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ASSOCIATED SOCIETIES FOR GROWING AUSTRALIAN PLANTS STUDY GROUP NEWSLETTER 71

CYCAD, ZAMIAD and PALM STUDY GROUP - JUNE-JULY 1996

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Circumstances beyond my control have made this newsletter perhaps not as frequent as I would desire, so please bear with me until my health improves, for now more than ever before we need just a little co-operation from any member capable of lifting a pen, even if it is merely 100 words, and even if it is merely to report a news item on the subject or to explain how you, as a member, are having worries or problems in growing a particular Cycadale or a palm. We are, after all, a group. This is a group effort, not a one-man band.

My grateful thanks to the little band of helpers who do write to me, be it occasionally. Your encouragement by doing so has kept this going now over 14 years. Remember also that the date for dues is 1 June, and are payable within that month, please.

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The never ending controversy - Wodyetia

Much has been written, said, or just bandied about this, one of our most recent glorious discoveries - unfortunately, in many cases, by people or authorities with little understanding of the real situation - many with the best of intentions. The situation got so out of hand mainly because of our own attitude to not ever allowing sensible seed collection to be carried out from a newly discovered palm not at any time in danger of extinction.

Our country cries out for more and more exports, and this was an opportunity to do just this, rather than stop authorised collection, allowing pirating by various means I prefer not to discuss here, so that we lose the export trade, and ironically find we are actually buying back from the U.S.A. seed of our own indigenous palm.

The trouble has been blown up out of all proportions by various media outlets because seed has been available legitimately from sources outside its habitat in small quantities and at a time when legal export should have been in progress. It is the old story of not being able to export the "troublesome-to-the-farmer" native cockatoos. (He is, however, allowed to poison or shoot them.) So arises the disgusting illegal trade of bird smuggling, and the gigantic prices the surviving birds bring! Just what does it take to sensibly educate some authorities?

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Up to the beginning of February I was experimenting with soaking cycad and some palm seed (chamaedorea) that takes 12 months to germinate with a stimulant (indolebutric acid) for 24 hours to invigorate germination. The substance is available sold as growth hormone, mostly in liquid form and lately as a gel. I have had health distractions, but now will continue with experiment.

My own experiences in growing palms in a 1/4 acre assimilated rainforest

First of all, let me say the views are my own, but gained after 35 years of palm growing in the one spot, not with all indigenous material, but with a mixture of exotic and native.

Talking first on woody weeds, this seeming to be the choice topic in S.G.A.P. circles now, I find only one, and that an exotic and probably the first multi-planted palm in older Brisbane. Once known at the false Date or cocos palm, Arecastrum romanzoffianum should in no circumstances be planted in a small garden plot, its only virtue being the young fronds while the palm is very young. Later its dead fronds hang and are scraggly, and the great clusters of fruit are a constant attraction to night flying fruit bats, these being only two of its disadvantages.

This does not mean that all exotics are bad in the garden - in fact, the dozens of American chamaedorea species could not be bettered as understorey plants. Getting back to the main reason for this article, and starting on a negative note, indigenous palms definitely have a place in the home garden, but a word from experience: consider the size of your block; how tall or spreading does the plant grow; how water demanding is its root system?

I did say this was negative, and from my own plantings we have found two of the most popular palms can be garden hazards, as they are in our 42 perches. I speak of Archoentophoenix cunninghamiana, and its cousin Archoentophoenix alexandrae. The are the Picabeen and the Alexander palms respectively.

We have four of these, now full size and planted in our front area, which is roughly 70 feet by 30 feet (in old measurements). This section of our front is very heavily planted with 20 other mature palm species, 10 indigenous trees and a great amount of understorey cycad, palms and jungle type exotics and natives. The micro climate makes it very much like a rainforest, but we mentioned hazards, and here they are!

These palms are self cleaning, and while this is great in a real rainforest, each frond averages 3.5 metres in the rachis, sheds weekly on an average one frond, plus one inflorescence, much to the detriment of understorey foliage beneath them. Many epiphytes and climbing vines suffer when this happens. Our latest casualty was a young native Ylang Ylang tree that took us years to acquire. Given the choice again, I would pick the native Solitaire palm. We do have three of these, with no present hassles associated.

It must also be realised the fronds drop some 15 metres. Constantly cutting them up and repairing their damage is a "No-No". Thank goodness there is only one Cuban Royal palm planted. Its self cleaning frond is the ultimate!!

Although many exotics I have grown have lots of merit, closest to my heart are the indigenous species growing here so very well:

Caryota rumphiana (now 11 metres);

Two really fine **Licuala ramsayii**, lovely natives from around the Tully/Mission Beach areas, sometimes very difficult to grow here successfully;

Linospadix monostachya and **minor**, the former a real garden gem, and what a pity it is so slow in growth, probably the main reason that it is difficult to find in nurseries, comparable with many small exotic palms for sure;

Ptychosperma macarthurii in two forms, both doing well;

Several **Solitaire**, that single trunked **Ptychosperma**;

A few really well grown (for me, that is) **Livistona**, such as the Carnarvon Gorge and the Taroom species, the weeping one, **L. decipiens**;

A few **Calamus** which need attention so they do not develop the climbing spine tendrils;

One only **Wodyetia bifurcata**;

Love, but have little luck with, that pride of Darwin, **Carpentaria acuminata**;

And, of course, not to forget my black palms, **Normanbya normanbyana**.

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Now, I know this is an indigenous study group, but sources of research are the basis of such study, and for those who read the pollination bit in newsletter 70, here is more of the same - this time to try to explain the botanical miracle of the pollen drop in the tip of the egg case in cycads (micropyle).

The ovule or seed case of Cycadales has a characteristic structure, and one moreover that, with minor modifications, is found in all flowering plants. An oval inner mass, the nucellus has its upper half covered by an integument which has a tiny opening, the micropyle at its tip. In Cycadales, a few cells break down beneath the micropyle to form a hollow cavity known as the pollen chamber. It is filled with a sugary fluid that eventually is exuded as the pollen drop.

Meanwhile, countless pollen mother cells in the micro sporangia (case of the male cycad) have divided, by reduction division, to produce four microspore (pollen grains). These grains divide again to become micro prothalli. Once liberated, they are caught at the entrance of the micropyle and sucked in for eventual uniting and germination.

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SUGGESTIONS FOR GROWING BETTER CYCADS FROM SEED

by Peter Heibloem

Use community pots for sprouted seeds which are at least 12 inches deep. This promotes strong tap root development and conserves valuable space. After 1-2 years or longer, seedlings can be removed and put into individual containers. Put one inch of gravel at the bottom of your pot for extra drainage and one inch of coarse river sand on the top of the potting mix to prevent the potting mix from drying out too fast.

Give the cycad seedlings more water rather than less water so that they never dry out. To prevent root rot, make sure that the potting mix is very open and exceptionally well drained. This will allow more air around the roots and promote faster root development.

Fertilise the cycads with slow release Osmocote or Nutricote (some growers say this is not as good). I use for 6-9 months formula with trace elements added. I also water with Naturakelp or a fish/seaweed concentrate about every six weeks.

I germinate my cycad seed in cliptop plastic bags in slightly damp perlite and vermiculite soaked in fungicide (Previcure) in a cool place. This keeps pests out and avoids the temptation to force the seed into early germination which never works and usually spoils the seed. After the seed is germinated, I put the seed on a hot bed until the root is 1-2 inches long and then into the pot. This minimises losses which can occur if the seed dries out before the root is long enough.

Planting cycad seed too early often ruins the seed, especially if it is planted in hot or wet conditions, or it dries out before it is ready to germinate. Storing fresh seed in plastic bags in cool, dry conditions for 2-6 months is recommended. To determine when the seed is ready to germinate, a few can be planted or placed in damp vermiculite in another bag. Or if numbers permit, one can be cut open to observe the development of the embryo. From my experience, very few varieties of cycad seed are ready to germinate after they come off the plant.

The most common mistake I have made is keeping the seed too damp and planting the seed too early. If your seed start to dry out (check every two weeks for rattlers), soak the seed again to rehydrate it, then dry it and store it again until it is time to plant.

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