ANPSA PALM & CYCAD STUDY GROUP NEWSLETTER

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Extracts from other journals & newsletters : The December 2009 issue (no.105) of 'Palms & Cycads' contains an article, pp. 28-31, showing some of the varied shapes of pollen grains of some Australian palms. Researchers from ANU & James Cook universities are also studying Australian fossil palm pollen, come of it 60 million years old. In the same issue there is a shot of a 4.5 m *Cycas media* ssp. *media*, thought to be 600 years old, on Hayman Island, & images of a young *Livistona humilis* in cultivation & of a large *Macrozamia macdonnellii* at King's Canyon, Watarrka N.P., Central Australia. The March 2010 issue of the same journal has a 2-page lyrical review of the new edition of 'Genera Palmarum'. The original 1987 book by Dransfield et al. looked most imposing & had the authority of Kew Gardens famed palm taxonomists behind it, but I must admit I rarely used it, as it dealt with all the palm genera, but omitted data on the species. The new edition, with Dransfield & 5 other taxonomists, not all from Kew this time, has a much longer (129 pages versus 73) section on palm biology, & the pictures are now in colour, Since 1987 7 new genera have been described, & 2 previously described palms have been given new genera ; *Veitchia merrillii* , commonly grown in tropical Australia, has become *Adonidia merrillii*, & a Samoan palm is now *Solfia samoensis.* Each genus now has a distribution map, & for your $200 plus you get over 700 large pages of erudite & glossy book. I don't think I will indulge myself as most of the new genera are well covered in Dransfield's 'Palms of Madagascar'. Might start saving for a trip to that fabulous island instead.

The June issue of the same journal has a 3 page article by Mark Wuschke on the rules for importing seeds to Australia. Allowed seeds can be found by googling 'Aqis Icon', & following the prompts. If your seed is not on their list, you can apply to Biosecurity Australia to have it added to the list. This is free, but takes a lot of time, much paperwork, & documentation showing that the species is unlikely to become a weed. Their ideas of common sense may not match yours, & often clash with mine. The same issue contains an article on the cycad blue butterfly, with differing viewpoints by Mark Wuschke & Will Kraa. I have mentioned before (newsletter no. 95) that I agree with Will that this native butterfly has probably become a major pest in S-E Qld in recent years due to North Qld strains being introduced that are pre-adapted to living on *Cycas* & *Lepidozamia* species, while the southern strains were adapted to hunt for *Macrozamia* species. Will & Mark recommend checking new fronds between October & April twice-weekly for the tiny white eggs, & spraying with any contact insecticide, or with Rogor. I know Will does what I do, in practice, & sprays about every 3 weeks with Crown (acetamiprid dissolved in dimethyl sulfoxide) or Procide in alternation. Both are safe for humans & animals, more so than Rogor (dimethoate), & have both systemic & contact action. Confidor is safe for humans, but is slower to act, & as a systemic mainly relies on root uptake, so I don't use it on this pest. I have a very good friend who owns a pesticides & veterinary chemicals manufacturing company, who keeps me posted on what Monsanto et al. never tell you on their web sites & product sheets. Procide is a very fast-acting contact insecticide with some residual effects, & is a synthetic pyrethroid which is light stable & supposed to stay active for 2 weeks (rain permitting). It also has some miticide activity due to its major component, 80 g/l of bifenthrin. Too much pyrethroid affects root growth of some plants, so I prefer to use Crown, which is a systemic based on a nicotine derivative, very safe indeed for humans, & is absorbed by leaves & roots, like Rogor. Crown kills the butterflies in flight, if the spray reaches them, & is also sudden death on ants. Both Crown & Procide are marketed in Australia by Scotts (www.scottsasiapacific.com) & their great drawback is their expense at initial purchase. Both can be used at low rates, 2.5 ml per 10 l of water, so they are not expensive on a daily usage basis, just dear to buy as 1 l is the minimum for Crown & 500 ml for Procide. I have used Crown on a great range of plants with no ill effects. Procide can also be used as a soil drench against cutworms (lawn grubs), but the rate rises to 12 ml per 100 square metres , to be followed by 5 mm of sprinkler irrigation or equivalent. My last litre of Crown cost $ 350, still the current price, & Procide $ 130, both dear compared to my favourite herbicide, paraquat, at $ 145 for 20 litres. Paraquat is deadly if you drink it, but is otherwise safe to humans, as it can't penetrate skin. It does sting open cuts & such. It is very convenient to use as it only kills green tissue, so you can spray around brown trunks of shrubs etc, & if you hit a wanted plant you have 10 minutes or so to rinse it off with water. It is activated by bright sunlight & in 3 hours or so sprayed areas turn a khaki shade, so you know where you have been, unlike Roundup (glyphosate) which can also linger for up to 7 years in sandy soils.

As I mentioned in Newsletter no. 95, I have not seen damage to my *Bowenia* plants, & nor has Will Kraa in the article cited above. This may be partly or entirely due to me, & perhaps Will also, keeping our bowenias among dense vegetation in substantial shade. The butterflies definitely like sunny conditions, & seem to prefer *Cycas* species to all others, being deeply fond of *C. revoluta*. My small lepidozamias are also in shady spots, & have shown little damage.

In the same issue Mark & Will air their views on what is normally a less serious pest, the Palm Dart Butterfly (*Cephrenes augiades*), native to our wet tropics & subtropics, but now present in Perth, Sydney. Adelaide & Melbourne due to movements of ornamental palms. 'The butterfly is bright orange with a few small black spots, {with} wings

about 4-5 cm in total width. There are both pale & dark forms. The caterpillar is a pale almost transparent green, up to about 5 cm in length with a black spot on the head. It feeds mainly at night. By daylight it wraps itself up in a nest made by sewing together adjacent palm leaflets with sturdy strands of silk.' They very rarely kill palms, but make them look unsightly, especially with small specimens. They attack virtually all palm species, especially native *Livistona* species, & even the harsh leaves of *Bismarckia & Brahea.* All the usual contact insecticides, & Rogor, give good control. Will points out that the small native wasps give almost perfect control in his large palm nursery, which must be why I have had no problems with this pest. I have lots of wasps, & ignore them unless they build nests near doorways into my house. Will concludes, there is sometimes a little damage 'late in autumn when the wasps stop producing offspring & no longer need to catch caterpillars to feed them.' Adult wasps live on nectar.

New editor needed soon : Since I will soon be moving to a less suitable area for growing most palms & cycads, I would like to ask if anyone would like to take over the job. I could still contribute snippets of information.

Best wishes to everyone for the new financial year, which also looks like being a drier one, Hope we don't go back to the other extreme (I know most of WA never really left the dry times). At present, the Russian & Ukrainian scientists might be right here : global cooling is setting in.

Kerry.