

Key Words: Evaluate; Naturalized; Ornamental; Fleshy-fruit; Zoochorous fruit

**Family:** *Arecaceae*

**Taxon:** *Livistona australis*

**Synonym:** *Corypha australis* R. Br. (*basionym*)

**Common Name:** Australian cabbage palm  
 Australian fan palm  
 Cabbage Tree  
 Gippsland palm

**Questionnaire :** current 20090513      **Assessor:** Chuck Chimera      **Designation:** EVALUATE  
**Status:** Assessor Approved      **Data Entry Person:** Chuck Chimera      **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	y
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	
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	y
402	Allelopathic	y=1, n=0	n
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals	y=1, n=-1	n
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens	y=1, n=0	n
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	
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	y
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	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	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	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	n
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	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Is the species highly domesticated? No] No evidence
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Species suited to tropical or subtropical climate(s) 2-High] "Endemic to eastern Australia, in Queensland, New South Wales and Victoria."
202	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Quality of climate match data? 2-High]
203	2001. Ellison, D./Ellison, A.. Cultivated palms of the world. UNSW Press, Sydney.	[Broad climate suitability (environmental versatility)? Yes] "This widely distributed palm is native to moist temperate and subtropical forests of eastern Australia." ... "It is excellent for cool-temperate to subtropical regions and, once established, tolerates exposure to light, frosts and drought." [Temperate and subtropical]
204	2001. Ellison, D./Ellison, A.. Cultivated palms of the world. UNSW Press, Sydney.	[Native or naturalized in regions with tropical or subtropical climates? Yes] "This widely distributed palm is native to moist temperate and subtropical forests of eastern Australia."
204	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Endemic to eastern Australia, in Queensland, New South Wales and Victoria."
301	2006. Howell, C.J./Sawyer, J.W.D.. New Zealand naturalised vascular plant checklist. New Zealand Plant Conservation Network, Wellington, NZ <a href="http://www.nzpcn.org.nz">www.nzpcn.org.nz</a>	[Naturalized beyond native range? Yes] "Livistona australis" ... "Fully naturalised" [New Zealand]
301	2008. Meyer, J-Y./Lavergne, C./Hodel, D. R.. Time Bombs in Gardens: Invasive Ornamental Palms in Tropical Islands, with Emphasis on French Polynesia (Pacific Ocean) and the Mascarenes (Indian Ocean). Palms. 52: 71-83.	[Naturalized beyond native range? Yes] "Table 2. Naturalized and invasive palms in French Polynesia" ... "Livistona australis" ... "Locally naturalized (Tahiti, FP)"
302	2008. Meyer, J-Y./Lavergne, C./Hodel, D. R.. Time Bombs in Gardens: Invasive Ornamental Palms in Tropical Islands, with Emphasis on French Polynesia (Pacific Ocean) and the Mascarenes (Indian Ocean). Palms. 52: 71-83.	[Garden/amenity/disturbance weed? No] Naturalized
303	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Agricultural/forestry/horticultural weed? No] No evidence
303	2008. Meyer, J-Y./Lavergne, C./Hodel, D. R.. Time Bombs in Gardens: Invasive Ornamental Palms in Tropical Islands, with Emphasis on French Polynesia (Pacific Ocean) and the Mascarenes (Indian Ocean). Palms. 52: 71-83.	[Agricultural/forestry/horticultural weed? No] No evidence
304	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Environmental weed? No] No evidence
304	2008. Meyer, J-Y./Lavergne, C./Hodel, D. R.. Time Bombs in Gardens: Invasive Ornamental Palms in Tropical Islands, with Emphasis on French Polynesia (Pacific Ocean) and the Mascarenes (Indian Ocean). Palms. 52: 71-83.	[Environmental weed? No] No evidence
305	2003. Starr, F./Starr, K./Loope, L.L.. Livistona chinensis - Chinese fan palm - Arecaceae. USGS - Biological Resources Haleakala Field Station Maui, <a href="http://www.hear.org/starr/hiplants/reports/pdf/livistona_chinensis.pdf">http://www.hear.org/starr/hiplants/reports/pdf/livistona_chinensis.pdf</a>	[Congeneric weed? Yes] "On Maui, <i>L. chinensis</i> is commonly cultivated in residential areas and is naturalized near Iao, West Maui and from Ha'iku to Hana, East Maui. <i>L. chinensis</i> spreads from initial plantings to nearby areas and is especially prolific in moist windward areas where numerous seedlings are often observed in ditches, water ways, stream beds, gulches, and shady understory of disturbed secondary forests. Control of this ornamental palm on Maui is probably not feasible due to the widespread distribution. Perhaps it could be discouraged from being further planted in moist areas and controlled if it were detected in natural areas."

305	2008. Meyer, J.-Y./Lavergne, C./Hodel, D. R.. Time Bombs in Gardens: Invasive Ornamental Palms in Tropical Islands, with Emphasis on French Polynesia (Pacific Ocean) and the Mascarenes (Indian Ocean). <i>Palms</i> . 52: 71-83.	[Congeneric weed? Yes] "The Chinese fan palm or fountain palm ( <i>Livistona chinensis</i> ) is considered invasive in Bermuda (Kairo et al. 2003) and in Mauritius and La Réunion Islands (Moore & Guého 1984, Strahm 1993, 1999). It is naturalized in Florida ( <a href="http://www.fleppc.org/list/05List.htm">www.fleppc.org/list/05List.htm</a> ), in Hawaii (Wagner et al. 1990, 1999) where it spreads in ditches, stream beds, wet gulches and shady understory of disturbed secondary forests (Starr et al. 2003a) and on the east coast of New Caledonia in riparian forest (MacKey 1985)." ... "According to Moore and Guého (1984), about 15 palm species are widely cultivated as ornamentals in La Réunion and Mauritius. Nine of them are naturalized (Table 2), including an invasive species, the Chinese fan palm <i>Livistona chinensis</i> . On Mauritius it is widely naturalized in the secondary and the native forests (Rouillard & Guého 1981 1985, 1999; Strahm 1993, 1999) and in the southeast part of La Réunion it has spread in streambeds, shady understory of disturbed secondary forests, and in coastal areas (Fig. 5). Local land managers often mistake it for the endemic palms <i>Latania</i> spp."
401	2010. Dowe, J.L.. <i>Australian Palms: Biogeography, Ecology and Systematics</i> . Csiro Publishing, Collingwood, Australia	[Produces spines, thorns or burrs? Yes] "Leaves 35-60 in a globose crown; petiole 150-250 cm long, 10-20 mm wide, moderately ridged on the adaxial surface, margins with short single black curved spines congested in the proximal portion..."
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? No] No evidence
403	2010. Dowe, J.L.. <i>Australian Palms: Biogeography, Ecology and Systematics</i> . Csiro Publishing, Collingwood, Australia	[Parasitic? No] Arecaceae
404	2009. Carlile, N./Priddle, D.. Mortality of Adult <i>Livistona australis</i> on Cabbage Tree Island, Australia. <i>Palms</i> . 53(1): 46-50.	[Unpalatable to grazing animals? No] "An isolated population of <i>Livistona australis</i> (R. Br.) Mart. has been impacted by almost a century of browsing by European rabbits, <i>Oryctolagus cuniculus</i> , on Cabbage Tree Island, Australia."
404	2011. Priddel, D./Carlile, N./Wilkinson, I./Wheeler, R.. Eradication of exotic mammals from offshore islands in New South Wales, Australia. Pps. 337-344 in Veitch et al. (eds.) <i>Island invasives: eradication &amp; management</i> . IUCN, Gland	[Unpalatable to grazing animals? No] "Rabbits were also restricting the regeneration of many rainforest canopy species (Werren and Clough 1991). For example, seedlings of the cabbage tree palm ( <i>Livistona australis</i> ) survived only if they were caged to prevent grazing by rabbits (Carlile 2002). Lack of seedling recruitment over the 90 years that rabbits were present threatened the continued survival of this species on the island." [Seedlings would presumably be palatable to cattle, goats, sheep, deer and other grazing ungulates]
405	2008. Wagstaff, D.J.. <i>International poisonous plants checklist: an evidence-based reference</i> . CRC Press, Boca Raton, FL	[Toxic to animals? No] No evidence
406	2005. Biosecurity New Zealand. Pest watch: 18/06/2005 – 08/08/2005. <i>Biosecurity</i> . 62: 18-19.	[Host for recognized pests and pathogens? Possibly] <i>Phoma nigricans</i> (fungus) - Hosts = <i>Livistona australis</i> (Australian cabbage palm, cabbage tree palm) ... "Other PPIN hosts include kiwifruit, cayenne pepper, mandarin, feijoa and high bush blueberry"
406	2009. Hodel, D.R.. <i>Pest Notes: Palm Diseases in the Landscape</i> . UC ANR Publication 74148. UC Statewide IPM Program, University of California, Davis, CA	[Host for recognized pests and pathogens? No] Australian fountain palm ( <i>Livistona australis</i> ) = Mostly Disease Resistant
406	2010. Dowe, J.L.. <i>Australian Palms: Biogeography, Ecology and Systematics</i> . Csiro Publishing, Collingwood, Australia	[Host for recognized pests and pathogens? No] No evidence
406	2012. Shoot Gardening. <i>Livistona australis</i> (Australian fan palm). <a href="http://www.shootgardening.co.uk/plant/livistona-australis">http://www.shootgardening.co.uk/plant/livistona-australis</a>	[Host for recognized pests and pathogens? No] "Pests: Generally pest free. Diseases: Generally disease free"
407	2000. Haynes, J./McLaughlin, J.. <i>Edible Palms and Their Uses - Fact Sheet MDCE-00-50-1</i> . University of Florida IFAS Ext., Homestead, FL <a href="http://miami-dade.ifas.ufl.edu/old/programs/urbanhort/publications/PDF/EdiblePalms.pdf">http://miami-dade.ifas.ufl.edu/old/programs/urbanhort/publications/PDF/EdiblePalms.pdf</a>	[Causes allergies or is otherwise toxic to humans? No] "Australian fan palm (solitary - Australia). Young tender leaves edible (non-destructive)." [No evidence]
407	2008. Wagstaff, D.J.. <i>International poisonous plants checklist: an evidence-based reference</i> . CRC Press, Boca Raton, FL	[Causes allergies or is otherwise toxic to humans? No] No evidence
408	2010. Dowe, J.L.. <i>Australian Palms: Biogeography, Ecology and Systematics</i> . Csiro Publishing, Collingwood, Australia	[Creates a fire hazard in natural ecosystems? No] "Grows in moist areas of open forests as a subcanopy element or canopy emergent, occurring in large and small colonies, small groups or scattered individuals, often locally common, 0-1000 m asl ..." [(May depend on habitat, but no evidence)]

409	2003. Riffle, R.L./Craft, P.. An encyclopedia of cultivated palms. Timber Press, Portland, OR.	[Is a shade tolerant plant at some stage of its life cycle? Possibly No] "The palm needs sun from youth to old age."
409	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Is a shade tolerant plant at some stage of its life cycle? Possibly] Grows in moist areas of open forests as a subcanopy element or canopy emergent,..." [Subcanopy tree presumably shade tolerant]
409	2012. Plants for a Future Database. Livistona australis. <a href="http://www.pfaf.org/user/Plant.aspx?LatinName=Livistona+australis">http://www.pfaf.org/user/Plant.aspx?LatinName=Livistona+australis</a>	[Is a shade tolerant plant at some stage of its life cycle? Possibly] "It can grow in semi-shade (light woodland) or no shade. It requires dry or moist soil."
410	1998. Rodd, A.N.. Revision of Livistona (Arecaceae) in Australia. Telopea. 8(1): 49-153.	[Tolerates a wide range of soil conditions? Yes] "Ecology: occurs in a wide range of forest types, but most commonly in swamp-forest associated with species such as Melaleuca quinquenervia and Eucalyptus robusta, rainforest margins, or gallery-rainforest. In such wet situations it appears to be indifferent to soil type."
410	2003. Riffle, R.L./Craft, P.. An encyclopedia of cultivated palms. Timber Press, Portland, OR.	[Tolerates a wide range of soil conditions? Yes] "It grows in a range of soils but is indigenous to regions with fertile soil and plenty of year-round moisture, under which condition it looks its best."
411	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Climbing or smothering growth habit? No] "Functionally dioecious palm. Stem to 25 m tall, 25-40 cm dbh"
412	2006. Searle, J./Maden, S.. Flora Survey Report South Stradbroke Island Management Area. Environmental Planning & Sustainable Development Section: Gold Coast City Council, Gold Coast, AU	[Forms dense thickets? Yes] "Localised patches of dense Cabbage Palm (Livistona australis) form swamp forest thickets in low lying areas, often with a dense litter layer of palm fronds and little other under-storey, and typically interspersed with a sub-canopy of mesic tree species such as Celery Wood (Polyscias elegans), Pink Euodia (Melicope elleryana) and Lilly-pillies (Syzygium oleosum, S. leuhmanii)."
412	2009. Dowe, J.L.. A Taxonomic Account of Livistona R.Br. (Arecaceae). Gardens' Bulletin Singapore. 60(2): 185-344.	[Forms dense thickets? Possibly] "Often locally common and may grow in large colonies."
501	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Aquatic? No] "Functionally dioecious palm. Stem to 25 m tall, 25-40 cm dbh" [Terrestrial]
502	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Grass? No] "Functionally dioecious palm. Stem to 25 m tall, 25-40 cm dbh" [Arecaceae]
503	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Nitrogen fixing woody plant? No] Arecaceae
504	2003. Riffle, R.L./Craft, P.. An encyclopedia of cultivated palms. Timber Press, Portland, OR.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "This is a solitary-trunked species. Mature trunks are straight as an arrow and can grow to heights of 100 feet in habitat but are generally no more than half that under cultivation."
601	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Evidence of substantial reproductive failure in native habitat? No] "Conservation status - No present threats."
602	2001. Ellison, D./Ellison, A.. Cultivated palms of the world. UNSW Press, Sydney.	[Produces viable seed? Yes] "Mature round fruits are red to black and seed germinates readily within 2 to 4 months."
603	2009. Dowe, J.L.. A Taxonomic Account of Livistona R.Br. (Arecaceae). Gardens' Bulletin Singapore. 60(2): 185-344.	[Hybridizes naturally? Possibly] "Livistona decora is most closely related to L. australis, but is readily distinguished by the deeply segmented leaves and pendulous segment apices. The range of these species overlaps in the Fraser Is./Rainbow Beach area of southeastern Queensland, and it may be that hybridisation has occurred as some individuals in that area are difficult to assign to either species."
604	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Self-compatible or apomictic? No] "Functionally dioecious palm."
605	1994. Zomlefer, W.B.. Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill & London	[Requires specialist pollinators? No] "Although early monographers assumed that many palms were anemophilous, the flowers actually are predominantly entomophilous. Common insect vectors include beetles, Hymenoptera, and flies; bats and hummingbirds also have been noted (Henderson 1986)."
605	2009. Dowe, J.L.. A Taxonomic Account of Livistona R.Br. (Arecaceae). Gardens' Bulletin Singapore. 60(2): 185-344.	[Requires specialist pollinators? No] "In a review of pollination in palms, Henderson (1986) reported that Livistona flowers possessed septal nectaries and that bee pollination was possible."

605	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Requires specialist pollinators? No] "Inflorescences 140-250 cm long; partial inflorescences 6-9, branched to 5 orders; peduncular bract lacking; rachis bracts loosely tubular, densely floccose; rachillae 5-25 mm long, glabrous. Flowers solitary or in clusters of 2-4, funnel-shaped in bud; sepals triangular, 1.2-2 mm long, fleshy, acute, white-cream to pale yellow; petals triangular to ovate, 2.0-3.5 mm long, fleshy, subacute to obtuse, white cream to pale yellow; stamens c. 2.5 mm long." [No evidence]
606	2003. Riffle, R.L./Craft, P.. An encyclopedia of cultivated palms. Timber Press, Portland, OR.	[Reproduction by vegetative fragmentation? No] "This is a solitary-trunked species. Mature trunks are straight as an arrow and can grow to heights of 100 feet in habitat but are generally no more than half that under cultivation." [No evidence]
606	2010. New Zealand Plant Conservation Network. Flora Details - <i>Livistona australis</i> . <a href="http://nzpcn.org.nz/flora_details.asp?ID=3424">http://nzpcn.org.nz/flora_details.asp?ID=3424</a>	[Reproduction by vegetative fragmentation? No] "Reproduction Exclusively by seed"
607	2009. Carlile, N./Priddle, D.. Mortality of Adult <i>Livistona australis</i> on Cabbage Tree Island, Australia. <i>Palms</i> . 53(1): 46-50.	[Minimum generative time (years)? 4+] "From flower scars on the trunks it was determined that reproductive height was reached at 5.2 m (s.e. 0.19, n = 28) or at 185 years of age."
607	2012. Shoot Gardening. <i>Livistona australis</i> (Australian fan palm). <a href="http://www.shootgardening.co.uk/plant/livistona-australis">http://www.shootgardening.co.uk/plant/livistona-australis</a>	[Minimum generative time (years)? 20+] "20-50 years to maturity"
701	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit globose, 12-22 mm diam.; epicarp reddish-brown to dull black, occasionally glaucous, with scattered lenticular pores; suture line extends almost the length of the fruit; pedicel 2-3 mm long. Seed globose, 10-16 mm wide; eophyll 5 ribbed." [Unlikely. No evidence, and large fruits & seeds lack a means of external attachment]
702	2003. Riffle, R.L./Craft, P.. An encyclopedia of cultivated palms. Timber Press, Portland, OR.	[Propagules dispersed intentionally by people? Yes] "The Australian fan palm has nobility and, because of the pendent leaf segments, gracefulness. Its straight columnar trunk invites its use as an avenue tree, planted single file along one or both sides."
703	2010. New Zealand Plant Conservation Network. Flora Details - <i>Livistona australis</i> . <a href="http://nzpcn.org.nz/flora_details.asp?ID=3424">http://nzpcn.org.nz/flora_details.asp?ID=3424</a>	[Propagules likely to disperse as a produce contaminant? No] "Dispersal - Bird dispersed and by gravity"
704	2010. New Zealand Plant Conservation Network. Flora Details - <i>Livistona australis</i> . <a href="http://nzpcn.org.nz/flora_details.asp?ID=3424">http://nzpcn.org.nz/flora_details.asp?ID=3424</a>	[Propagules adapted to wind dispersal? No] "Dispersal - Bird dispersed and by gravity"
705	2009. Dowe, J.L.. A Taxonomic Account of <i>Livistona</i> R.Br. (Arecaceae). <i>Gardens' Bulletin Singapore</i> . 60(2): 185-344.	[Propagules water dispersed? Potentially] "Grows in moist areas of open forest, swamp forest, moist sclerophyll forests, along stream banks and in rainforest, 0-1000 m alt." [Distribution along streams suggests fruits or seeds may be moved by water]
706	1996. Bass, D.A.. Pied Currawongs and Invading Ornamentals: What's Happening in Northern New South Wales. Pp 362-365 in Shepherd, R.C.H. (ed.). Eleventh Australian Weeds Conference Proceedings.	[Propagules bird dispersed? Yes] "Pied currawongs ( <i>Strepera graculina</i> ) have long been recognized as important seed dispersal vectors of introduced ornamental plants: in particular the invasion of <i>Ligustrum</i> and <i>Pyracantha</i> species (Mulvaney 1986, Bass 1989, 1990). Pied currawongs are large gregarious omnivorous birds that congregate during cooler months in large feeding flocks." ... "Appendix 1. Seeds collected from regurgitated pied currawong pellets." [Livistona australis = 30 seeds]
706	2007. Guix, J.C.. The role of alien plants in the composition of fruit-eating bird assemblages in Brazilian urban ecosystems. <i>Orsis</i> . 22: 87-104.	[Propagules bird dispersed? Yes] "Table 3. Plant species dispersed by birds and found colonizing spontaneously in 11 urban areas of Brazil" ... "Many of the feeding bouts in the study areas came from thrushes ( <i>Turdus</i> spp., Turdidae). Although the thrush species found in urban areas are relatively small (40-83 g) and short billed they have wide gapes and can ingest relatively large fleshy fruits whole, such as those of <i>Syagrus romanzoffiana</i> , <i>Livistona australis</i> (Arecaceae), <i>Eugenia uniflora</i> (Myrtaceae) <i>Coffea arabica</i> (Rubiaceae), and <i>Solanum pseudocapsicum</i> (Solanaceae). When the seeds ingested are relatively large they are regurgitated and not pass through the digestive tract."
706	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Propagules bird dispersed? Presumably Yes] "Fruit globose, 12-22 mm diam.; epicarp reddish-brown to dull black, occasionally glaucous, with scattered lenticular pores; suture line extends almost the length of the fruit; pedicel 2-3 mm long. Seed globose, 10-16 mm wide; eophyll 5-ribbed."

706	2010. New Zealand Plant Conservation Network. Flora Details - <i>Livistona australis</i> . <a href="http://nzpcn.org.nz/flora_details.asp?ID=3424">http://nzpcn.org.nz/flora_details.asp?ID=3424</a>	[Propagules bird dispersed? Yes] "Well naturalised on Kawau Island, otherwise mainly confined to the vicinity of plant specimens in urban areas. This is because the fruits are of sufficient size that most birds cannot consume them. However, wood pigeon/Kereru ( <i>Hemiphaga novaeseelandiae</i> ) can and do distribute fruit. This is possibly how it has become so well established on Kawau Island."
707	2009. Dowe, J.L.. A Taxonomic Account of <i>Livistona</i> R.Br. (Arecaceae). Gardens' Bulletin Singapore. 60(2): 185-344.	[Propagules dispersed by other animals (externally)? No] "Fruit globose, 12- 22 mm diam., dull reddish-brown to black, occasionally glaucous; epicarp with scattered lenticellular pores; suture line extends almost the length of the fruit; pedicel 2-3 mm long. Seed globose, 10-16 mm wide. Eophyll 5-ribbed." [Possible, but unlikely. Although seeds lack a means of external attachment, introduced rodents may move seeds by carrying them externally for consumption. Seeds that escape predation may be effectively dispersed]
708	2001. Parry-Jones, K.A./Augee, M.L.. Factors affecting the occupation of a colony site in Sydney, New South Wales by the Grey-headed Flying-fox <i>Pteropus poliocephalus</i> (Pteropodidae). Austral Ecology. 26: 47-55.	[Propagules survive passage through the gut? Yes] "Table 1. Food items found in droppings of Grey-headed Flying-foxes at the Gordon colony site, New South Wales (1986-1989)" [Includes fruit of <i>Livistona australis</i> . Seeds presumably passed through gut]
708	2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia	[Propagules survive passage through the gut? Presumably Yes] "Fruit globose, 12-22 mm diam.; epicarp reddish-brown to dull black, occasionally glaucous, with scattered lenti-cellular pores; suture line extends almost the length of the fruit; pedicel 2-3 mm long. Seed globose, 10-16 mm wide; eophyll 5-ribbed."
801	2009. Dowe, J.L.. A Taxonomic Account of <i>Livistona</i> R.Br. (Arecaceae). Gardens' Bulletin Singapore. 60(2): 185-344.	[Prolific seed production (>1000/m <sup>2</sup> )? No. Unlikely] "fruit single-seeded" [Genus description] "Trunk to 25 m tall," ... "Inflorescences unbranched at the base, not sexually dimorphic, 140-250 cm long, not extending beyond the limit of the crown, branched to 5 orders; partial inflorescences 6-9; peduncular bract(s) lacking; rachis bracts loosely sheathing, densely floccose; rachillae 5-25 mm long, glabrous. Flowers solitary or in clusters of 2-4, funnel-shaped, white to cream to pale yellow; sepals triangular, 1.2-2 mm long, fleshy, acute; petals triangular to ovate, 2-3.5 mm long, fleshy, subacute to obtuse; stamens ca 2.5 mm long. Fruit globose, 12- 22 mm diam., dull reddish-brown to black, occasionally glaucous; epicarp with scattered lenticellular pores; suture line extends almost the length of the fruit; pedicel 2-3 mm long. Seed globose, 10-16 mm wide. Eophyll 5-ribbed." [Fruits relatively large and single-seeded. No evidence that seed densities reach such high numbers]
802	1985. Ellis, R.H./Hong, T.D./Roberts, E.H.. Chapter 53. Palmaceae in Handbook of Seed Technology for Genebanks - Volume II. Compendium of Specific Germination Information and Test Recommendations. International Board for Plant Genetic Resources, Rome	[Evidence that a persistent propagule bank is formed (>1 yr)? No] "Although there can be a delay of 3 to 4m before the seeds start to germinate (8,11), whole ripe fruits tested in a peat/perlite (1:1) medium at 24° to 28°C are reported to germinate readily (3)."
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species
804	1995. Gartner, B.L.. Plant stems: physiology and functional morphology. Academic Press, San Diego, CA	[Tolerates, or benefits from, mutilation, cultivation, or fire? Possibly No] "Different species vary in their ability to recover after fire. Given the same extent and locations of injury, much of this variation in recovery may be explained by distribution of the buds." ... "In type A plant, buds are absent from the nonfoliated aerial stems; they may, however, be present in the foliated zones of stems either as terminal buds only (e.g., in the single-stemmed palm, <i>Livistona australis</i> ...) ... [Fig. 4, page 336 indicates that Type A plants, such as <i>L. australis</i> , are killed by low intensity and high intensity fires]
804	2009. Kubiak, P.J.. Fire responses of bushland plants after the January 1994 wildfires in northern Sydney. Cunninghamia. 11(1): 131-165.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Possibly Yes] "Appendix 1. Observations on fire responses (after 100% leaf scorch) of vascular plants in the Lane Cove River (LCR) (observations mainly Jan 1994 – Oct 1999) and Narrabeen Lagoon (NL) (Mar – Oct 1994) catchments, following the fires of January 1994." [ <i>Livistona australis</i> listed as R = majority of adult plants resprouted after the fires]
804	2012. The Royal Botanic Gardens & Domain Trust. <i>Livistona australis</i> . <a href="http://www.rbgsyd.nsw.gov.au/education/Resources/bush_foods/Livistona_australis">http://www.rbgsyd.nsw.gov.au/education/Resources/bush_foods/Livistona_australis</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire? Possibly No] "The growing tip of the palm is edible; however, harvesting of this tip kills the plant because it cannot regrow from another point"
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]