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ASSOCIATED SOCIETIES FOR GROWING AUSTRALIAN PLANTS  
INDIGENOUS CYCAD/ZAMIAD AND PALM STUDY GROUP  
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Hi Friends,

Despite a few setbacks the cycas booklet seems to have taken off and according to PASCOA along with John Dowe's palm book, it raised society book sales to a high extent. This goes well for the next one which is a companion book, based on the articles in Australian Plants 101 Volume 13 but with an entirely new set of photos emphasizing the zamiads only. This work required the expertise of a fine botanist, and I found that in Dr. Laurie Johnson. He states that it must be emphasised that a lot of the 1959 ideas need revision. Of course his new colleague Ken Hill has now taken the serious study of the cycadales. I wish him well and hope that strong conservation ideas will come out of it.

Remembering my correspondent and friend John Maconochie, it is hopeful that the great work he pioneered with Cycas will also be continued and we now have Sharon Chérgwin of the Northern Territory to fulfil this.

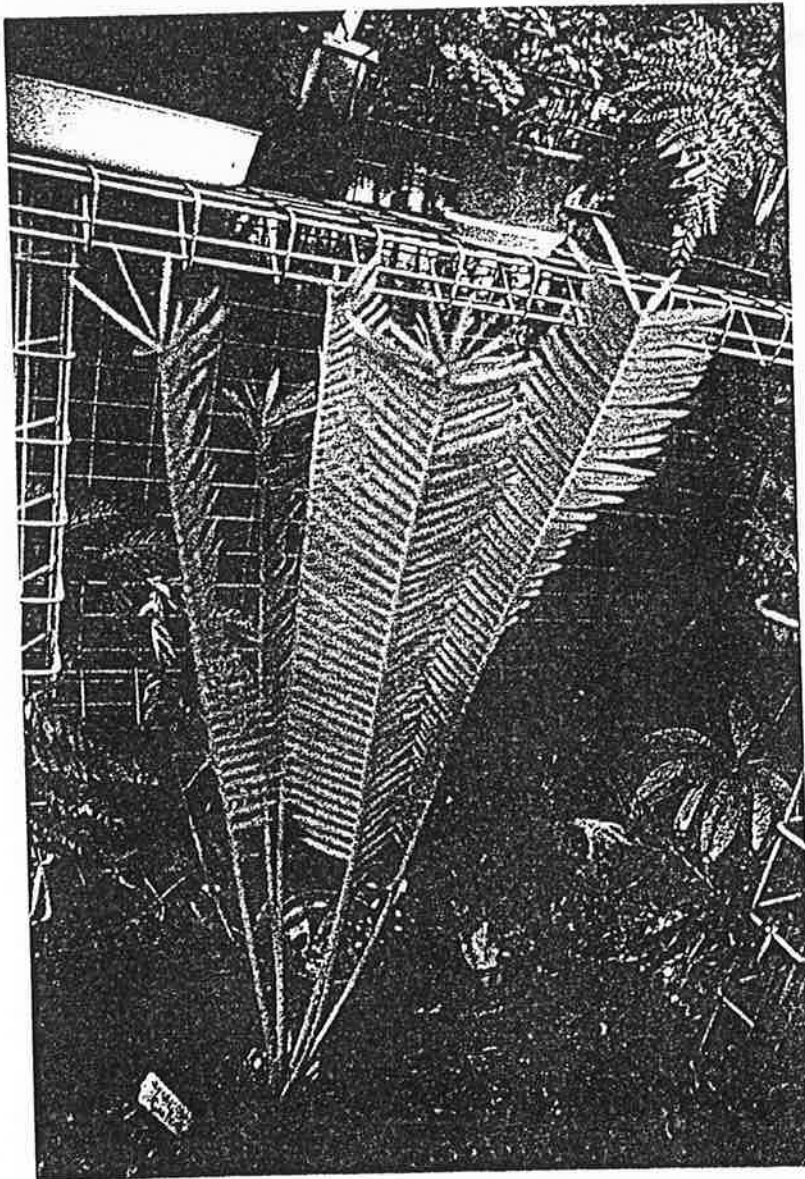
#### CYCAD PROPAGATION

Now that the era of growing cycads from seed is at a peak and large quantities of our cycas seed is being exported to collectors everywhere, it is time to explain methods of germination tried and proven here. Like all the cycadales, the genus Cycas is slow to germinate and can be encouraged to do so.

Viability of seed is generally ascertained by applying the 'floater test'. If the embryo is dead or shrunken, the envelope or space around the seed will cause it to float when placed in water. Viable seed sinks immediately. This test, which is 90% certain in many seed forms, is not always so in the Zamiaceae, or Cycadaceae. Old seed sometimes floater tested will suddenly germinate in recycled mixtures put aside for other plants. Various methods have been used to lengthen viability, in seed that for one reason or another we have delayed putting down. In palm seed, soaking it in a nutrient solution is sometimes advantageous so experiment being the mother of invention, we tried several methods with seed of the cycadales. It is not always possible for the hobbyist or collector to plant quantities of seed immediately, so if the residue of this is mixed with clean moist sand and peat moss, then stored, germination will occur. The method, is to prepare equal quantities of moist sand and chopped sphagnum moss or moistened peat moss. Moisten again by adding one of the auxin solutions such as containing indolebutric acid, indoleacetic acid or naphthalene acetic acid.

Solution strength to be 10 drops to the litre of distilled water. Place a layer of this mix in a small hessian bag, and then a layer of cleaned cycad ovules. Continue in this fashion till the bag is full then tie off securely and store away from bright light. Auxins are a stimulant to help roots form, so examine each month to check for the splitting of the ovule, or emergence of the radical tap root. Pot up in the usual way.

Uncleaned ovules will sometimes hold their viability until cleaned by soaking the flesh off in water. So by adding a nutrient or stimulant to the water, they can be cleaned of the surrounding fruit and soaked for perhaps an hour in this water before planting out. It was found that this improved and sometimes lengthened the viability of ageing seed where the viability was low. Tepid or warm water is best, but not hot water. I use a product known as GROWTH FORMULA., which is an auzin containing solution for this purpose, when storing seed, and also if putting it down immediately.



Cycas Conferta  
"Chergwin" in  
cultivation

MACROZAMIA MOOREI IN ITS HABITAT NEAR INJUNE - L.P. Butt

A few years ago an idea stimulated us. As members of a large group concerned with the study of our native zamiads. A private grazier living in the vicinity of the large zamiad *Macrozamia Moorei* was approached and a request put that our society be allowed to examine one selectively cull by removal some of the zamiads which had become a worry to him because of their dense thickets.

The grazier, who already was conserving areas of his large station to protect aboriginal artifacts, was entirely agreeable, so only the time and arranging had to be worked out. The day duly arrived the month being July, and away we went very fully equipped with sleeping bags, blankets, eskies of food, rough and tough clothing, adequate tools and a few cameras.

Members were allowed to come in their own cars, but I travelled in a small mini-bus with the Bryant family. We had also a semi-trailer and an end loader, and big hopes to use it. After spending one night under the stars we finally arrived and drove into the homestead area. The grazier met us and I could see he was very dedicated man in preserving aboriginal things but would have to be educated into knowing the true value of his zamiads. We were taken to cave art sights on the property, and then to country with veritable thickets of the *M. Moorei*.

Selective culling is quite a business in itself and as the terrain was grey wallum sandy loam, this made it easier. On average the very mature plants were around two to three metres in height and in most cases many more females than males. My camera recorded much of the action, and after working out just which plant to remove (A) For their aesthetic beauty and (B) For the benefit of the plant beside the Zamiad, then levering it into the hole. The dislodged plant was then trimmed of its lower fronds, picked up in the scoop of the machine and transferred to a place on the semi-trailer. Working all the afternoon we soon had sufficient for the load and as our private car people arrived and busied themselves with mostly collecting seed which in July was abundant. When the action was over it was evident that the difference we made to that colony was negligible, but the remaining thicket would benefit. Now was the time for study and *M. Moorei* is a wonderful plant for this purpose. One very old zamiad had toppled ages ago, and 13 of our members were photographed beside the trunk. The largest one I saw was a giant about 60 cm's in caudex thickness and some 3 to 9 metres high.

News from our grazier friend was that there was a hillside colony of a different species also on his property so many of those present went to investigate. I saw the resultant plants brought back and despite popular opinion at the time which was that this small caudiced zamiad was a cross between *M. Moorei* and *M. Lucida*, I am non-committal about it as I feel it could well be just another form of our parazamias and needs more study. This farmer admitted that cattle around the homestead often ate old fronds with no ill affect but it was a different question with wild cattle over which he had little control. They got access to the newly arising young poisonous fronds after a burn off.

He said that the poison did not affect the meat, and if they got there in time at least the cows were rescued and put on supporting wires around the fences he also said they continued to produce good calves. We emphasised the antiquity and botanical value of the zamia, the horticultural uses of the fronds, the uses of its starches and in the case of the cycadaceae the medicinal value of its gum. After we departed I believe he had a greater respect for these fossil giants than before.

What a weekend to remember, and what a journey home with that great load. I travelled in front of the semi, and had hysterics every time we thought the air brakes might fail. All plants went to good homes within the society, mostly sold to augment costs of hiring our equipment.

#### THE ELUSIVE AUSTRALIAN FISH - TAIL PALM

*Caryota rumphiana* known to occur in New Guinea, Indonesia, and also Malaysia, was later discovered in the low monsoonal rain forests of the Cape York peninsular, where Baron von Mueller described it first as being distinct from its australasian cousins by way of having longer flowering branches. This difference has since not been verified, so the variety he gave it is not recognised and tropical North Queensland is now included in its habitats according to David Jones it mainly occurs north of the McIlwraith Ranges.

This palm is not readily seen in a lot of collections being passed over for the better known *Caryota urens*. However it will adapt well around our S.E. corner and to about mid-coastal N.S.W. It likes very well drained organically rich soil responds well to composts, and must be treated as an understorey palm for a few years. The flowering inflorescence can vary considerably being from 1 metre to two metres in length with a 50cm to 60cm flowering head of mauve backed florets opens to a creamy white. The resultant seed is a purplish black. There is much that is variable in this palms height and in cultivation it reaches about 10 metres, but in habitat this can be about 25 metres 10 to 20 centimetres long half fan shaped, oblique, pleated, bright leathery green, the margins ragged with blunt points. Leaf branches at the base are 3 to 5 metres long and scattered upper branches to 2.5 metres on the trunk. I first viewed a huge specimen in a private garden in Mackay; raised a few seed from it. My own garden plant is now 5 metres high, and distinctly *C. rumphiana*. Other specimens noted in cultivation were at Cairns Flecker Gardens, Rockhampton Botanic Gardens, Brisbane Gardens and Sydney Botanic Gardens. Many of the long time collectors in P.A.C.S.O.A., would also be growing this palm.