**Family:** Archontophoenix purpurea

**Common Name:** purple king palm
Mount Lewis king
purple piccabean palm

<table>
<thead>
<tr>
<th>Questionnaire :</th>
<th>Status:</th>
<th>Data Entry Person:</th>
<th>Designation:</th>
<th>WRA Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>current 20090513</td>
<td>Assessor Approved</td>
<td>Chuck Chimera</td>
<td>EVALUATE</td>
<td>1</td>
</tr>
</tbody>
</table>

101 Is the species highly domesticated?  
\[ y=-3, n=0 \]  

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)  
\[ \text{High} \]

202 Quality of climate match data  
(0-low; 1-intermediate; 2-high)  
\[ \text{High} \]

203 Broad climate suitability (environmental versatility)  
\[ y=1, n=0 \]  

204 Native or naturalized in regions with tropical or subtropical climates  
\[ y=1, n=0 \]  

205 Does the species have a history of repeated introductions outside its natural range?  
\[ y=-2, n=-1, n=0 \]

301 Naturalized beyond native range  
\[ n=1 \star \text{multiplier (see Appendix 2)}, n\text{= question 205} \]

302 Garden/amenity/disturbance weed  
\[ n=0, y=1 \star \text{multiplier (see Appendix 2)} \]

303 Agricultural/forestry/horticultural weed  
\[ n=0, y=2 \star \text{multiplier (see Appendix 2)} \]

304 Environmental weed  
\[ n=0, y=2 \star \text{multiplier (see Appendix 2)} \]

305 Congeneric weed  
\[ n=0, y=1 \star \text{multiplier (see Appendix 2)} \]

401 Produces spines, thorns or burrs  
\[ y=1, n=0 \]

402 Allelopathic  
\[ y=1, n=0 \]

403 Parasitic  
\[ y=1, n=0 \]

404 Unpalatable to grazing animals  
\[ y=1, n=-1 \]

405 Toxic to animals  
\[ y=1, n=0 \]

406 Host for recognized pests and pathogens  
\[ y=1, n=0 \]

407 Causes allergies or is otherwise toxic to humans  
\[ y=1, n=0 \]

408 Creates a fire hazard in natural ecosystems  
\[ y=1, n=0 \]

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)  
\[ y=1, n=0 \]
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</table>
| 411 | Climbing or smothering growth habit | y=1, n=0  
| 412 | Forms dense thickets | y=1, n=0  
| 501 | Aquatic | y=5, n=0  
| 502 | Grass | y=1, n=0  
| 503 | Nitrogen fixing woody plant | y=1, n=0  
| 504 | Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers) | y=1, n=0  
| 601 | Evidence of substantial reproductive failure in native habitat | y=1, n=0  
| 602 | Produces viable seed | y=1, n=-1  
| 603 | Hybridizes naturally | y=1, n=-1  
| 604 | Self-compatible or apomictic | y=1, n=-1  
| 605 | Requires specialist pollinators | y=-1, n=0  
| 606 | Reproduction by vegetative fragmentation | y=1, n=-1  
| 607 | Minimum generative time (years) | 1 year = 1, 2 or 3 years = 0, 4+ years = -1  
| 701 | Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas) | y=1, n=-1  
| 702 | Propagules dispersed intentionally by people | y=1, n=-1  
| 703 | Propagules likely to disperse as a produce contaminant | y=1, n=-1  
| 704 | Propagules adapted to wind dispersal | y=1, n=-1  
| 705 | Propagules water dispersed | y=1, n=-1  
| 706 | Propagules bird dispersed | y=1, n=-1  
| 707 | Propagules dispersed by other animals (externally) | y=1, n=-1  
| 708 | Propagules survive passage through the gut | y=1, n=-1  
| 801 | Prolific seed production (>1000/m2) | y=1, n=-1  
| 802 | Evidence that a persistent propagule bank is formed (>1 yr) | y=1, n=-1  
| 803 | Well controlled by herbicides | y=-1, n=1  
| 804 | Tolerates, or benefits from, mutilation, cultivation, or fire | y=1, n=-1  
| 805 | Effective natural enemies present locally (e.g. introduced biocontrol agents) | y=-1, n=1  

**Designation:** EVALUATE  
**WRA Score:** 1
<table>
<thead>
<tr>
<th>ID</th>
<th>Source</th>
<th>Question</th>
<th>Answer</th>
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</thead>
<tbody>
<tr>
<td>102</td>
<td>2012. WRA Specialist. Personal Communication.</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>103</td>
<td>2012. WRA Specialist. Personal Communication.</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>201</td>
<td>2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia</td>
<td>Species suited to tropical or subtropical climate(s) 2- High</td>
<td>Endemic to the Mt Finnigan, Mt Spurgeon and Mt Lewis massif, Queensland, on soils derived from weathered granite in rainforest, 400-1200 m asl…</td>
</tr>
<tr>
<td>204</td>
<td>2010. Dowe, J.L.. Australian Palms: Biogeography, Ecology and Systematics. Csiro Publishing, Collingwood, Australia</td>
<td>Native or naturalized in regions with tropical or subtropical climates? Yes</td>
<td>Endemic to the Mt Finnigan, Mt Spurgeon and Mt Lewis massif, Queensland, on soils derived from weathered granite in rainforest, 400-1200 m asl…</td>
</tr>
<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title and Source</td>
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Archontophoenix purpurea (Areccaceae)

April 2012

Palmpedia. Archontophoenix purpurea.


A shade tolerant plant at some stage of its life cycle? 

Archontophoenix purpurea looks best grown in partial shade, but will handle full sun with an abundance of water and can even sit happily in fairly wet, poor draining soils.
**Archontophoenix purpurea** (Arecaceae)


[Tolerates a wide range of soil conditions? No] "...on soils derived from weathered granite in rainforest..."


[Tolerates a wide range of soil conditions?] "Soil pH requirements: 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral) 7.6 to 7.8 (mildly alkaline)"


[Tolerates a wide range of soil conditions? No] "Soil Moisture: constantly moist to occasionally flooded. Soil: enriched soil, mildly acidic to mildly alkaline"


[Climbing or smothering growth habit? No] "It is tall, with a single trunk, an open crown and leaves that arch elegantly from the purplish crownshaft."


[Forms dense thickets? No evidence] "The palms at this site (Archontophoenix purpurea) are characterized by tall smooth trunks. Palms represented only a few stems on the 1600 m2 plot, therefore no effort was made to separate palms from other species in the analysis."


[Forms dense thickets? No evidence] "Endemic to the Mt Finnigan, Mt Spurgeon and Mt Lewis massif, Queensland, on soils derived from weathered granite in rainforest, 400 1200 m asl..."


[Aquatic? No] "...on soils derived from weathered granite in rainforest, 400 1200 m asl..." [Terrestrial]


[Grass? No] Arecaceae


[Nitrogen fixing woody plant? No] Arecaceae


[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "It is tall, with a single trunk, an open crown and leaves that arch elegantly from the purplish crownshaft."


[Produces viable seed? Yes] "Ripe fruits are red and fresh seed germinates in 8-12 weeks, but requires bottom heat."


[Produces viable seed? Yes] "Propagation Methods: From seed; direct sow outdoors in fall"


[Hybridizes naturally? Unknown] "Genera known to readily hybridize in gardens include Chamaedorea, Latania, Pritchardia, Archontophoenix, and Phoenix."


[Self-compatible or apomictic? Unknown. Related A. cunninghamiana reported to be self fertile] "Bangalow palm has many attributes that potentially make it a high weed threat to New Zealand forests (open and shaded areas). These include: monococious and self fertile; long lived (> 100 yrs); sets copious seed; seed readily germinates in 1-3 months (Jones 1996)"


[Requires specialist pollinators? No evidence based on floral morphology] "Inflorescence 50-135 x 60-65 cm, axes light green becoming dark green. Prophyll to 140 x 26 cm, glabrous or covered with reddish brown scales. Peduncular bract attached 5 cm above prophyll. 70-78 x 9-11 cm, glabrous and fibrous. Third bract 10-11 x 2-2.3 cm, acuminate. Peduncle 20-25 x 5.5-9(-15) cm wide, with scattered brown scales. Rachis 60 65 cm long, angular in lower portion. Rachillae up to 111 per inflorescence and up to 85 cm long. Triads borne on basal ?- ? Of rachillae with the paired staminate flowers distally. Flowers cream fused green. Floral bracts prominent, sharp and angular. Staminate flowers 6-7 x 15-17. Petals 8-11 x 3 5 mm, covered in small brown scales especially on inner surface. Stamens 20 35 and up to 9 mm long, filaments curved, purple/brown with fine brown scales. Pistillode as long as stamens, with shallow longitudinal ridges, with a broad, lobed apex. Pistillate flowers globose, up to 6.5 mm long."
Archontophoenix purpurea (Arecaceae)


<table>
<thead>
<tr>
<th>Reference</th>
<th>Source</th>
<th>Tolerates, or benefits from, mutilation, cultivation, or fire?</th>
<th>Effective natural enemies present locally (e.g. introduced biocontrol agents)?</th>
</tr>
</thead>
</table>
Summary of Risk Traits

High Risk / Undesirable Traits
- Thrives in sub-tropical climates
- Broad climate suitability
- Related species have naturalized or become invasive
- Fleshy-fruits presumably adapted for dispersal by birds and other frugivorous animals

Low Risk / Desirable Traits
- No records of naturalization or invasiveness elsewhere
- Unarmed (no spines, thorns or burrs)
- Non-toxic
- Relatively slow growth rate and long time to maturity
- Landscaping and ornamental value
- Seeds may be recalcitrant and limit the ability of forming a soil seed bank