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Tropica

**Tropical Garden Society
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No. 16 – March 2009

Aechmeas

Greg Jones

The *Aechmea* genus belongs to the Bromelioideae subfamily which along with the subfamilies Pitcairnioideae and Tillandsioideae make up the family Bromeliaceae.

There are around two hundred *Aechmea* species that have very diverse inflorescences, some spectacular, which if pollinated are followed by berry like fruits containing many small seeds. They tend to have spiny leaves, many of them viciously so. Aechmeas naturally have a huge array of leaf sizes, colours, striking patterns and amazing (or plain but interesting) flowers. Through select breeding and hybridising it is these features along with variegations and mutations that have resulted in hundreds of cultivars, many of which are hugely popular garden and house plants throughout the world.

These versatile bromeliads can fill almost any niche and to me their only drawback is their often nasty spines, although these can add to their character, and in fact some of the recently developed spineless clones can look a little boring.

Some of the Aechmeas originating from tropical climates can be quite sensitive in Sydney's temperate climate but most Aechmeas are suited to our climate and can take almost anything our weather throws at them without showing any damage. However an occasional watering in dry times and a little foliar fertiliser can improve their vigour, size and appearance.

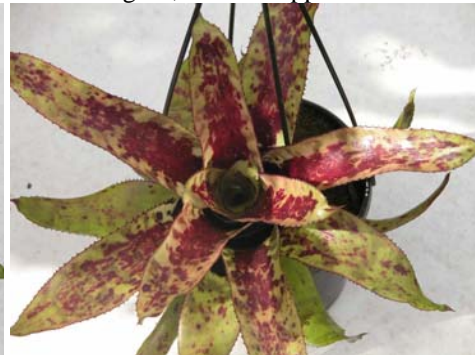


Aechmea orlandiana clump



Aechmea orlandiana

A very light form



Aechmea orlandiana

Seed grown, showing strong red colours

Aechmeas being such a diverse group can tolerate a large range of light conditions with many of the large tough plants such as *Aechmea blanchetiana* at their best in full sun while some of the softer cultivars such as *Aechmea* "Fosters Favorite Favorite" are happiest in lower light areas but as is the norm for all bromeliads they are best moved around in the garden until they show their best colour.

Healthy Aechmeas are not bothered much by the usual bromeliad pests such as the various scales and mealy bugs but if they do become a problem a mild systemic insecticide such as Confidor will clean up these pests.



Aechmea blanchetiana rubra



A. orlandiana clinging to a palm trunk.

Photo: Ian Edwards

Aechmea propagation is generally by division. Where the offshoots are on medium to long stolons they are easily removed with sharp secateurs. Where the offshoots originate from the base of the parent plant a serrated knife will usually do the job.

Aechmea seed is for the most part easy and quick to germinate and the seedlings usually grow at a fast rate, for bromeliads that is, taking as little as two to three years in most cases to reach maturity.

My favorite Aechmeas are the patterned leafed varieties such as fosteriana and corriea-araujoi, with the real standouts being the many forms of orlandiana, which never cease to amaze me with their subtle or significant differences.

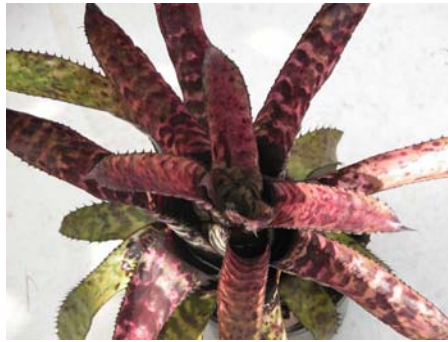
There are many named varieties of orlandiana but I find buying one can be disappointing, for unless they are grown under similar light conditions they may show little of the characters they were named for. In general more light brings out the pink and red colours in orlandiana cultivars.

6.



Aechmea Bert Variegated

Photo: Greg Jones



Aechmea Pickaninny

Photo: Greg Jones

Growing in gardens that are quite shady are three Aechmeas which impress with 7. their very bright red flower stems. Each has green, strap-like leaves. Two of them are purple on the underside. We think the one with green underneath is *Aechmea miniata*, one probably *Aechmea* “Royal Wine”, but have no idea of the name of another, leaves purple under, which develops white berries on a strongly branched red stem.



Aechmea “Royal Wine”



Aechmea miniata

EXPERIENCES GROWING AECHMEAS

Norma Edwards, Cronulla, NSW

Experienced growers of Bromeliads know how to tell one species from another but I find the Bromeliad Key for Beginners in Tropica No. 9 (November 2006) does help a bit. The two defining features of Aechmeas are the spiny leaves and an inflorescence held on a stem.

We have a number of Aechmeas, most growing in the garden in sandy soil with 50% orchid potting mix added when planted, but a few tied to trees. Over time some have developed into quite large clumps as we generally don't remove the pups. Some are large, like the *Aechmea blanchetii* on the front cover, down to small ones like *A. “Pie in the Sky”*.

In Tropica No. 4 (March 2005) I wrote about growing *Aechmea tayoensis* from seed. It flowered after nine years. By then it was 2 m across.



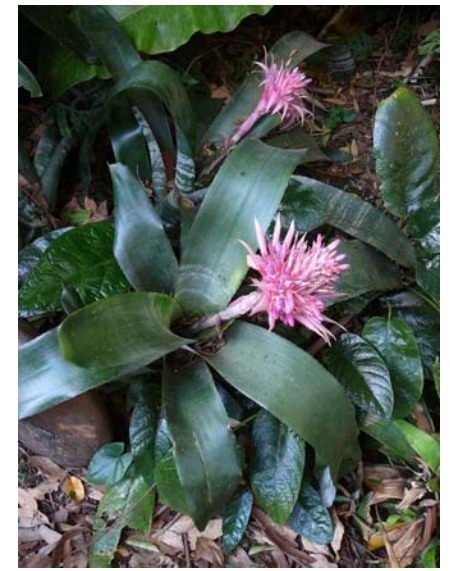
Aechmea caesia inflorescence

Photo: Ian Edwards

The *Aechmea caesia* in the photo above grows in full shade. It has plum-coloured leaves about 50 cm long and is a real treasure. Others have less spectacular inflorescences, although the actual flowers when closely examined can at times be amazing. If they happen to set berries, as with *Aechmea* “Royal Wine”, the inflorescence can last for many months.



Aechmea name unknown



Aechmeas fasciata

8.

Those Aechmeas held onto trees as epiphytes appear to be happy, even tolerating the months of drought, given an occasional splash of water. They are quite able to adhere with their roots after establishing.

We do have a leaning towards the very dark foliage plants like *Aechmea* “Belize” with its dark shiny wavy leaves, seen in the photo below. The red inflorescence is a bonus.

Aechmeas seem to be an undemanding genus of Bromeliads, tolerating deep shade or full sun, depending on the species. Well worth a try.



Aechmeas as epiphytes



Aechmea gamesepala “Lucky Stripe”



Aechmea “Belize”

New Caledonian palms – some name changes

9.

Ian Edwards

There are now only 10 palm genera from New Caledonia instead of 16, following a recent review (Kew Bull. 63: 61-73). Genera that previously contained only one or two species have been “sunk” into some of the larger genera. *Alloschmidia glabrata*, notable for its many inflorescences, is now *Basselinia glabrata*, and *Moratia cerifera*, whose white waxy crownshafts can be seen in Bed 28b at the Royal Botanic Gardens, Sydney, becomes *Cyphokentia cerifera*. Others less familiar to us are *Veillonixia alba*, now *Cyphophoenix alba*; *Lavoixia macrocarpa* now *Clinosperma macrocarpa*; *Campecarpus fulcitus* now *Cyphophoenix fulcita*; and two *Brongniartkentia* species, *B. lanuginosa* and *B. vaginata* are now both *Clinosperma* species. Finally, an old friend that some of us are growing, *Basselinia gracilis*, has reverted to being *Basselinia eriostachys*.



Basselinia gracilis, now Basselinia eriostachys, growing in Sydney.



Alloschmidia glabrata now Basselinia glabrata in Sydney R. B. G.

The former *Basselinia gracilis* is actually composed of two or possibly three species. *Basselinia gracilis* still exists, but it is a very small and not very colourful palm which grows in a restricted area and is rarely cultivated. Jean-Christophe Pintaud and Don Hodel, authors of *The Palms of New Caledonia*, tell the story in the latest issue (190) of *The Palm Journal* from Southern California, with excellent photos of some of the many variations of *Basselinia eriostachys*. They point out that in spite of its great variability in size, indument, crownshaft colour and leaf division, *Basselinia eriostachys* is still readily recognisable within the former *B. gracilis* complex by its lanceolate leaf divisions.

Arenga palms for Sydney**Ian Edwards**

Members of the old Sydney Palm and Cycad Society will recall one palm that was always turning up at our auctions: *Arenga engleri*. Perhaps this was because people with a fruiting plant would find self-sown seedlings in their garden and pot them up. Evidently a palm well-suited to Sydney. There are 25 *Arenga* species currently listed on the Kew Gardens World Checklist. Most come from tropical Asia, with one Australian species. Several of them are suitable for gardens in Sydney. Some are solitary but most are clustering palms and most are hapaxanthic, the stem dying down from the top after flowering. They are monoecious, so only one plant is needed to produce fruit. The leaflets have serrated edges towards their tips and are silvery underneath. Those species with thicker stems have black, woven fibres on their leafbases.



Arenga engleri
A self-sown seedling

Arenga engleri

Arenga engleri comes from moist, lowland forests in Taiwan and the Ryukyu Islands. It is a clustering palm, growing in our climate to 4 m high and about as wide. The stems are short and covered in fibres. The leaves are long and arching on a long petiole, with many closely spaced leaflets, up to 50 cm long by 2-3 cm wide. The lower leaf tips touch the ground, so that it is not possible to have other plants growing below them. The outer half of the leaflet margins are slightly serrated, with the usual *Arenga* feature of being silvery below.



Arenga engleri



***Arenga engleri* inflorescence**

A big branched inflorescence, held close to the stem, carries large orange flowers. When flowering, waves of an attractive fragrance are emitted, which can sometimes be noticed many metres away.

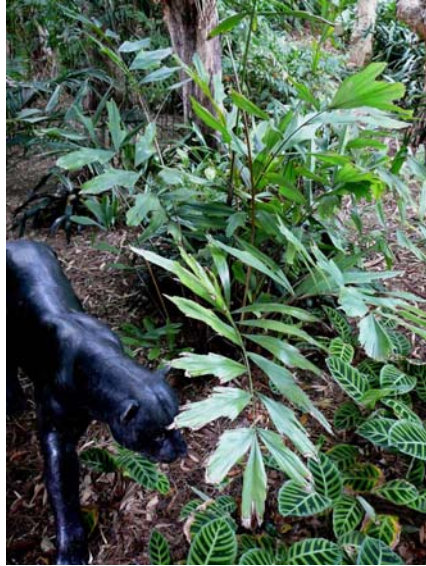
Fruit are round, about 1.5 cm diameter and gradually change colour from green through yellow and orange to red. They are attractive to our birds who distribute seeds around the garden. Although self-sown seedlings come up quite readily, they are remarkably slow from then on. This is a tough palm that is said to be fairly cold-hardy. *Arenga engleri* will grow in full sun but looks best in a little shade.



***Arenga engleri* infructescence**

12. *Arenga tremula* *Arenga porphyrocarpa*

One of the smaller species in the genus. They were once in a separate genus, *Didymosperma*. It is a clustering palm from Java and Sumatra, growing to 2.5 m in the tropics. The thin stems are covered with dark fibres. Arching leaves on long petioles carry large widely-spaced and distinctly-lobed leaflets which are silvery underneath. The name "porphyrocarpa" means purple fruit. Said to tolerate full sun or part shade, it grows slowly in Sydney, not as lushly as in the tropics, but is still an attractive garden-sized palm.



Arenga porphyrocarpa

Arenga hookeriana

A clustering understory palm, only about 1 m high, from the tropical rainforests of northern peninsular Malaysia and southern Thailand. This species is much sought-after because of its big, undivided leaves, which are diamond-shaped with deeply lobed margins and are silvery underneath.



***Arenga hookeriana*, young plant**

Don Hodel suggests in *Palms and Cycads of Thailand* that *Arenga hookeriana* might be one of the many forms of *A. caudata*, because intermediate forms are found. Also, 90% of wild-collected seeds of *A. hookeriana* will grow into typical *A. caudata*. However, the cultivated forms are distinct. Unlike the latter, it may be marginal as a garden plant in Sydney but is small enough to be a container specimen.

This clustering palm comes from the Philippines, where it grows in clearings in the rainforests. When young it resembles *Arenga engleri*, the leaves and leaflets being similar, but the leaves are held more upright and in older palms their tips do not reach the ground, so that other plants can be grown beneath them. As the palm ages the stems become taller than those of *A. engleri*, with the dark fibres covering them more evident. These are eventually shed leaving the lower trunks smooth and green.

As with *A. engleri* it has a sweetly perfumed inflorescence, large orange flowers and big round fruit that gradually turn red.

Arenga tremula grows happily in Sydney in full sun, but is said to be less cold-tolerant than *A. engleri*.



Arenga tremula

Arenga australasica

The only Australian species. It grows uncommonly in lowland rainforest in far north Queensland and more commonly on some adjacent islands. A large clustering palm with a few stems growing to 15-20 m, surrounded by smaller suckers.

The leaves are about 3 m long on a short petiole, with leaflets held in a V shape at a 30 ° angle. (See photo p.17.)

In habitat it seldom looks at its best but in a tropical garden, set in a lawn, is a magnificent palm. It will grow in Sydney but it is said to be slow growing even in the tropics.



14. *Arenga micrantha*

A sparsely clustering palm to 3 m in height, relatively new to cultivation and said to be the most cold-hardy. That seems likely as it comes from north-eastern India, Bhutan and Tibet. It is unusual in seeming to be dioecious, with separate male and female plants. We don't appear to be growing this species in Sydney, but it should be suitable, especially for cooler areas. It is being grown in New Zealand. This photo of a plant in New Zealand was posted on the I.P.S Palm Talk web site



Arenga micrantha

Arenga caudata

A small species from south-east Asia, only about 2 m high. It forms dense clumps of slender stems with arching leaves. The species name "caudata" meaning "tail" refers to the long drawn-out tips of the wedge-shaped leaflets. It is a very variable palm with a number of different leaf forms. The red fruit, to which our birds are attracted, are ovoid, about 6 mm long, and closely packed on single spikes. They germinate readily.

Arenga caudata grows well in coastal Sydney, but on sandy soil is more than usually sensitive to any magnesium deficiency. Best in some shade.

Arenga pinnata

A big solitary palm which has been cultivated for its palm sugar content for so long in Asia that its origin is uncertain. (The sugar is obtained by tapping the inflorescences.) The leaves are up to 10 m long, held fairly erect, with drooping plumose leaflets, almost 1 m long. Inflorescences are 2 m long with purple flowers that are reported to have a strange aroma. Fruit are about 5 cm long and yellowish when ripe. Some of the black fibres on the leafbases form long spines which look formidable but are soft and not really dangerous. *Arenga pinnata* is reported to be tolerant of drought and fairly cold-hardy. It can be cultivated readily in Sydney, but is too large for the average garden. Being solitary it will die gradually after flowering.



***Arenga caudata* leaf**

EXPERIENCES GROWING ARENGA PALMS

15.

Greg Smith, Bulimba, Qld

We have *Arenga hookeriana* growing in a sheltered, shady spot in my home garden here in Brisbane. It has always been a very clean plant and indeed it has overgrown the space we originally allotted for it. This species is definitely tougher than *Arenga caudata* here in Brisbane and I would be surprised if it wasn't happy further south. Needless to say we have some in stock here at Palms for Brisbane Nursery. I don't believe that we have any stock of *Arenga micrantha*.

Paul Anderson, Empire Bay, NSW

Over the years I've tried growing six common species of *Arenga* with two of these, *A. undulatifolia* and *A. microcarpa* being just too cold-sensitive to survive. The other species, *A. pinnata*, *A. engleri*, *A. australasica* and *A. caudata* have been more or less reasonably successful. Most of them slow to extremely slow growing in this climate and that probably accounts for my lack of enthusiasm for experimenting with rarer species. Both *Arenga pinnata* and *Arenga engleri* are now fairly large plants in our garden.

Arenga pinnata is growing in a light sandy, well-drained soil under a canopy of various trees in about 50-70% shade and it really hasn't had much in the way of loving attention over the years. Being under a canopy this has developed into a very large impressive palm with the fronds being approximately 5 m in length giving a total diameter in excess of 10 m and with a stem height of about 2 m. The tallest frond reaches up 7 m. It has taken 25 years to reach these majestic dimensions but if its growth habit is anything like the closely related single trunked species of *Caryota* it's unlikely to last another 25 years. The likelihood of it bolting for the heavens at any moment then flowering and dying over the next ten years or so is probably fairly high. If you've got lots of room this species is certainly worth a try.



***Arenga pinnata* leaf**

The *A. pinnata* stem is clothed in spine-like fibres of various lengths up to 400 mm long radiating in all directions. While not overly vicious they probably act as a deterrent to some climbing animals. They also assist in trapping leaf litter. Some indigenous groups of people bundle these fibres like straw and use them for roofing materials, brooms etc.

16.

Arenga australasica is growing under light shade in a less than ideal western aspect. I planted this tree over 20 years ago and it was fairly advanced in a 35 litre bag even back then and about 2 m tall. Its tallest frond now reaches approximately 4 m. While it doesn't appear to suffer any real problems with growing in our climate it is just dead slow. Don't try and grow this palm if you are in a hurry and don't attempt it unless you are young and very patient, I've found it painfully slow in this climate. If you can buy an advanced specimen, it is certainly worth a try, but unless you have a heated green house don't hold your breath waiting for a seedling to develop. I'm not sure but it must take a couple of years for each frond to develop here.



Arenga australasica leaf

Arenga caudata was available in the nursery trade many years ago but I haven't seen it offered for sale for at least fifteen years. The one I planted out suffered under my indifference and neglect; it eventually succumbed and petered out after a few years in the ground. Whilst this species probably has potential to survive and maybe even grow here if given a good position and care, in my experience it's probably a little too tropical in its requirements to make reasonable growth in Sydney's climate.

Arenga engleri has developed into a fairly large clump over 25 years and whilst it is slow to grow from seed, once it reaches a reasonable size its growth rate is much faster. I guess the most remarkable feature of this species is the cloud of sweet perfume given off at various times whilst in flower. For a number of years I didn't even realise the source of the perfume wafting through the garden of an evening was the *Arenga engleri*. I didn't really try and locate the source as I thought it was high in a tree as it seemed to be dispersed over a wide area. This species is easy to grow and a real survivor and is a suitable size for the average garden, its clumping growth habit makes it an excellent screening plant but unfortunately its slow early growth rate will prevent it from being produced en masse and limit its cultivation to enthusiast's collections in Sydney. Like all species of *Arenga*, the stem develops to maturity then flowers progressively down the stem over a number of years. The highest bunch of fruit is the first bunch to set and by far the largest. As the flowering approaches the base of the trunk the size of the inflorescence reduces, thereby reducing the amount of fruit set.

Alan Collins, West Pymble, NSW

17.

The two species of *Arenga* growing in my backyard at Pymble are *Arenga engleri* and *Arenga tremula*, both of which I have had about 20 years.

A. engleri is located in full shade facing south and is doing okay but has not yet attained the size of its parent. This palm has multiple trunks covered in fibre and bears many leaves to 3 m in length, the leaflets of which are silver on the lower surface. The tallest trunk which is about 2 m has produced two inflorescences though set no fruit to date.

A. tremula is located facing west in full afternoon sun. This palm is similar to *A. engleri* in clumping habit though the palms are much taller, to 3 m. The leaves are about 3.5 m and look very elegant with their arching habit. During the past few years a few of the palms have set heavy fruit clusters though they have not been harvested.

Warning: gloves should be worn if cleaning *Arenga* fruit as the juice is corrosive. In August 1998 we purchased two *Arenga hookeriana* from the late Jill Goetze when we visited Cairns. For eight years these palms languished in small pots and showed very little growth. Twelve months ago one was planted in semi shade and has survived one winter. The second one has been planted out just recently. To date they are only 40 cm high, each with two leaves. Here's hoping!

Scadoxus multiflora ssp. katherinae

Norma Edwards

At our ABC garden exhibits *Scadoxus puniceus* (Paintbrush Lily), grown by Jill and Alan Collins, has always attracted interest. Luckily they are at the best at show time, the end of August. At the 2007 show I bought a small plant of another *Scadoxus* species from a grower. It soon had sideshoots and did not die down like *S. puniceus*.

In November 2008 a flower bud appeared, quite exciting as I did not know what to expect. Individual flowers opened from the outer rim and over a few weeks continued to open until the full ball had formed. It was really quite big, about 20 cm across. Gradually the flowers faded and fell off, but the plant is still robust.

We know its name now because "Botanica" has almost the same picture.

Scadoxus are bulbs from Africa, closely related to the Blood Lily *Haemanthus* and were once included in that genus. *Scadoxus puniceus* dies down in winter (so does *Haemanthus*) and the flowers emerge in spring before the leaves appear. This species however, has not died down.



18.

Our Open Garden weekend

Brian and Jann Kennedy

Our garden was opened to the public for the first time in the 36 years that we have lived here and, of course, it just had to rain didn't it. But except for the soft-leaf buffalo lawn in the bottom garden which was trodden on by the 700 plus visitors in two days, no damage was evident. People learnt about the open day through the local newspaper, magazines and web sites and also the flyers that I placed around the Northern Beaches. Some also heard me on radio being interviewed on Simon Mahoney's garden show.



As far as we are concerned the success was mainly due to the tireless efforts of the following Tropical Garden Society members:

Neil Curran, for his professional attendance at the front desk where he not only took the money and sold the Subtropical Garden magazines but also introduced the visitors to the garden.

Helen Curran, for giving garden advice to the many

visitors and also assisting Jann in her duties in entertaining the volunteers.

Fred Moody, Werner Raff, Jill and Alan Collins, for their tireless and professional efforts in answering the many garden queries put to them by the visitors.

We had quite a large number of members of several garden clubs that were amazed by the knowledge of the above-mentioned Tropical Garden Society members.

Jann and I were overwhelmed by the number of people who thanked us for allowing them to see our garden.



The garden is situated on 860 square metres of fairly steep land (0.5 m drop) **19.** with limited access. All the work in the yard and garden was carried out by us including retaining walls, pathways, stairs, fences, drainage, paving, pavilion, ponds, and filtration systems. Everything, even the swimming pool, was dug out by hand.

We were members of the old Palm Society and are now members of the Tropical Garden Society of Sydney. With our love of palms, Japanese Koi fish, and especially everything Balinese, we decided to make our existing tropical garden into a Balinese-style garden. We wanted the garden to be an organised jungle but it had to be more than just a number of plants thrown together, it had to complement the site, it had to tell a story which brought together the ponds, paths, furniture and statues.

The garden is broken up into several rooms: The Koi Fish room lined with palms in large pots; the Entertaining room which includes a swimming pool, pavilion, and three water ponds complete with water features; the Alfresco room lined with garden beds of lirioppe, clivias and palm species; the Rainforest Walk under the tall palms is lined with mondo grass, ferns, native orchids, bromeliads



and small chamedorea palms as a backdrop; the Open Spiritual Pathway then meanders through Balinese archways; the Lower Yard, reached via a small rainforest walkway, has a small lawn of shade-loving, soft-leaf buffalo grass framed by garden beds and more large palms. This section is relatively new and is entered via a Balinese split gate.



Very tall palm trees, some over 25 years old (planted by us) provide a canopy of shade and together with four fish ponds produce a microclimate for the smaller shade loving plants and a buffer from the southerly winds. There are over 70 species of palms and a large number of bromeliads, cordylines, crotons, orchids and many other types of plants.