevalence of eucalypts in California is more the result of large scale intentional plantings that it is the result of extensive naturalization. 3. Timber companies expanded their plantation forestry into colder, frost-prone highland areas of western KwaZulu-Natal, the north-Eastern Cape, and south-eastern Mpumalanga Highveld states of South Africa. 4. Widely cultivated in South Africa and New Zealand; tested for forestry in northern and southern Spain and Portugal.
3.01	1. Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Volume II. Indigenous Tracheophyta - Monocotyledons except Graminae. First electronic edition, Landcare Research, June 2004. Transcr. A.D. Wilton and I.M.L. Andres. (http://FloraSeries.LandcareResearch.co.nz. [Accessed 20 July 2004]). 2. Howell, C.J., J.W.D. Sawyer. 2006. New Zealand naturalized vascular plant checklist. New Zealand Plant Conservation Network. Wellington, NZ. 3.a-d. Ritter, M. & J. Yost. 2009. Diversity, reproduction, and potential for invasiveness of *Eucalyptus* in California. *Madroño* 56(3): 155-167.	1. Has been recorded in the Waikato and collected wild from the Kaingaroa State Forest near Rotorua. It has been widely planted in shelter belts in many cooler parts of N.Z. 2. Naturalized plant status: casual (i.e. Casual is the name given to taxa that are: passively regenerating only in the immediate vicinity of the cultivated parent plant, or more widespread but only known as isolated or few individuals; garden escapes persisting only 2–3 years; or garden discards persisting vegetatively but not spreading sexually or asexually'(Webb et al. 1988). 3.a. The prevalence of eucalypts in California is more the result of large scale intentional plantings that it is the result of extensive naturalization. 3.b. Common *Eucalyptus* taxa naturalized in California: *E. macarthurii* . 3.c. Observed widespread reproduction of a number of species in the max Watson Grove at the Arboretum at U.C. Santa Cruz, such as...*E. macarthurii* , which are not planted frequently elsewhere in California. 3.d. ...*E. macarthurii* are rarely grown elsewhere outside Australia (Jacobs 1981) and are very uncommon in California.
3.02		No evidence.
3.03		No evidence.
3.04		No evidence.

3.05	1. Holm, L. et al. (1979) A Geographical Atlas of World Weeds. John Wiley and Sons, New York. 2. Henderson, L (2001) Alien Weeds and Invasive Plants. Agricultural Research Council. 3. An electronic Atlas of Weeds and Invasive Species. CD ROM version 1. 1997. Based on the original work 'A Geographical Atlas of Weeds' by Holm et al.	1. *Eucalyptus cambageana* is a principal weed in Australia. 2.a. *Eucalyptus diversicolor* is an invader in South Africa. 2.b. *E. grandis* was declared an invader (category 2). 3. Severa Eucalyptus species such as *E. populnea, E. pilularis, E. ferruginear* and *E. cambageana* are listed as principal weeds in Australia.
4.01		No evidence.
4.02	1. Anonymous. 2009. "Focus on Eucalypts." *SAPIA NEWS No. 12* . ARC-Plant Protection Research Institute, South Africa.	1. It is likely that most *Eucalypts* are allelopathic-having the potential to suppress understory plants through chemical inhibitors that leach into the soil.
4.03		No evidence.
4.04	1. United States Department of Agriculture Permit applications 08-11-106rm and 08-014-101rm received from ArborGen LLC. Field testing of genetically engineered *E. grandis* X *E. urophylla* (http://www.aphis.usda.gov/brs/aphisdocs/08_014101rm_ea2.pdf [Accessed: 8/19/2010]). 2. Hughs, L. 2005. NSW Government, Environment, Climate Change & Water. *Eucalyptus macarthurii* (a tree) - vulnerable species listing NSW Scientific Committee - final determination (http://www.environment.nsw.gov.au/determinations/EucalyptusMacarthuriiVulSpListing.htm [Accessed: 8/11/2010]).	1. *Eucalyptus* species are known to produce chemical compounds that are required by the plant for defense against herbivores and pathogens. 2. Grazing and other forms of disturbance preclude establishment of seedlings in many locations, so that the current mature cohort of individuals is unlikely to be replaced unless protective measures are implemented.
4.05	1. Hughs, L. 2005. NSW Government, Environment, Climate Change & Water. *Eucalyptus macarthurii* (a tree) - vulnerable species listing NSW Scientific Committee - final determination (http://www.environment.nsw.gov.au/determinations/EucalyptusMacarthuriiVulSpListing.htm [Accessed: 8/11/2010]).	1. Grazing and other forms of disturbance preclude establishment of seedlings in many locations, so that the current mature cohort of individuals is unlikely to be replaced unless protective measures are implemented.

4.06	1. Maseko, B. et al. 2000. First report of Phytophthora nicotianae associated with Eucalyptus die-back in South Africa. New Disease Reports 2 (http://www.ndrs.org.uk/article.php?id=002003 [Accessed: 8/20/2010]). 2. Forestry and Agricultural Biotechnology Institute (http://www.fabinet.up.ac.za/tpcpweb/news/Pseudobunaea_Pest_Awareness.pdf [Accessed: 8/20/2010]). 3. Keane, P. J. et al. 2000. Diseases and Pathogens of Eucalypts. CSIRO Publishing, Collingwood, Victoria, Australia. 4. Sappi Forests. Tree Farming Guidelines (http://www.sappi.com/NR/rdonlyres/2ED1B630-889A-4884-8233-9F1941FFF88E/0/SilvicultureChapter1SpeciesSelection.pdf [Accessed: 8/20/2010]). 5. Gilman, E. F. & D.G. Watson. 1993. Eucalyptus ficifolia Fact Sheet ST-239. Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida (http://hort.ifas.ufl.edu/trees/eucfica.pdf [Accessed: 8/20/2010]).	1. Since 1999, *P. nicotianae* Breda de Haan (synonym, *P.n* .var *parasitica* (Dastur) Waterhouse) has been recovered from dead and dying Eucalyptus trees such as *E. macarthurii* Deane & Maiden and *E. smithii* . 2. *Pseudobunaea irius* (Poplar Emperor Moth) occur on cultivated trees such as oaks, poplars, eucalypts, Black Wattle and pines. 3. Highly susceptible to insect defoliation, particularly by the chrysomelid beetle *Paropsis charybdis* Stal. 4. *E. macarthurii* is susceptible to various forms of *Phythophthora* particularly in the first two years following establishment and relatively disease free due to its thick bark. 5. *Paropsis charybdis* is an Australian insect and was first recorded in New Zealand from the Port Hills, Christchurch, in 1916. Most species of Eucalyptus grown in New Zealand can be defoliated to some extent by this tortoise beetle but oviposition (egg laying), and consequent larval damage, is largely restricted to eucalypts in the sub-genus *Symphyomyrtus* , Section *Maidenaria* , e.g. *Eucalyptus globulus, E. viminalis* and *E. nitens* . This insect is regarded as the most serious defoliator of eucalypts in New Zealand. Frequent and severe defoliation of *E. globulus, E. viminalis* , and *E. macarthurii* has virtually curtailed the planting of these species, thus resulting in an economic impact.
4.07		No evidence.
4.08	1. Gill, A.M. "Eucalypts and fires: interdependent or independent?" In: Eucalypt ecology: individuals to ecosystems. Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997.	1. Eucalypts often are the major source of fuel for fires, but not always.
4.09	1. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. Encyclopedia of Biological Invasions. Berkeley: University of California Press.	1. Shade-tolerant sub-canopy [Eucalyptus] species are not known.
4.10	1. Boland, D. J. et al. 2006. Forest Trees of Australia. CSIRO Publishing. Collingwood, Victoria. 2. Royal Botanic Gardens Sydney. *Flora of New South Wales* Vol. 2. Revised ed. Ed. Gwen J. Harden. Sydney. UNSW Press. 2002	1. Usually found on flats and near swamps and streams in country of moderate relief. It prefers fertile clay loams and alluvials, which retain a suitable soil moisture level throughout the year, but it will also show good growth on deep sandy loams over clay and, as a smaller tree, it is found on lighter sandy loams. 2. On relatively fertile soils.

4.11	1. The Royal Botanic Gardens and Domain Trust (30 April 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Family: *Myrtaceae* ; tree up to 40 m high.
4.12	1. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]). 2. The Royal Botanic Gardens and Domain Trust (30 April 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. If natural regeneration from seed happened and the new grove was left unmanaged a very thick closed forest would develop. 2. Locally frequent.
5.01	1. The Royal Botanic Gardens and Domain Trust (30 April 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. In grasy woodland.
5.02	1. The Royal Botanic Gardens and Domain Trust (30 April 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Family: *Myrtaceae*
5.03	1. The Royal Botanic Gardens and Domain Trust (30 April 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Family: *Myrtaceae*
5.04	1. The Royal Botanic Gardens and Domain Trust (30 April 2012). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Tree up to 40 m high.
6.01		
6.02	1. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]).	1. A prolific flowering species, *E. macarthurii* quickly releases seed if timber harvest is done on mature trees loaded with ripe capsules in the wrong season of the year and if non-woody biomass is left after log extraction on bare soil without finely and timely crushing and mincing it with soil as an organic fertilizer for a further timber crop. 2. Observed widespread reproduction of *E. marcarthurii* in the Max Watson Grove at the Arboretum at U.C. Santa Cruz.

6.03	1. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]). 2. Florence, R.G. *Ecology and Silviculture of Eucalypt Forests* . CSIRO Publishing. Collingwood, Victoria, 2004. 3. Potts, B.M. et al. 1987. Inbreeding and Interspecific Hybridization in *Eucalyptus gunnii* . *Silvae Genetica* 36: 194-199. 4. Griffin, A.R. 1988. Patterns of Natural and Manipulated Hybridization in the Genus *Eucalyptus* L'Herit.--a Review. *Australian Journal of Botany* 36(1): 41-66.	1. Possibility of hybridization. 2. Unsure if these hybridized naturally. Traditional and alternative species and hybrids for planting under different climatic and site regimes (from Jenkin 1990): Summer rainfall maximum (traditional species: *E. grandis*) alternative species for colder sites (light to no frost): *E. macarthurii, E.grandis* X *E. macarthurii* , *E. macarthurii* X *E. grandis* . Summer rainfall maximum (traditional species: *E. grandis*) alternative species for drier sites: *E. macarthurii* X *E. camaldulensis* . 3. Barriers to interspecific hybridization are generally weak as evidenced by the prolific reports on natural and artificial hybridization (Pryor & Johnson 1971, 1981; Pryor 1976; Potts & Reid 1983; Griffin et al. in press). However, hybridization does not occur between subgenera (e.g. Pryor & Johnson 1971, 1981; Pryor 1976; Potts & Reid 1983; Griffin et al. in press) and, while there are general trends (e.g. Pryor 1957a, 1976; Pilipenko 1969; Pryor & Johnson 1971, 1981; Pryor & Willing 1974; Griffin et al. in press), crossability patterns within subgenera are not well explored. 4. *E. macarthurii* involved in natural intersectional hybridization within the subgenus *Symphomyrtus* and also involved in one or more successful manipulated or spontaneous intersectional hybrids.
6.04	1. Centre for Plant Biodiversity Research. 2006. EUCLID: Eucalypts of Australia. Third Ed. Contributors: A.V. Slee, M.I.H. Brooker, S.M. Duffy, J.G. West. CSIRO. Queensland. (http://www.publish.csiro.au/samples/euclidsample/html/index.htm [Accessed: 8/23/2010]). 2. House, S.M. "Reproductive biology of eucalypts." In: *Eucalypt ecology: individuals to ecosystems* . Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997. *Also see Griffin et al. 1987.	1. There is a delay in pollen ripening and dispersal to lessen the chance of self-fertilisation and consequent inbreeding. 2. a. Seed can be set following self-pollination, although the breeding system appears to be one of preferential outcrossing. 2.b. Eucalypts are commonly self-compatible, although the breeding system is one of mixed mating with preferential outcrossing. 2.c. At pollination, outcrossing is promoted by the protandrous condition and pollinator behavior.

6.05	1. Centre for Plant Biodiversity Research. 2006. EUCLID: Eucalypts of Australia. Third Ed. Contributors: A.V. Slee, M.I.H. Brooker, S.M. Duffy, J.G. West. CSIRO. Queensland. (http://www.publish.csiro.au/samples/euclidsample/html/index.htm [Accessed: 8/23/2010]). 2. House, S.M. "Reproductive biology of eucalypts." In: Eucalypt ecology: individuals to ecosystems. Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997. *See also Griffin 1982.	1. Pollen is transported to the stigma from another flower by insects, small birds or small mammals. 2. The majority of eucalypts produce small, white or cream flowers grouped into large conflorescences, which are visited primarily by insects, a range of birds, and bats.
6.06	1. Little, K.M. & R.A.W. Gardner. 2003. Coppicing ability of 20 *Eucalyptus* species grown at two high-altitude sites in South Africa. *Canadian Journal of Forest Research* 33:181–189 2. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]).	1. Vigorous ability to coppice 2. Very vigorous coppice regrowth
6.07		
7.01		
7.02	1. Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Volume II. Indigenous Tracheophyta - Monocotyledons except Graminae. First electronic edition, Landcare Research, June 2004. Transcr. A.D. Wilton and I.M.L. Andres. (http://FloraSeries.LandcareResearch.co.nz. [Accessed 20 July 2004]). 2. Ritter, M. & J. Yost. 2009. Diversity, reproduction, and potential for invasiveness of Eucalyptus in California. Madroño 56(3): 155-167. 3. Little, K.M. & G.J. van den Berg. 2007. Comparison of different herbicides for single stem Eucalyptus macarthurii cut stump control. Journal of Tropical Forest Science 19(1): 13-17. 4. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]).	1. It has been widely planted in shelter belts in many cooler parts of N.Z. 2. The prevalence of eucalypts in California is more the result of large scale intentional plantings that it is the result of extensive naturalization. 3. Timber companies expanded their plantation forestry into colder, frost-prone highland areas of western KwaZulu-Natal, the north-Eastern Cape, and south-eastern Mpumalanga Highveld states of South Africa. 4. Cultivated (widely in South Africa) and experimental plantings (Portugal, Spain, United States [California, Florida, Georgia, South Carolina, etc.])
7.03		No evidence.

7.04	1. Ritter, M. & J. Yost. 2009. Diversity, reproduction, and potential for invasiveness of Eucalyptus in California. Madroño 56(3): 155-167. *See also: Centre for Plant Biodiversity Research. 2006. EUCLID: Eucalypts of Australia. Third Ed. Contributors: A.V. Slee, M.I.H. Brooker, S.M. Duffy, J.G. West. CSIRO. Queensland. 2. House, S.M. "Reproductive biology of eucalypts." In: *Eucalypt ecology: individuals to ecosystems* . Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997. 3. Potts, B. 1990. The response of eucalypt populations to a changing environment. Tasforests, December: 179-193. 4. Cremer, K.W. 1977. Distance of seed dispersal in Eucalypts estimated from seed weights. Australian Forest Research, 7(4): 225-228. 5. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In: D. Simberloff & M. Rejmánek, eds. Encyclopedia of Biological Invasions. Berkeley: University of California Press.	1. After fertilization, when the stamens and the style fall from the flower, the ovary develops into a woody capsule with valves dehiscing at the top, allowing tiny, wind-dispersed seeds to be shed (per Slee et al. 2006). 2. The passover release of seed is aided by wind and results in a generally low dispersal distance. 3. Seed dispersal in most eucalypt species is mainly by wind and gravity. 4. Wind is probably the only important agent of seed dispersal in the eucalypts, except possibly in species growing on river margins or flood plains where water could also transport the seed. 5. Relatively limited seed dispersal; planted eucalypts are very small and have no adaptions for dispersal (wings or fleshy). The passive release of seeds is undoubtedly aided by wind; however all rigorous studies of eucalypt seed dispersal and seedling spatial distribution show that in general seeds are dispersed over quite short distances that are in agreement with measurement of terminal descent velocity.
7.05	1. Anonymous. October 2010. Scotland, Forestry Commission. Interim Guidance on the Grant Aiding and Planting of Eucalypts in Scotland. Accessed: 18 January 2012. http://www.forestry.gov.uk/pdf/InterimEucalyptusGuidance.pdf/$FILE/InterimEucalyptusGuidance.pdf. 2. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. It has no specific mechanisms for water dispersal, though dry eucalypt seed will float; seed sinks after absorbing water. 2. Eucalypts should not be planted near rivers/streams. Temporarily flooded or eroded river/stream banks are suitable habitat for spontaneous establishment of seedlings. Additionally, their seeds can be dispersed for long distances by running water.
7.06	1. Anonymous. October 2010. Scotland, Forestry Commission. Interim Guidance on the Grant Aiding and Planting of Eucalypts in Scotland. Accessed: 18 January 2012. http://www.forestry.gov.uk/pdf/InterimEucalyptusGuidance.pdf/$FILE/InterimEucalyptusGuidance.pdf. 2. Southern, S.G. et al. 2004. Review of gene movement by bats and birds and its potential significance for eucalypt plantation forestry. *Australian Forestry* , 67(1): 44-53.	1. The seed drops directly to the ground from open pods. There are no biological vectors for seed movement. 2. Dispersal in animal droppings does not occur, although many birds eat eucalypt seed, because the seed does not survive passage through the alimentary canal of mammals and birds (Joseph 1986).

7.07	1. Anonymous. October 2010. Scotland, Forestry Commission. Interim Guidance on the Grant Aiding and Planting of Eucalypts in Scotland. Accessed: 18 January 2012. http://www.forestry.gov.uk/pdf/InterimEucalyptusGuidance.pdf/$FILE/InterimEucalyptusGuidance.pdf. 2. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions.* Berkeley: University of California Press.	No adaptations that would suggest that it could attach itself externally to animals. 1. The seed drops directly to the ground from open pods. There are no biological vectors for seed movement. 2. Relatively limited seed dispersal; planted eucalypts are very small and have no adaptions for dispersal (wings or fleshy).
7.08	1. Anonymous. October 2010. Scotland, Forestry Commission. Interim Guidance on the Grant Aiding and Planting of Eucalypts in Scotland. Accessed: 18 January 2012. http://www.forestry.gov.uk/pdf/InterimEucalyptusGuidance.pdf/$FILE/InterimEucalyptusGuidance.pdf. 2. Southern, S.G. et al. 2004. Review of gene movement by bats and birds and its potential significance for eucalypt plantation forestry. *Australian Forestry* , 67(1): 44-53.	1. The seed drops directly to the ground from open pods. There are no biological vectors for seed movement. 2. Dispersal in animal droppings does not occur, although many birds eat eucalypt seed, because the seed does not survive passage through the alimentary canal of mammals and birds (Joseph 1986).
8.01	1. House, S.M. "Reproductive biology of eucalypts." In: Eucalypt ecology: individuals to ecosystems. Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997.	1. The genus *Eucalyptus* is characterized by the frequent production of large numbers of flowers and fruits, many ovules, and relatively high seed numbers.
8.02	1. Gill, A.M. "Eucalypts and fires: interdependent or independent?" In: Eucalypt ecology: individuals to ecosystems. Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997.	1. Seed storage in the soil is less than a year (*also see Grose 1960). Any substantial store of eucalypt seed is in the canopy of the plant. 2. Eucalypt seeds do not have dormancy and seed storage in the soil lasts less than a year.
8.03	1.a.b. Little, K.M. & G.J. van den Berg. 2007. Comparison of different herbicides for single stem *Eucalyptus macarthurii* cut stump control. *Journal of Tropical Forest Science* 19(1): 13-17.	1. a. When applied to the cut surface within 15 min of felling, all herbicides (triclopyr, tryclopyr + glyphosate, metsulfuron-methyl + glyphosate [refer to article for rates]) killed 88-95% of the stumps, as compared with the control. All herbicide treatments were equally effective in reducing coppice as compared with the control. 1.b. The most suitable method of killing *E. macarthurii* stumps would be the method which is cost effective, whereby the stump is killed in a one off application and the newly planted seedlings are not damaged. All herbicide treatments were equally effective, but environmental criteria, cost constraints, restrictions regarding use and the registration of the products tested (in particular that of triclopyr + glyphosate) will determine which one is selected

8.04	1. Little, K.M. & R.A.W. Gardner. 2003. Coppicing ability of 20 Eucalyptus species grown at two high-altitude sites in South Africa. Canadian Journal of Forest Research 33:181–189. 2. GIT Forestry Consulting (http://git-forestry.com/EucalyptHighlandForests02.htm [Accessed: 8/11/2010]).	1. Vigorous ability to coppice 2. Very vigorous coppice regrowth
8.05		