

SOCIETY FOR GROWING AUSTRALIAN PLANTS

CYCAD & ZAMIAD STUDY GROUP

SGAP QLD REGION
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Hi! everybody,

This newsletter is put together to correct some of the dated mistakes I have just found in recently re-published papers on cycads by John Thieret known as the "Economic Botany of Cycads".

Also to give my version of the valuable correct information regarding the economic uses apart from ornamental, given to our indigenous cycadales. Published in 1958 originally, the information on nomenclature was probably very to the point but in 1959 Dr. L.A.S. Johnson of Sydney Royal Botanical Herbarium also published papers which supercede and clarify the genus in Australia.

John Thieret's papers are however extremely valuable for the information about the products and uses that could be put to our cycadales, especially from terrain where they allegedly cause trouble to primary industries.

I would like to commend the Cycad Society of America for getting these papers re-published, but also feel that some of the dated nomenclature could have been re-checked, as once published, it becomes gospel to many people.

Correctly, according to L.A.S. Johnson, there are three families. Cycadaceae which consists of one genus only, the Cycas. This genus in Australia has a possible 12 known species and with a probability of crosses also.

Zamiaceae, which consists here of Macrozamia typical and its section Parazamia, Bowenia which has two species and of course Lepidozamia which also has only two species, one occurring in the sub-tropics and the others in the tropic zones.

The third family group Stangeriaceae does not concern us as it occurs in Africa.

For many years to the present day the most common mistake was to call *Macrozamia communis*, the primary cycad of New South Wales, as *Macrozamia spiralis*.

The real *Macrozamia spiralis* of course is now more correctly known as *M. conalipis* occurring west of Sydney.

Macrozamia denisonii is now also synonymous and becomes *Lepidozamia peroffskyana*.

On a happier note, let me list a few of the very valuable pointers about our cycad products, many of them not very clearly seen even by the eminent Professor Chamberlain.

According to John Thieret in his "Economic Botany of Cycads" starch to be used as commercial starch and starches used as sago derive from the stems (caudices) of certain palms, i.e. *metroxylon* and caudices of certain cycadales i.e. *Cycas*, *Zamia* and *Macrozamia*. This stem - sago or starch should not be confused with starches that come from seeds and tubers.

The process of extracting stem - sago is very interesting and several relevant points are noted here.

The cycas must have seeded and be at a period just before the emergence of new fronds from the apex. One anonymous source writes that the plant is felled close to the ground and divested of fronds and outer layers of the caudex. Only the inner core is extracted, sliced into thin circular discs and dried on mats in the sun. When crisp these are then pounded into a flour and mixed with water.

This gooey substance is placed in pots until it settles to the bottom or sticks to the pot sides. The liquid is then drained away, the residue remaining is tossed and stirred until it forms into the familiar pellets we know as sago. These pellets are then dried, steamed, and passed through various sieves to grade the sago. Another very interesting point which speaks volumes for the conversation of the Arnhem Land cycas species. Are these facts that the seed of cycas is cleaned of flesh, and the kernels roughly pounded for several minutes and dried in the sun. They are then placed in a dilly-bag at a water stream and allowed to soak in running water for about one week, then dried, and pounded to a paste and baked as cakes beneath ashes as is much of the aborigines diet.

It has merit because this food will not deteriorate and can be kept for long periods in arid country where "walkabouts" and ceremonies take place.

Reports are that it is used in Arnhem Land for ritual occasions the cakes are blessed and offered to the "ranga, the sacred totemic object, by the "Dalkarra" mirri who gives it the sacred names of the totem.

According to John Thieret's papers, the young emerging fronds of the cycas here, and in other parts of the world have vegetable value.

The tender baby fronds of circinales are cut up, and boiled in several changes of water before consumption.

These fronds normally are very highly toxic to cattle, and from early colonial reports on the matter have caused rheumatism to the joints of humans unwise enough to try to cook and eat them.

Although we have many accounts of the flour taken from the seeds being eaten as staple diet by our aboriginals, most of the clear information seems to be from treatment of overseas species.

The Singhalese recipe being to soak the cleaned seed some 24 hrs., when softened they are pounded into a flour by a wooden mortar. The flour is sifted and pounded further until a white fine texture develops. Made into dough it is shaped into cakes and baked into crumpet-like biscuits. Australian aborigines use several soakings and frequent changes of water before they dry the flour and knead it into cakes.

It will of course be noted that it seems in all cases reported that today the flour cakes and porridges eaten are used as emergency food only and only as staple diet by primitive tribes where other flours are not readily available.

Reports concerning early colonial days in Australia say that *Macrozamia communis* (Burrawang) was used as a staple diet by New South Wales Aborigines and *Macrozamia riedlii* of Western Australia was once part of the diet of the Western Australian tribes.

Professor Chamberlain did state that prior to World War I a high quality starch was obtained from seed of *M. riedlii*. This industry did not last long between the wars.