

ASGAP BRACHYCHITON & ALLIED GENERA STUDY GROUP
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Membership matters : Subs are due as at 1-7-'98; still \$5 within Australia , \$10 overseas. It is best if overseas members send notes (US\$ or A\$), or cheques if need be. Don't send money orders, as bank charges eat up 80% of the value on \$10.

New trees : A couple of people, particularly a Sunshine Coast nurseryman non-member, have given me *Brachychiton* plants &/or grafting material, in recent months. Several are probably just unusual forms of *B. populneus*. Among those securely grafted are:

- * *B. acerifolius* 'Newmani', the clone that flowered well as a 2 & 3-year old that I've mentioned previously. Still has all juvenile foliage.
- * orangy *B. acerifolius*
- * weeping form of *B. populneus*. Said to weep 10 feet at ends of branches once mature.
- * a different *acerifolius* x *bidwillii* hybrid.
- * *B. bidwillii* 'White Star', a white-throated palmate leaf form (pink).
- * "*B. sp. Monto*"; *populneus*-type judging by the foliage.
- * *B. sp.* from Shark Bay, W.A.
- * allegedly large-flowered *B. discolor*.
- * allegedly dark-red-flowered *B. discolor*.
- * *B. muellerianus* from N. Qld.
- * *B. diversifolius* ssp. *orientalis*, from Cape York.
- * *B. collinus* from Mt. Isa.
- * *B. acerifolius* superior-flowering clones DPI1, DPI2, DPI3 & Stanmore.
- * several *populneus* types.
- * a nameless *B. bidwillii* hybrid.
- * *B.-x vinicolor* 'Kholo'.

At this rate I'll have a *Brachychiton* forest before long. As of late June, my seedling *B. spectabilis* plants still have some leaves, but my grafted ones are leafless, as are seedling & grafted *B. megaphyllum* & *B. sp. aff. megaphyllum*. The N.T.-Kimberleys *B. diversifolius* seedlings are well-leaved.

Aseasonal flowering: Almost all my *B. bidwillii* are spring to mid-summer flowerers; 1 clone flowers all year without ever going deciduous, unlike the others. This year all the northern inland (Leichhardt form) clones started to flower in mid-June.

Other genera: As always, my *Lysiosepalum involucratum* are doing well, & just starting to flower. *Thomasia macrophylla* failed to survive a very hot summer. Purchases from Adelaide SGAP in Sept. '98 are all looking fine so far. They included 2 *Thomasia sarotes*, *Thomasia pygmaea* (yes, isn't it a miracle it is still alive.

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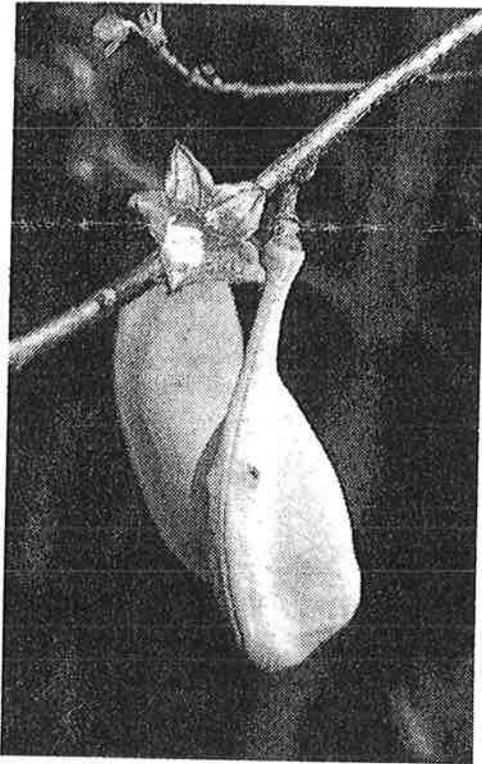
Probably not for long.) white & pink *Lasiopetalum behrii*, *L. baueri*, & a blue-flowering *Halgania*. An older *L. behrii* is doing well.
A friend's *L. behrii* flowered well last spring as a 3-year-old.

Brachychitons as bush tucker: With permission I include an article from the Feb.'98 issue (no.5) of 'Australian Bushfoods' magazine by John Wrench, titled 'The good oil on kurrajongs'. John is a retired clinical pharmacologist. He had not heard of the caustic sap round *B. viscidulus* pods. I suspected oxalate, as the skin damage felt similar to that I had suffered after processing *Caryota mitis* seed. John said he'd noted oxalates were often present in plants adapted to very arid or windy places-- *B. viscidulus* qualifies on both counts. He also mentioned the danger, particularly as regards stones in the kidney, of ingesting raw oxalate -containing foods such as the "bush-foods-trendy" Warrigal Greens.

Kurrajongs

changes in the cyclopropenoids during heating, at the least stable

PHOTO: John Wrench



points in the molecules, that is, where the unsaturated bonds occur. Depending on the circumstances, any number of breakdown products may be formed, but the important thing is that the cyclopropenoid ring is broken, with fragmentation of the long chain. As simple as that. In the absence of other irritant or toxic components, it is reasonable to assume that the cyclopropenoid moiety is entirely responsible for the gut problems. Most people with normal gut and liver/ gall bladder function can cope with a wide range of edible plant seed lipids taken in reasonable quantities, with the exception of variants, such as ricinolic acid in Castor seeds and some of the highly unsaturated oils. Which leaves sterculic acid (et al) in the dock.

By the way, if the roasted seeds are converted to a seed meal by some kind of blender or coffee grinder, the interface with the air is greatly increased, exposing the various components to further risk of oxidation and rancidity, carrying as they do the catalysts formed during heating. Storage in a sealed container in a freezer or refrigerator is essential. The process of roasting (any seed) produces embrittlement which facilitates disintegration. The temperature and duration of roasting, however, are determined by the end usage. Seed meal or flour requires about 150°C for 15' or so, whereas a coffee substitute requires about 180°C for only as long as it takes to darken sufficiently. But **WATCH IT!** For fun, the seeds can be treated like popcorn by roasting briefly in the lid of a Bedourie oven on hot coals, or in some civilised manner!

The other problem with Kurrajong seeds is probably more obvious - the matrix of stellate hairs in which the seeds are nested in the follicle or pod. The traditional, careful strategies of the Aborigines, and the consistent cautions of the various authors, all point to the need to avoid personal contamination during the removal and cleaning of the seeds. The physical structure of the stellate hairs is impressive - fine, long; sharp spikes, lignified and therefore tough, but light enough to remain airborne. Delicate human tissues, even tough skin, but especially eyes, mouth, and respiratory tract are readily perforated by the hairs, giving rise to irritation, pain and infection. Lodgment of the hairs in the eye can lead to inflammation, ulceration of the cornea and infection, to say nothing of in-

tense pain and lacrymation. The several references to blindness in the literature, while not authenticated, are a warning. However, there are no sinister chemical agents involved - only devilish cunning spikes. It hardly matters what method is used to extract the seeds from the follicles, (all the authors have a favourite) provided that the generation of airborne hairs is minimised and personal protective measures are taken. It certainly helps to top and tail each follicle by secateurs, facilitating the opening of the two lips of the naturally split pod. Rubbing the seeds between leather gloves or on a coarse sieve is useful, but if you are worried, wash and rinse the seeds, allowing them to dry on a sieve. Now you know why it is practically impossible to buy Kurrajong flour. In conclusion, I should like to thank several people who gave kind help towards preparation of this article. Professor Trevor Clifford sent me copies of some extracts of overviews by Professor R. Hegnauer, University of Leiden, Holland - *Chemotaxonomie der Pflanzen* Vol. 3, 1964 and Vol. 6, 1973 (Birkhauser Verlag, Basel and Stuttgart). One C. J. Wrench, lecturer, Griffith University, Queensland Conservatorium of Music, was pressed to translate the texts over dinner. Associate Professor John Bourke (University of Queensland Dept. Physiol. & Pharmacol.) obligingly discussed the gut issues, and the effects of heat on the seeds. Dr. Gordon Guymer, Queensland herbarium discussed the nature of the stellate hairs. It is worth remembering that the name of the family 'Sterculiaceae' is derived from *Sterculus*, the Roman god of dung heaps and privies. Happy days.

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