

Leaflet by Leaflet – Painting the Palms of North Queensland

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1. *Oraniopsis appendiculata*
growing on the mossy bank of
a crystal-clear creek at high
altitude, on Mount Lewis.

In 1997, Lucy Smith embarked on a two-year Master of Creative Arts degree in illustration, designed to research and portray in detail the palm flora of North Queensland. The resulting collection of paintings captures eighteen of these palms in their natural habitats and forms, highlighting the diversity and beauty of both the palms and the environments in which they grow.

Images of palms in Australian art history

The palms of Australia were painted and drawn for many purposes in the last two centuries. They appear in drawings for the description of new species, as elements in the painted landscape, and are also mentioned in the accounts of European exploration and settlement of the country.

The palms that were most often mentioned and illustrated by early European explorers and settlers in Australia, from the 18th century onwards, were from the genera *Livistona*, *Archontophoenix* and *Ptychosperma*. Beginning with Joseph Banks' first observations of the Australian vegetation in 1788 (in fact the only plant to which he could attribute a name), many accounts by early settlers and explorers contained references to the "cabbage palm." The cabbage palm in question, *Livistona australis*, indeed once grew quite extensively around Botany Bay, site of the first European landing, and Sydney Harbor, site of the first fleets of settlers. Those people keeping accounts of settlement were mostly interested in the palms' immediate and potential practical uses in providing food and construction material.

For a short time in Sydney harbor (then known as Port Jackson), in the absence of other suitable wood for construction, the trunks of felled *Livistona australis* were used to make temporary but basic shelters. However, this 'wood' did not last for longer than one or two wet summers before rotting away. Many palms were also felled and the 'cabbages' or growing tips eaten. Unfortunately the effect on the Sydney harbor palm population from this use was drastic. Barron Field, writing in 1825 noted that the palm trees which had "once . . . characterized the neighborhood of Port Jackson . . . have long been exhausted," and that "the absence of these trees has taken away much from the tropical character of Sydney." *Livistona australis* and *Archontophoenix cunninghamiana* can still be found in the temperate rainforest of the Illawarra district, south of Sydney. In the 19th century, visiting landscape artists. Eugene Von Gerard, Conrad Martens and John Skinner Prout included them in their romantic paintings of rainforest landscapes and scenes of bush settlement. Eugene Von Gerard in particular drew these palms with great accuracy.

Australian palms were also illustrated from the early 19th century for scientific purposes. In 1802 Ferdinand Bauer made the first comprehensive, scientific illustration of an Australian palm when he

My initiation into the world of palms came with a project for the Townsville Palmetum in 1995. Under the guidance of local palm botanist John Dowe, I explored twelve species of locally growing palms and painted them in watercolor to hang as informative pieces for the visiting public. Since then, I was employed from time to time by John to make scientific pen and ink drawings of new species of palms from Australia, Vanuatu, and Papua New Guinea. The prospect of a larger project that enabled me to go further into my subject than in previous projects, held a lot of appeal. I decided to paint as many species of palms from the north Queensland region as possible, using detailed observation and information not previously explored.

The native palm flora of Australia is so rich and diverse that the hardest task was to narrow my subject matter down. I did this by defining a palm-rich area and listing the number of species growing within its boundaries. I eventually arrived at a figure of around 35 species, which included representatives of nearly all of the 19 genera in the Australian palm flora. This area ran from the Burdekin River in the south, east to the north Queensland coast, to the tip of Cape York Peninsula in the north, and west to the edges of

the Wet Tropics Region. Within this region I found not only an interesting range of species and forms, but also an even more interesting selection of environments, which ranged from seasonally flooded rivers and savannah plains, coastal forest, lowland woodland and rainforest, and high altitude woodland and rainforest.

After familiarizing myself with as many species planted locally as possible, and reading up on the relevant scientific literature, I planned the most important part of the research – the field work, during which I would endeavor to visit every species of north Queensland palm in the wild. The first, shorter trips were made to Mission Beach, Cairns and Paluma. In the palm-dense Mission Beach region, I shot many rolls of film in the extensive stand of *Licuala ramsayi* just inland from the coast. On the beachfront, large *Arenga australasica*, with leaves up to three metres long, proved difficult to photograph, surrounded as they were by dense vine forest, fringing the coastal sands. Graceful specimens of *Ptychosperma elegans* grew in the nearby slopes of the coastal ranges.

Into the far northern reaches of the Wet Tropics area, I made the muddy ascent up Mount Lewis in my trusty four-wheel-drive in an attempt to

drew, and later painted in watercolor, *Livistona inermis*, then incorrectly identified as *Livistona humilis*. The original drawing was most likely made from a specimen collected from an island in the Gulf of Carpentaria, and described by scientist Robert Brown. Both Brown and Bauer were taking part in Matthew Flinders' voyage of 1801–1803, whose successful mission saw the circumnavigation of the continent and the extensive collection of flora and fauna for scientific analysis and classification. Other scientific drawings were made for the description of new species, for example *Linospadix monostachya* [Von Martius' *Historia naturalis palmarum* (1837)], and *Livistona australis* [Curtis' *Botanical Magazine* (1857)]. Walter H. Fitch executed the color lithographs of *Livistona australis* for Curtis' *Botanical Magazine* from a specimen successfully grown at Kew. Specimens of *Livistona australis* grown from early collections of seeds can still be found today in most European botanical gardens

Expedition artists recorded palms whilst taking part in exploration by both sea and land. In 1848, Oswald W. Brierly, expedition artist on the voyage of the HMS Rattlesnake, made a revealing entry in his ship's diary. It tells of how a rare grove of mature, fruiting coconut palms had been discovered by the ship's crew on one of the Frankland Islands, south of Cairns. Brierly noted his surprise in finding such a grove of mature trees, the first to be found during many years of exploration of the coast and islands. This unpublished artistic record, which includes an illustration and written description, places the earliest recorded date for a known population of mature, wild-growing coconut palms in Australia back to 1848.

In other accounts, populations of wild palms were described with reactions varying from awe and admiration, to frustration. Engravings illustrating Huxley's 1852 account of the Edmund Kennedy expedition entitled "Cutting Through The Scrub" depict the thorny stems of *Calamus* species blocking the way of men with horses who are attempting to traverse the dense lowland rainforest near Tully. The illustration does not really depict the true denseness of *Calamus australis* and *Calamus moti* (Fig. 4) thickets occurring in the lowland rainforest of the area, now largely cleared for agriculture. These palms were specifically mentioned as a major source of delays for the expedition which began in 1848, and was subsequently disastrous when all but three men perished due to the unforeseen difficulties of traversing the rugged north Queensland landscape.

photograph *Oraniopsis appendiculata* (Fig. 1) and *Archontophoenix purpurea* (Fig. 2), the latter being a species endemic to one small area on the mountain. I had previously visited the area with John Dowe during the collection of a new species, *Linospadix apetiolata*, and knew it to be a fickle place as far as rainy weather and sunlight were concerned. Sure enough, the mist was thick and the rain unrelenting but our patience was rewarded when, in sight of a stand of *Archontophoenix purpurea*, the clouds cleared momentarily. For a brief few minutes I was rewarded with the sight of shafts of sunlight reaching through the mist and illuminating the beautiful palms, framed by wild gingers, ferns, and massive vine-laden trunks.

On each visit to the rainforest I was always in awe of my first sight and impression of a new palm species, such as the giant *Oraniopsis appendiculata* on Mount Bartle Frere, or the diminutive and elegant *Linospadix monostachya* growing nearby in the understorey. Away from the rainforest habitats, it was always a contrast to see some species of *Livistona* growing in quite different conditions. *Livistona lanuginosa*, the western-most palm included, had by far the most hostile environment to contend with. They grow in isolated patches on

the banks of tributaries of the Burdekin River, which can remain completely dry for long periods of time. The stand that I saw at the Cape River in the height of the dry season was hit with floods of over three meters height some six months later, when heavy rains flooded the area during a cyclone. In more lush woodland surroundings on the edge of the rainforest grew *Livistona australis* (Fig. 3), a distinctive form of the most widespread Australian palm species, found in the Bluewater and Paluma Ranges. In the disturbed rain forest of the wetter regions of these ranges, thickets of *Calamus moti* (Fig. 4) and *C. australis* grew in profusion.

In September 1997 I made a major field trip to the Cape York Peninsula, assisted by funding from the Palm and Cycad Societies of Australia. Accompanied by John Dowe, whose knowledge of the palm areas was extensive, and field assistant Gavin Smith, I spent nearly three weeks travelling

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2. *Archontophoenix purpurea* is one of two species endemic to Mount Lewis, where mist and rain almost continually shroud the vegetation, and chance breaks in the cloud provide sudden, dramatic illumination.





some 7,000 kilometres, much of this in four-wheel drive. In the Lockerbie Scrub, a small area of rainforest at the tip of Cape York, we saw Papua New Guinea species *Calamus hollrungii*, *Calamus aruensis* and giant *Gulubia costata* soaring above pandanus swamps. Once, while photographing *Hydriastele wendlandiana*, John Dowe's curiosity got the better of him and he accidentally disturbed a nest of angry golden wasps – twice! We waited in fear for an allergic reaction to our scores of stings from this extremely territorial wasp (they stop their attack abruptly at a distance of 20 meters from the next), but fortunately were able to continue relatively unfazed!

Moving southwards down the Peninsula, I saw great stands of spiky-trunked *Livistona benthamii* surrounded by *Melaleuca sp.* trees, and *L. muelleri* growing amongst the eucalypts and termite mounds so typical of the Peninsula. Some of the *L. muelleri* trunks and lower leaves were still smouldering from recent bushfires. We ventured east into the isolated rainforest of the Iron Range and found the graceful *Archontophoenix tuckeri*, named for Robert Tucker, growing on the rocky creek banks of steeply-walled valleys, surrounded by tall forest trees and lianas, native bamboo and pandanus. We surprised a cassowary on a deserted stretch of the creek, and it promptly took off into the rainforest, Gavin and John in hot pursuit. I chose to wait back at the creek and was photographing a nice fruiting specimen of *Archontophoenix tuckeri* when a gentle 'plink' made me turn around, just in time to see the cassowary creeping quietly back across the water. Although I must give equal praise to the charms of all my palms, I would have to say that seeing the foxtail palms, *Wodyetia bifurcata*, growing in their natural habitat, was one of the highlights of the Cape York trip. After a full day's slow, tortuous driving towards the coast and a pleasant walk, we finally reached the foxtail site. I was struck by the sight of thousands of these magnificent palms sprouting from every possible piece of ground amongst the huge granite boulders, which covered the hills of Cape Melville. It was a true delight to climb amongst the palms, scrambling over and under boulders, while I studied the crowns of mature giants at head-height from the tops of the rocks.

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3. *Livistona australis* This distinctive specimen found on the Paluma Range grows amongst striking *Eucalyptus grandis* and *Casuarina* spp. on the margins of the surrounding rainforest. This specimen and those from the nearby Bluewater Range population may represent a local variety of the widely distributed species.

On the way back from Cape Melville, crossing the flat savannah plains of Lakefield National Park, we saw fabulous stands of massive *Corypha utan* (Fig. 5).

When the field trips were more or less completed, I began the task of creating the illustrations. First I had to sort through the hundreds of photographs I had taken, arranging many of them into large panoramas which covered the walls of my studio. I studied these, along with my field notes and sketches, until I found the best specimens in the most typical surroundings. Then I made several small composition sketches, and once I was happy with one I enlarged this concept into a drawing. Drawing an entire palm is like cracking a structural code. Firstly you need to work out how the leaves are built and then how they emerge and held from the central part of the "trunk." The arrangement of leaf base remains on a broad *Livistona* trunk will tell you a lot about the spiralling growth patterns formed by the leaves. Then of course you must understand the overall look and feel of the palm. At what angle are the leaves held, and how are they spaced? Do the leaflets, or segments, droop elegantly or are they held erect? From where do the inflorescences emerge – are they produced amongst the leaves or do they hang clearly below the flat expanse of the tubular crownshaft?

Painting the palms was the next, and final, step. Each drawing was worked on for several days until all the detail that I would require to paint was included. As well as understanding palm structure, when painting palms there are plenty of challenges to your color mixing skills. Faced with a sea of greens, it is amazing just how many types of green you can differentiate by looking at them with a painter's eye. In the north Queensland palms I found a surprising array of greens, ranging from the subtle, pale blue-green of *Livistona lanuginosa* to the darker, ultramarine green of *Ptychosperma elegans*. Trunks, too, can be many different colors, especially those with fire-blackened bases.

After all that painstaking preparation, the actual painting of the palms was an enjoyable experience! The drawings were checked for accuracy by John Dowe, then traced onto illustration board where the painting would be executed. For up to three weeks I huddled over each painting, carefully building up details using tiny sable brushes. I had first laid down the backgrounds using an airbrush or a large watercolor wash brush. I painted the palms first with a layer of thin watercolor over the drawing, and then slowly built this up by applying layers of opaque gouache paint. Each background needed to have its own special

character that expressed the nature of a particular piece of forest. It was enjoyable to draw on my vivid memories of visiting each palm – I learned to recall an early misty morning at Paluma seeing *Laccospadix australasica*, and that icy, accidental plunge from a luxuriously mossy rock, into the crystal Mount Lewis stream which ran past stately *Oraniopsis appendiculata*. When not daydreaming, I carefully counted yet again every leaflet, and observed the particular way in which they hung in space. Finally after a couple of weeks, the day would come when I could declare a painting to be “finished.”

By February 1999 I had painted 18 species in habitat, and a small group of flower and fruit pieces. I was almost ready for the March exhibition. All of the work was framed, including a selection of working drawings, which were hung alongside the finished paintings. On 9th March 1999, the “Palms of North Queensland” exhibition opened at the Pinnacles Gallery, Townsville to a warm and receptive audience. From the comments of visitors throughout the ten-day duration of the exhibition, I learned about the varied responses to the work from a wide cross-section of people. Many people expressed their surprise at the variety and number of local native palms that existed, some of which could be found growing in their gardens and streets. Others remarked on the variety of environments portrayed, and felt that the illustrations provided them not only with a tour of the local native palm flora, but also of their surrounding natural countryside. Judging from these responses, I felt that the exhibition was a success. Each illustration had achieved its aim, to portray each species of palm accurately in structure, form, and natural appearance. Since the exhibition, I have looked at the possibilities of expanding the project to cover even more species of Australian palms, and perhaps to produce an informative book using the illustrations. Four of

the paintings, which represent a good cross-section of the work, have since been reproduced in a limited edition of hand-signed, archival quality prints. The originals are tucked away, waiting for their next public appearance.

My story now switches suddenly to the other side of the world. The setting is the Palm Room in the Herbarium at the Royal Botanic Gardens, Kew, London. In another time, another place, I find myself drawing species of New Guinea palms of all descriptions; rattans from Africa, new *Licuala* species from the rainforests of Borneo, all this from the relative comfort of my window-side desk. As I pull each dried and pressed specimen from its tagged and numbered box, I close my eyes and try hard to imagine the palm from which this leaf was cut, wrapped, and then placed between the boards of a plant press in some distant tropical forest. I picture it growing in its natural setting, reaching high into the canopy for the light, or sitting quietly in the gloomy understorey, passively gathering leaf litter. In my diagnostic line drawings I attempt to convey my new found, and ever growing, understanding of these plants to assist in my job of illustrating the great diversity of the world's palm flora. My urge to return to the forests and woodlands, nonetheless, has by no means diminished, and I find myself drifting off into daydreams of painting green palms, and more palms.

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4 (page 134). *Calamus moti* growing in a typically dense thicket in a section of disturbed rainforest, its leaves forming a harmonious pattern of graceful arches and interwoven lines. 5 (page 135) *Corypha utan* from the hot Lakefield savannah showing three different growth stages, including the terminal flowering that precedes the death of the massive, mature plant.

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PALMS OF NORTH QUEENSLAND limited edition prints by Lucy Smith. *Licuala ramsayi*, *Livistona muelleri*, *Archontophoenix purpurea*, *Livistona australis*. Each print US\$35/£25 or set of four for US\$130/£90. For all orders add US\$10/£8 for postage. Send check or money order payable to Lucy Smith to Lucy Smith, c/o Herbarium, Royal Botanic Gardens Kew, Richmond Surrey TW9 3AE, UK. Please include shipping address and e-mail address (if available). View prints and download order forms at www.lucysmith.com.



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