

INDIGENOUS
CYCADACEAE AND ZAMIACEAE

LEPIDOZAMIA PEROFFSKYANA

LEPIDOZAMIA HOPEI

MACROZAMIA

SECTION MACROZAMIA:-

MOOREI

RIEDLEI

MACDONNELLII

MIQUELII (VARIABLE, SEVERAL FORMS)

COMMUNIS

DIPLOMERA

MACROZAMIA

SECTION PARAZAMIA:-

PLATYRACHIS

LUCIDA

SPIRALIS

SECUNDA

HETEROMA

STENOMERA

PAULI - GUILIELMI (FOUR FORMS)

FAWCETTII

BOWENIA SPECTABILIS

BOWENIA SERRULATA

CYCAS:-

MEDIA

CAIRNSIANA

KENNEDYANA

NORMANBYANA

PRUINOSA

ARMSTRONGII

ANGULATA

CALACOLA

BASALTICA

FURFURACEA

INFORMATION STILL
SKETCHY ON MOST
SPECIES HERE.
POSSIBLY TEN MORE
UNNAMED SPECIES ALSO.

BOTANICALLY SPEAKING

CYCAS ONLY GENUS REALLY
IN FAMILY SECTION
CYCADACEAE.
OTHERS ZAMIACEAE
AND STANGERIACEAE

The Cycadales group of plants occur in several countries, and of those species indigenous to Australia several are now declared noxious because of a toxic substance peculiar to all cycads. This poison contained in the seeds and leaves is believed to give the sickness "wobbles" to cattle. This is, of course, correct, if an animal is hungry enough to tackle the hard shiny fronds. The seed berries of only a few species could be called accessible to cattle.

Because of their immense botanical interest and the very poor quality of the country they are mostly found on, it is very unfortunate that some authorities and many agriculturalists recommend the poisoning of these plants.

The Cycad family is made up of a considerably reduced number of survivors of a group whose fossil representatives have been traced back to the period known as Devonian, approximately 300 millions years ago, thus making the group probably among the oldest plants on earth today as they were as prevalent as the ferns in the ancient fern forests of the age before the dinosaur roamed. Although they are very palm-like in appearance, they are very close to ferns and the conifers in botanical rating, and the botanist, Professor Chamberlain, remarked that he believed they are ferns that had learned to develop seeds rather than spores. (The Living Cycads - Chamberlain). This opinion, however, is not ~~shared~~ *SHARED* By *all* botanists today.

Plants are distinctly male and female having different shaped cones or seed stems for each sex. The words sperangia and sori are associated with the pollen of the male plant as in ferns showing just how closely allied these plants are to ferns.

Aborigines have used the great root, the caudex, and the starchy seeds as a food for many, many years. This is done by washing out the poison, grinding a flour from the pith, and roasting it. In Arnhem Land the genus *Cycas* is used in this way, as also is the *Bowenia* of Eastern Queensland and the *Macrozamia* of both N.S.W. and Queensland.

This wonderful group of plants throughout the world has great commercial value, producing a fine quality starch, a good commercial glue, and a good quality flour. Indeed, the famous Mexican tortilla cakes are made by cycad flour, and sago is made from the Chinese member of the family, *Cycas revoluta*.

Another indication of their close botanical affinity to ferns is that the leaves are referred to as fronds and are circinate (rolled up on their axis from base to apex, as in ferns), in at least two of the genera.

Australia, as its contribution to the Cycadaceae, has the genera *Bowenia*, *Macrozamia*, *Cycas* and *Lepidozamia*. Although these are sometimes cleared from cattle country or just poisoned by authorities, there is nothing to prevent them being used as garden ornamentals, (Preservation by Cultivation, remember?) for which they are ideally suited. In appearance many of them are equal to many palms and grow to such a beautiful symmetrical shape without taking up a great deal of room in a small garden.

For many years there was a photograph of one species in a Tamborine Mountain hotel which was called *Macrozamia denisonii*, but which is now correctly named *Lepidazamia peroffskyiana*. This was reputed to be thousands of years old. Unlike the tree fern, their trunks are made of shrunken leaf bases in a distinct pattern, and sometimes the "rings" of these can be used to determine the age of the plant.

The so-called "Zamia" of Central and North Queensland from Rockhampton north is probably *Cycas media*, a species bearing a stout trunk or caudex and a crown of dark glossy fronds. The large seeds of the female plant are carried around the margins of a spearlike inflorescence. This species makes a fine tropical effect if planted in a home garden in North Queensland where it is easy to obtain. Seedlings are generally prevalent around the parent plant but are notoriously slow in growth. Unfortunately, this is true of most of our Cycad species, but they make fine potted plants.

In the Gympie district of Queensland we found a hillside well covered with a species, probably *M. niquelii*. These plants grew on short thick trunks crowned with symmetrical circles of hard glossy fronds. Hundreds of juvenile seedlings were evident also. A few plants had developed the ripe female cone and here is where its real beauty lies. The cone is composed of brilliant orange fruit about
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the size of a small walnut partly protruding from an array of green shieldlike cone sections. Each shield has a green protruding spike which is quite a deterrent to animals trying to consume it.

There has been quite a lot of confusion in the nomenclature of the Australian species, but according to the latest botanical information, now this has been rectified in all except the *Cycas*.

Previously, I had noticed quite specific differences in the N.S.W. species *M. spiralis* and the *M. spiralis* of the Queensland regions. Now it appears the corrected classification states that *M. corallipes* (Hook) is really *M. spiralis* the so-called N.S.W. *M. spiralis* is correctly *M. communis* and the Queensland plant is *Macrozamia lucida*. A botanist states that in the genus *Macrozamia* (Miquel) there are six species and a further eight in the section known as *Parazamia*, *Parazamia*, being actually a sub section.

It is indeed wonderful to know of the fine work on taxonomy being done on our Cycadales.

Another genus of particular interest is the *Bowenia*, possibly the daintiest of our cycads. There are two species, *Bowenia spectabilis* with smooth leaf edges, and *B. serrulata* which has serrated edges. The latter occurs in the vicinity of Byfield quite near Yeppoon, Central Queensland coast, and is known locally as "Byfield fern". If taken in the juvenile stages or grown from seed both plants make attractive potted specimens, the leaves being fernlike and having no visible trunk. This makes the species more akin to ferns than most species in Australia.

In cultivation, *B. spectabilis* requires half shade and fairly moist conditions. However, as *B. serrulata* grows in Eucalypt forests it will stand a greater amount of sunlight and drier conditions.

Two more species I have seen in their natural habitat are *Macrozamia moorei* and *Lepidozamia hopei*. *M. moorei* occurs around Springsure, Carnarvon in Central Queensland and on the slopes of Mt. Morgan. This species was poisoned out extensively over the years. Lastly I mention the tallest of our indigenous Cycads, *Lepidozamia hopei*, which can reach a height of 20 metres and is a plant of our wet tropics.

ONE MAN'S INFLUENCE

G.W. Thorpe.

On an exploratory hike during a week-end excursion to 'Myravale', a large cattle property near Gympie, we emerged from a mountain-side rain forest area into a patch of *Macrozamia miquelii*.

This cycad, with very short, thick trunk and long palm like leaves (but not of the palm family), occurs only in a limited area of Queensland, including the ranges of West Gympie. At this site it occupies an area of approximately one hectare, near the mountain top, and exists in company with a magnificent stand of *Zanthorrhoea australis*, many specimens of which are so old that walking under the 'blackboys skirts' is possible.

We eagerly examined the *Macrozamia* plants and found male and female fruit (on separate plants), and obtained several viable seeds in the vicinity.

At camp fire 'get-together' that night, while discussing the day's highlights, Len Butt, an acknowledged *Macrozamia* expert, gave a gripping account of the occurrence and usefulness of these plants around the world. He particularly mentioned that the female fruit of *Macrozamia miquelii*, as well as being recognised world wide as one of the most attractive within the genus, also was, in days gone by, one of the staple foods of our aborigines.

Among graziers, however, *Macrozamia*s enjoy a bad reputation because of their effect on cattle, who are induced by scarcity of other feed, to eat the plant, and suffer a severe and enduring condition known as 'staggers'.

Mr and Mrs Ted Carr, the property owners, had accepted our invitation to attend our 'camp fire and coffee' night and were intrigued by the new light thrown on their *Macrozamia* by Len. Where previously they were quite happy to rid their property of this potentially dangerous plant, they now propose to fence in the area and preserve the plant.