

**ASGAP BRACHYCHITON & ALLIED GENERA STUDY GROUP**

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**Mea Culpa** : Once again I am cramming all newsletters into the last month of the financial year. Can't blame it on the computer this time, but have waited until flowering etc. information was in. I had hoped to get web sites set up for both study groups by now, so that I can direct people to the relevant parts of the sites for 2 main purposes :- (1) to display colour images without the cost of colour photocopying, & (2) to set up fairly static information on what species exist, & their

horticultural pros & cons.

I should have this done some time in July or August 2006, roughly a year later than planned. I will be grateful to receive email attachments of pictures of any brachys, or their relatives, for possible inclusion in the web site or a future book on the genus. For web sites images need to be fairly low on pixels, say 300 x < 300, while for books they need to be say 4 megapixels. I can easily edit images smaller, & can convert analog (film) images to digital, although at a cost, which I am hoping to greatly reduce in the near future if SGAP-Qld. purchases some relevant equipment.

For each study group I have edited items so that, for instance, all the weather bits are in the early June newsletters, for easier reading.

**Nomenclature** : To be pedantic, all scientific names should be in italics, & all cultivar names in quotes, but I have mostly only done this to avoid confusion, or for the first appearance of a cultivar or species in this newsletter. I do follow the convention that species names are always lower-case, & cultivar names start with a capital letter. An 'x' before a 'species' name indicates this scientific name refers to a known (usually natural) hybrid. Brachychitons are unusual in having quite a number of hybrids with valid scientific names.

**Membership Matters** : Subs are still \$5 in Australia & \$10 for overseas, & run from July in one year to June in the next. The 1-line table below shows your status as per my records, where a tick means paid up.

02-'03 ✓ 03-'04 ✓ 04-'05 ✓ 05-'06 ✓ 06-'07 07-'08

**Weather & Plant Behaviour** : This last 12 months the incessant drought has really hit plants hard, with many brachys failing to flower unless watered, which most of them could not be. June to mid-October was nearly rain-free, & *Lysiosepalum involucreatum*, *Lasiopetalum behrii*, *L. macrophyllum* & *Rulingia hermannifolia* flowered very briefly or not at all. Brachychitons failing to flower included most flame trees & lace barks, some *B. bidwillii* (first time ever), many northern Australia species (*spectabilis*, *viscidulus*, *tridentatus*, *macrophyllus*, sp. aff. *macrophyllus*, *grandiflorus*, *chillagoensis*, *diversifolius*, *collinus*, *australis*, sp. Exmoor Station & *velutinosus*). Well watered pots of some northern species (*x ochroleuca*, *garrawayae* & *muellerianus*) flowered briefly. Well established hybrids (*x excellens*, *x vinicolor*, *x incarnatus*) flowered near to normally, while younger grafted trees of the same clones did not flower. *B. x excellens* 'Rosalind' flowered normally. Several plants of *B. bidwillii* 'Maroochydore' & 'Clayton' flowered poorly & for only 3 weeks, as did my sole adult plant of 'White Star'. Well-watered 2-years-from-grafting plants of *B. x Jasper Belle* flowered well from mid-September till late February, as did *bidwillii* 'Beau Belle' & 'Large Red'. One clone of 'Jasper Belle' (JB6) kept a trickle of flowers up until early June, despite light frosts from 24-5-06. Another (JB3), which had ceased flowering in late February, has been covered in buds since June 12<sup>th</sup>. (from July 1st, last year, but buds did not open until 15-9-05). Probably heavier frosts in July will bring it to a temporary halt. Almost all of 30 or so different clones of 'Robin Hood' (= *acerifolius* 'Ian' x *bidwillii* 'Large Red') at Merv's, almost all in large pots, started to flower in mid-September, & most flowered well until January '06. His established *bidwillii*s, 'Beau Belle', 'Large Red' & 'Small Red', flowered from early September to late February for the first 2 clones, & for its usual 6 weeks for the third. *B. x vinicolor* 'Clarabelle' flowered well from late October to late December. *B. x roseus* 'Belladonna' flowered for only a month here, but for at least 2 months at Merv's.

Potted plants flowering included *B. muellerianus* (light pinky-apricot, fading darker, 2.0 cm long x 4.2 cm wide; ex Musgrave River Roadhouse), *B. garrawayae* & *B. x ochroleuca*. The first species was flowering for the first time, & the other 2 for the second time.

Species probably too small, or young, to flower anyway, included *B. incanus*, *albidus*, *rupestris*, & the Dundee Beach (top end of N.T.) form of *B. diversifolius*.

The cold weather came early this year, with the first frost on May 24<sup>th</sup>, about a month earlier than average, & 15 frosts since. None below -3 as yet. In 2005 the winter was relatively mild, with only a few light frosts. Last spring was cooler than usual, but still with an occasional hot day, & as with the previous year, the alternation of temperatures seemed to upset my *Dendrobium kingianum* & *Sarchochilus* orchids, & their respective hybrids, most of which flowered poorly. This was followed by some very hot days in early summer, as in S.A., Vic. & NSW.

**A Flowering Surprise :** In early October 2005 my grafted adult plant of *B. sp.* Ormeau, c 8-10 years old, was covered in flowers, mainly male, for 5 weeks. The surprise was the flower colour, which was a distinct butter yellow, or perhaps a more vivid yellow than that. All the pictures I had seen, including several 'possibles' for the sp. Ormeau image included in our field guide to the plants of S-E Qld., 'Mangroves to Mountains' (vol. 1), had white or cream flowers. This species has perhaps the most attractive juvenile leaves of any brachy, & probably the biggest contrast between the juvenile (7-11 long fingers running to a central 'palm' around the leaf stalk) & adult (simple, mango-like) leaves. The crown of the tree is also dense.

**Further plant responses :** I have lost some seedlings, mainly over last winter, which have just rotted off. Probably too wet for too long. They included *B. acerifolius*, *megaphyllus*, *chillagoensis*, *excellens* x itself, *albidus*, *bidwillii* & *garrawayae*. Others treated identically have thrived. *B. diversifolius* likes to be dry over autumn-winter, as does *fitzgeraldianus* & *viscidulus*, even when past the small-seedling stage.

By 1-4-06 most *B. megaphyllus* & *viscidulus* were leafless, & all were by mid-May. Most *B. chillagoensis* (all seedlings), & most, but not all, *B. spectabilis*, were leafless by mid-May. Those with leaves then, still have them. Does not give the *megaphyllus* or *viscidulus* long to store up energy from sunlight, since they did not leaf up until November or later, so I am expecting a very poor flowering next spring (got no flowers this year from either).

**Red Peduncles :** I noticed red peduncles on all *B. bid.* *Maroochydore* x *Jasper Belle* pods, & on the *Large Red* x *Jasper Belle* pods. As previously, only the half of the pod-stalk (peduncle) nearest the pod turned a scarlet colour which faded to pink over 3 weeks or so, & then to brown. That half of the peduncle must be controlled by genes from the pod &/or seeds, & the other half by the plant proper, at least as far as outer colouration goes.

**New Hybrids :** Those raised in the past year, with the female parent listed first, include *Clarabelle* x itself, *bidwillii* *Maroochydore* Form x *Jasper Belle*, *bidwillii* 'Clayton' (a clone of the Bowen area coastal form, with highly lobed leaves, like *Maroochydore*, but lacking the purple-new-leaves & extreme hairiness of the latter) x *bidwillii* *Maroochydore* [the first few leaves are not heavily lobed in the crosses], 'Clayton' x *Jasper Belle*, *bidwillii* 'Large Red' x *Jasper Belle*, *Robin Hood* x *discolor*, *Robin Hood* x *Clarabelle*, *bidwillii* 'Beau Belle' x *Clarabelle*, *B. x excellens* x itself (several parental clones, all pink or red), *Beau Belle* x *discolor*, *Beau Belle* x *Jasper Belle*, *Beau Belle* x *excellens*, *Clarabelle* x *Jasper Belle*, *Robin Hood* x *muellerianus*, *Beau Belle* x *garrawayae*. And, from seed collected at Dundee Beach, 2.5 hours drive S-W of Darwin, the local form of *B. diversifolius* ssp. *diversifolius*. The other subspecies, *orientalis*, comes from north Qld.

**Article :** An article is included that I wrote for issue 2, pages 76-78, of a new gardening magazine, 'Subtropical Gardening'. It was slightly 'jazzed-up' by the editor. The magazine looks as if it will come out every 3 months or so. Issue 2 was early 2006, & I think issue 4 is about to appear. The article does save me repeating some of the basics, for the newer newsletter readers, & the colour pictures, & many more, should soon be on the website.

**Email Addresses :** Anyone who wants to send me their email address, & reduce their sub to \$3 per year, feel free to do so, & I shall send their newsletter by email. My computer insists in putting my email address in red, which photocopies poorly, so I repeat it below with illegal blanks between each word, which will fool it. krathie @ powerup .com .au



Paul Plant FAIH with Kerry Rathie

Few trees in the tropics & subtropics are more typically Australian than members of the genus *Brachychiton*.

They are well recognised as being drought tolerant and are known to handle high rainfall provided they have excellent drainage.

With around 40 species, several of which are yet to be described scientifically, brachychitons are found naturally over most of eastern and northern Australia. In domestic gardens only 4 species are widely grown, namely *B. acerifolius*, *B. discolor*, *B. populneus* and *B. rupestris*; with the shrub-like *B. bidwillii* gaining more popularity in Queensland.

The first 4 are medium to large trees in high demand for large gardens and public parks, and are frequently exported to overseas tourist resorts.

For small suburban gardens, *Brachychiton bidwillii* and its various hybrids make ideal specimens with showy flowers and smaller dimensions. They may not be as stately or effective shade producing trees compared to other species (such as *B. discolor*) however they are worthwhile plants for the garden and landscape.

Brachychitons are known for their variable foliage and flower characteristics. For example, seedling grown flame trees (*B. acerifolius*) can flower with no foliage, full foliage, or somewhere in between, with flowers in small or large clusters. Most flower for several weeks. The size and colour of individual flowers varies between trees. Orange shades are more common in trees from North Qld.

Whilst native purists may recommend only pure species should be grown, it is also well accepted that most gardens have a mixture of ornamental plants that are hybrids or cultivars of species.

Pure species are said to be more robust and hardier for the local climate and assist in preserving the gene pool of Australia's flora.

Hybrids are said to gain the benefit of 'hybrid vigour' for improved flowering and shape. The sprawling habit of *B. bidwillii* is made more acceptable to home gardeners and professional landscape designers with thanks to hybridising.

Unnamed hybrid - new hybrids are constantly being created.

The blossom in focus.



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When space is limited, look for small trees. Small trees however may not create much needed shade for the tropics and subtropics.

Large trees are vital for the amenity value of the suburb and are more pleasing. Large trees can make a greater impact on the aesthetics and value of a property.

Brachychitons are ideal substitutes for spring flowering blossom trees such as plums and peaches, and are reported to flower a little longer than traditional 'temperate' blossom trees.

These natives are obviously more suited to our climate and soils.

A grafted hybrid or species cultivar will guarantee identical flower characteristics in all plants. Growing conditions and rootstock (the plant on which it is grafted) however may affect dimensions and growth habit. Root systems of the grafted cultivars will be no more of a problem than those of *B. acerifolius* or *B. populneus*.

A grafted hybrid will flower much sooner for you than a seed grown tree.



The *B. spectabilis* tree. 'Robin Hood' will be released soon with its impressive red clusters.

All brachychitons flower best in full sun, although *B. bidwillii* can flower well in light shade. The cause of a flame tree flowering only on one side of the tree is believed to be due to the other side getting too much shade.

- these plants have minimal fertiliser needs once established - however they respond to feeding and this can be used to encourage rapid growth when young. Excess nitrogen may reduce flowering.

- adapted to a wide range of soils. Saline soils are probably not suitable.

- not significantly affected by any pests or diseases, but may suffer the attentions of leaf-roller insects in autumn. Young specimens can be attacked by grasshoppers.



The rootstock (base part of a graft) is a seedling growing in a pot. It is prepared by cutting at the correct angle.

Attractive red-flowering hybrids between a selected flame tree (*B. acerifolius* 'lan') with very large leaves and flower trusses, and *B. bidwillii* 'Large Red' (similar flowers to 'Beau Belle', but darker, on a smaller shrub) are currently being evaluated. One or more of these clones may become popular in future years for landscape use. Both 'Beau Belle' and 'Large Red' are clones of the far northern form of *B. bidwillii*, with almost unlobed leaves and flowers to 5 cm, as against the deeply lobed leaves and 2 cm flowers of typical southern forms.

**Some recommended cultivars and hybrids to grow.**  
**All those listed can take moderate frosts.**

<i>B. roseus</i> 'Belladonna' and 'Jerilderie Red' ( <i>B. acerifolius</i> x <i>populneus</i> )	Mid-pink for a few weeks in October. Heavy hanging clusters.	Usually evergreen tree to 12 m
<i>B. bidwillii</i> 'Beau Belle'	Cerise-red. Flowers on trunk and branches	Flowering period up to 3 months, can be longer in mild seasons
<i>B. 'Clarabelle'</i> ( <i>B. acerifolius</i> x <i>discolor</i> )	6 cm purple-pink	Flowering period 2-3 months
<i>B. 'Griffith Pink'</i> ( <i>B. discolor</i> x <i>populneus</i> )	4 cm purple-pink	Flowering period 2 months. Maple-like leaves
<i>B. 'Jasper Belle'</i> ( <i>B. spectabilis</i> x <i>B. bidwillii</i> 'Beau Belle')	6 cm pink	Flowering period 2-4 months

Main Species	Description
<i>B. acerifolius</i> (Flame Tree)	Flowers only for a few weeks in October-early November. Large lobed leaves. Tree to 12 m.
<i>B. bidwillii</i> (Often miscalled Little Kurrajong)	Flowers on trunk and branches in October (some scattered flowering also occurs in August and September). 2-6 m tall. Attractive new growth after shedding leaves and flowering.
<i>B. discolor</i> (Lacebark)	6 cm pink flowers, in October – early November. Tree to 30m in natural habitat but more likely 6 to 12m in domestic gardens.
<i>B. populneus</i> (Kurrajong)	Spring flowers, cream with reddish blotches. Evergreen large tree to 20m.
<i>B. rupestris</i> (Qld. Bottle Tree)	Insignificant flowers in summer. Juvenile leaves slightly palmate, adult leaves narrow and simple. Characteristic bottle-shaped trunk. Tree to 6 to 12m is common in domestic situations.

Many thanks is extended to Kerry Rathie who has an agricultural science background and a Ph.D. in quantitative genetics. Kerry runs a small nursery specialising in rare plants, many of them grafted natives of many genera. His other interests include plant breeding of woody species, and writing books about plant-related matters. His web site will be functional soon.