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The Royal Botanic Gardens Melbourne— 150 Years

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This year marks the 150th anniversary of the founding of the Royal Botanic Gardens, Melbourne, Australia. This magnificent park ranks as one of the finest public gardens in the world, attracting more than a million visitors every year. In this compact area of 39 hectares (87 acres) are 12,200 species of plants, from the tallest trees to the smallest perennials. The park has much to offer the visitor—a superb scientific collection, with unusual and exotic plants from all over the world. It can be seen as a classical Victorian garden, complete with rose gardens, ornamental lakes, and swans. It is a beautiful landscaped park, perfect for picnics or simply walking around in, to enjoy the beauty of nature.

Palms are prominent throughout, as feature plantings and numerous scattered individuals. While there is not the large number of species found in other botanical gardens such as in Townsville or Brisbane, the Melbourne collection is impressive all the same. Around 40 species are grown, mainly from cooler temperate areas, but with some surprising exceptions. The age of the gardens combined with the mild climate have allowed some specimens to grow to enormous size. In parts of the park, some stands of palms are self-reproducing, re-creating a near natural setting.

A botanical garden has many aims: education, to teach of the great diversity of the earth's flora; conservation, to grow rare species for their protection, and raise awareness of their condition; utility, to grow plants useful to man; and aesthetics—to grow plants because they are beautiful or unusual. The gardens' founders had all these in mind when planning began more than a century and a half ago.

Note: Some background information was drawn from Joan Law-Smith's "The Royal Botanic Gardens Melbourne," Maud Gibson Trust, 1984.

Location—Climate—History

Melbourne is the most southerly city on the Australian continent; at 38°S it is as far from the equator as San Francisco, or Norfolk, Virginia. Occasional extremes of temperature are experienced. In January, hot dry winds from the interior can drive temperatures to 42°C (108°F). This can change very abruptly, as cold fronts push through bringing cool, damp, windy weather from the Southern Ocean. July is the coldest month, with winter days seldom rising above 14°C (57°F) and nights occasionally falling to near freezing. Frost is virtually unknown, as the gardens are within a mile of the sea. Rainfall is 650 mm (26") annually, spread fairly evenly throughout the year. Overall the conditions are very favorable to the gardener, and our city is a very green one.

Melbourne, the state capital of Victoria, was founded in 1835 as a free colony, to extend Britain's claim over the newly settled continent. It has since grown to a modern city of three million people. Despite its size, it is an attractive city, due in part to the mild climate, the preservation of many charming Victorian buildings, and the large network of inner city parks of which the Botanic Gardens are the centerpiece.

Much credit is due to the city founders who began the park system within a decade of the city's founding. On February 25, 1846 the dedication ceremony took place at the chosen site on the south bank of the Yarra river, almost opposite the city center. The area was originally scrub and swampland, dominated by the indigenous River Red Gum, some of which are still standing.

Baron Ferdinand von Mueller, Director from 1857 to 1873, is acknowledged as the father of the gardens. A government botanist and energetic collector, he described many Australian species, including palms, and is honored with species of *Livistona* and *Calamus* named after him. Mueller's focus was science and education. His exotic intro-



1. This massive *Jubaea chilensis*, planted in 1903, has a trunk circumference of 3.1 m. 2. Inside the glasshouse, *Dypsis lutescens* leans over a pond filled with the giant Amazonian lily pad. 3. *Linospadix palmeriana*, normally found only in lowland tropical rainforests of Queensland. 4. *Brahea armata* in corner of the Palm Lawn.



5. The Palm Lawn: *Hedyscpe* grows beneath a mixture of *Phoenix*, *Livistona*, *Sabal*, and *Butia* species. 6. The Fern Gully: a temperate rainforest recreated with stunning effect. Shade-loving palms and ferns dominate.



7. Grey-headed flying foxes roosting in the crown of a Bangalow palm, much to its distress. 8. A large clump of *Phoenix reclinata*, this one planted in 1903 by Lord Tennyson. Many species of the genus are grown, they thrive in the relatively dry Melbourne climate.

ductions are numerous, the most notable being the conifer collection, many individuals of which survive today as his living legacy.

He also founded the National Herbarium, an important center for botanical studies. This houses a library and more than a million pressed dried specimens. Australian native plants predominate, notable among these are historical collections by Sir Joseph Banks and others in the epic voyage of the *Endeavour* under Captain James Cook.

Mueller was succeeded as director from 1873 to 1909 by William Guilfoyle, a brilliant landscaper, who made the gardens what they are today, a classic combination of beauty, elegance, and science. He rejected the then-popular concept that a botanical garden should be divided up as in rooms of a mansion. His emphasis was on scenic vistas; he introduced sweeping lawns, ringed by curving garden beds, ornamental lakes, stands of tall trees

with a network of winding pathways. Towering avenues of elms and oaks are his legacy; he was also the first to introduce major plantings of palms.

The Gardens Today

A free visitor's map shows the park divided into 10 great lawns, bounded by stands of forest, gardens beds, with four separate lakes, formed from old billabongs (lagoons) of the nearby Yarra river. On entering the main gate, the visitor passes the National Herbarium. The building has been recently modernized and now houses an information center, auditorium, gift shop, and a free plant identification service. Just beyond it, is the Western Lawn, a large formal garden with many mature palm specimens nearly a century old. Accurate, informative identification of plants greatly enhances the enjoyment of any botanical garden.

The majority of plants are identified; new markers are being introduced that list common name, botanical name and family, and place of origin. Many large trees have plaques describing their age and occasion of their planting, reflecting a tradition still popular of planting a tree to mark an historical event. Among the names are several members of visiting royalty, politicians, and other dignitaries. Palms were often planted on these occasions (Fig. 8).

The largest palm is a massive *Jubaea chilensis*, over 12 m tall (Fig. 1). Planted in 1903, its trunk exceeds 3 m around, and may be the stoutest of all palms. Around April the large yellow fruits are scattered about the lawn, the nuts inside are perfect miniature coconuts (right down to the three "eyes"). Nearby are *Butia capitata*, with masses of edible sweet-smelling fruits, and *Trachycarpus fortunei*, that toughest of all palms. A tall *Livistona decipiens* seems out of place at this latitude; the species is found only in a narrow coastal strip of Queensland, nearly 2,000 km farther north.

As one progresses farther into the park, specialty gardens of great variety attract the visitor; space permits mentioning only a few. Lovers of flowers will always find something in season, be it summer roses and hibiscus, spring magnolias and rhododendrons, or winter camellias; at certain spots the ground is a carpet of petals. Along one winding path is the Victorian Herb Garden. The rule against picking flowers or leaves is relaxed a little here, allowing the visitor to sample the collection of traditional kitchen and medicinal herbs.

The eastern part of the park is on more open, drier and more sandy ground, with correspondingly different plantings. The Eastern Lawn features many hardy palms from drier climates. Both species of *Washingtonia* grow high above the large clumps of *Chamaerops*, *Butia*, and *Phoenix* species. Cycad enthusiasts will be interested in the recently planted Cycad Bed, with more than 20 species. Many old specimens of *Lepidozamia peroffskyana* and *Macrozamia communis* can also be found around the park.

The Cactus Garden looks quite at home, though few visitors realize these plants are native only to the Americas. Interestingly, here once stood a short-lived "Palm House," a small version of the original in Kew Gardens in London. It has been replaced by more conventional glasshouses, which are crammed with exotic tropicals: pitcher plants, orchids, coffee and cocoa plants, as well as two dozen palm species (Fig. 2).

There are feature plantings of Australian native plants—generally drab and unassuming, but occasionally surprising such as *Banksia* with their unusual flowers and colorful bottle-brushes (*Callistemon* sp.). Native palms are found everywhere. The most common is *Livistona australis*, which is fitting as it is the only palm native to our state. They grow superbly, whether as specimens in open lawns or in dense forest. Other natives are *Archontophoenix cunninghamiana*, a graceful cold-hardy feather palm, and two species of *Linospadix*. *L. monostachya* grows 3 m high, the tallest I've ever seen; the other, surprisingly, is *L. palmeriana* (Fig. 3).

There is a formally named Palm Lawn, with more than a dozen species, perhaps planted a little too close together (Fig. 5). This little knoll forms a natural stage; in summer lights are strung from the palm trunks and stage productions of Shakespeare's *A Mid-Summer Night's Dream* are held. Species here include *Livistona mariae*, a native of the desert valleys of the Australian interior. Its juvenile leaves are a bright red color. Unfortunately the species does not thrive here—it does not like the cool winters. In contrast is *Hedyscepe canterburyana*, less than 10 years in the ground, and already six feet high. This palm from Lord Howe Island is virtually unknown in cultivation; it appears well adapted to cooler climates. There is a pair of *Sabal bermudana* with cigarlike trunks. In one corner is a group of *Brahea armata* (Fig. 4), a beautiful palm with blue-green leaves and a finely ringed trunk. It also has bizarre inflorescence, and the flowers are carried on huge stalks several meters long.

A City Rainforest

At the center of the park lies the jewel of the gardens—The Fern Gully. Here, in a valley formed by a tiny stream, a mature temperate rainforest has been established. On entering you are in another world—cool, damp, shady, and lush. This has been achieved by a mixture of canopy-forming trees from many parts of the world, with majestic height and spreading branches. Beneath are various native and exotic ferns, and other moisture- and shade-loving plants, such as bamboos, orchids, and palms (Fig. 6).

Trunks of *Livistona* and *Archontophoenix* crowd you, their crowns often out of sight above. Both species flower and fruit freely and the ground is carpeted with seedlings. As in the wild, few of

these will survive for long, due to crowding and low light, but the lucky few that germinate in a slightly brighter spot grow rapidly. By and large these are left undisturbed here, and plants of all ages can be seen in a near-natural setting. Both *Howea* species grow here too, though they rarely flower or fruit, not being tall enough to obtain the open sunlight they require. Some very impressive clumps of *Rhapis* can be seen, some 5 m tall. Between the palm trunks are a few clumps of *Chamaedorea* sp.

High above in the canopy reside the gardens' most famous residents, a large colony of fruit bats. Though officially nocturnal, they seem to be light sleepers. They constantly disturb each other's sleep with their continuous chattering and squealing. Some of their favorite roosting spots are in the crowns of palms, giving them a bizarre appearance (Fig. 7). The bats spend all but the coldest months of the year here, feeding on flowers and fruits from trees in the park and nearby back yards.

The Fern Gully is a place of great peace and beauty—and only a mile from the office towers and traffic of the city center. In summer, its shady paths are a cool refuge from summer heat. In winter, when visitors are few, and the only sound is the flowing stream and the silent dripping of rain, it is truly a magical place, my favorite spot in all of Melbourne.

I've only had time to mention some of the highlights of these beautiful gardens. I hope I've been able to convince palm enthusiasts in Australia and overseas to put Melbourne on your list of places to visit. In 1996 the visitor can look forward to many special birthday events, from twilight concerts and stage events, to sculpture exhibits. Whether you take in these events, or simply stroll through the park and admire Nature's gifts, you will certainly enjoy your visit to the Royal Botanic Gardens, Melbourne.

Appendix. *Palm species growing in the RBG Melbourne.*

Archontophoenix cunninghamiana
A. alexandrae
Butia capitata
Brahea armata
Calamus muelleri

Appendix. *Continued.*

Chamaerops humilis
Chamaedorea elegans
C. microspadix
C. sp.
Hedyscepe canterburyana
Howea belmoreana
H. forsteriana
Jubaea chilensis
Linospadix monostachya
L. palmeriana
Livistona australis
L. chinensis
L. decipiens
L. mariae
Phoenix canariensis
P. dactylifera
P. loureirii
P. pusilla
P. reclinata
P. roebelenii
P. rupicola
P. sylvestris
Rhopalostylis baueri
R. sapida
Rhapis excelsa
R. humilis
Sabal bermudana
S. sp.
Syagrus romanzoffiana
Trachycarpus fortunei
Washingtonia filifera
W. robusta
 In the Glasshouse:
Archontophoenix alexandrae
Arenga australasica
A. engleri
A. westerhoutii
Calamus australis
C. caryotoides
Calyptrocalyx lauterbachiana
C. sp. New Guinea
Carpentaria acuminata
Caryota mitis
Chamaedorea microspadix
Coccothrinax argentata
Cryosophila warszewiczii
Dypsis lutescens
Hydriastele microspadix
H. wendlandiana
Licuala ramsayi
L. spinosa
Normanbya normanbyi
Pinanga sp.
P. sp.
Pholidostachys sp.
Pritchardia eriostachya
Ptychosperma sp. "Ferguson Is."
Rhapis excelsa
Thrinax radiata
Veitchia joannis
Wodyetia bifurcata
