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Dear Member,

This Newsletter is being devoted entirely to the genus *Callistemon* - a genus which produces some of Australia's most spectacular plants. The name was formed by Robert Brown in 1814. It is from two Greek words 'Kallistos' or 'Kallos' meaning beautiful and 'Stemon' meaning stamens and is a reference to the flowers of the genus. The petals are insignificant but the stamens are long and are the most noticeable part of the inflorescence. They are arranged in groups which are free at the base and give the flower heads the appearance of a brightly coloured bottlebrush. All *Callistemon* are evergreen. Most flower during the late winter, spring and early summer period although there are some species and cultivars which flower sporadically throughout the rest of the year.

There is around 40 species of *Callistemon* in Australia and some 200-300 cultivars which have originated from natural hybridisation, seedlings of hybrids, deliberate cross-fertilisation or variation of type or form. Many of these cultivars are spectacular as they often combine the good characteristics of the parent plants.

Callistemons are generally regarded as hardy plants which will tolerate a wide range of climatic and soil conditions.

Early History of *Callistemon* Cultivation

European botanists and collectors of the late 18th century showed considerable interest in the plants of our remote southern continent. *Callistemon citrinus* was among the plants collected by Banks and Solander in 1770. By 1788, three species from the Sydney Region, *C. citrinus*, *C. linearis* and *C. salignus* were available to English horticulturalists. The convict artist, Thomas Walling, produced detailed illustrations of several Port Jackson species during the 1790's. An engraving of *C. speciosus* is published in a book published in France in 1813 which featured the plants growing in Empress Josephine's garden at Malmaison and was probably introduced by French botanists Leschenault and Labillardiere who collected seed, including *C. speciosus*, in Western Australia in the 1790's and early 1800's. *C. speciosus* was introduced to English horticulture in 1823. *C. rigidus* was introduced to English horticulture in 1815. Further introductions to English horticulture were:

C. brachyandrus - Introduced 1843, flowered 1848. It was grown in the gardens of the Royal Horticultural Society from seed provided by Governor Grey of South Australia.

C. citrinus (previously known as *C. lanceolatus*) - Introduced 1788.

C. phoeniceus - Introduced 1843 from seed supplied by James Drummond from the Swan River District of Western Australia.

C. pinifolius - Introduced from seed supplied by Allan Cunningham some time during 1820-1830.

C. rigidus - Introduced to English horticulture in 1800. The original plant was collected by Robert Brown in 1800. Brown's description in 1819 was the first detailed taxonomic description of a *Callistemon*.

C. lanceolatus (now *C. citrinus*) appears to have been introduced to Kew Gardens by Banks in 1788. In 1794 Curtis commented that *C. citrinus* was common in nurseries around England. The report states that the original plant was grown from "a root

sent from Botany Bay". It was popular in France and had been flowered there by 1800.

C linearifolius - Introduced in 1820 from seed supplied by Allan Cunningham.

C linearis - Introduced by Banks in 1788 when the species was first described as Melaleuca linearis.

C macropunctatus (now C rugulosus) - Introduced in 1811 possibly from seed collected by one of the French expeditions to Australia.

C pallidus - Introduced 1813.

C salignus - Introduced by Banks in 1788.

C viridiflorus - Introduced to England in 1818-1820. C viridiflorus flowered in June 1824 and is still being cultivated as a green house plant but there are reports that the plant is presently being grown outdoors by some Australian plant enthusiasts in England.

In 1889 J.H. Maiden in his book "The Useful Native Plants of Australia" described two bottlebrush species in the chapter on local plants utilised for timber. C lanceolatus (now known as C citrinus) was described as having hard and heavy wood suitable for ship-building and wheel-wrights work and for implements such as mallets. C salignus was described as having hard, close-grained wood suitable for use underground. He also states that "it has a pretty grain which looks well under polish". Two slabs of C salignus were exhibited at the London International Exhibition of 1862. C viminalis lasts quite well in the ground. It has a dense, closely-grained wood which polishes well with a rich, red colour.

Callistemons Around the World

The genus is uniquely Australian except for four species found on New Caledonia, C pancheri, C suberosum, C gnidioides, C buseanum, but callistemons are now being grown in many parts of the world. Reports received indicate that a number of plants which grow and flower well in Queensland also perform well in Tasmania which gives some indication of their adaptability. C polandi grows and flowers well in Central Africa and America. C subulatus and C viridiflorus grow and flower well on the west coast of England where very low temperatures combined with snow and dessicating winds can be experienced for lengthy periods during winter. C pityoides grows and flowers well in Germany where temperatures can reach as low as -18°.

C linearis and C pinifolius (red form) grow and flower well in the mild coastal climate of San Francisco as also do C viminalis and C citrinus. These latter species are grown as shrubs or pollarded where bare trunks and rounded crown^{are} required for car park or street plantings. Container gardening is a popular form of landscaping in San Francisco and a form of red-flowering callistemon is often seen in large tubs with bedding annuals around the base.

In southern Florida C viminalis is used for highway plantings and gardens and park plantings.

At Quito, the capital of Ecuador, and other places in the high Andes C viminalis is grown in private gardens and grows well in the cool, dry climate almost on the equator at altitudes up to 3000m.

Studies indicate that species grown in England during the period 1788 to the middle 1800's included C brachyandrus, C citrinus, C phoeniceus, C pinifolius, C rigidus, C pallidus and a number of other species.

The flowers of C viminalis are used in religious ceremonies in Nepal in conjunction with flowers of Grevillea robusta.

Derrick Arnall lives at an altitude of 1000 metres in Malawi, Central Africa. His property is in dry savannah forest at a latitude similar to that of Cairns in North Queensland. Callistemons grow well for him. C viminalis 'Malawi Giant' originated on Derrick's property. Other species and cultivars being grown by him include C viminalis, C polandi, C subulatus, C recurvus, C pearsonii, 'Dawson River', 'Cedar Creek', 'Captain Cook', C acuminalus, C pachyphyllus, C chisholmii, 'Southern Cross', C linearis,

'Tenterfield', 'Injune'. In a recent letter Derrick stated that he had more Callistemon seedlings than he knew what to do with. His advantage is that, although his property comprises 17 acres, boundaries are poorly defined and he is able to spread out into the surrounding forest.

What do the Specific Epithets Mean:

Two species names refer to their pendulous growth habits.

salignus willowy
viminalis with long slender shoots like osiers (basket willows)

Two species are named from their habitat.

montanus from the mountains
paludosus from the swamps

Flower colour and other floral characteristics are responsible for some epithets.

brachyandrus short stamens
flavo-virens yellowish-green
formosus beautiful
pallidus pale
phoeniceus fiery red
speciosus showy
viridiflorus green-coloured

Leaf characteristics give the following epithets.

acuminatus tapering to a point
citrinus lemon-scented
linearis narrow
linearifolius narrow-leaved
pachyphyllus thick-leaved
pinifolius pine-leaved
rigidus stiff
subulatus tapering to a fine point
teretifolius narrow-leaved, cylindrical in section

Some species commemorate botanists or botanical collectors.

cabbagei R.H. Cabbage
chisholmii E.C. Chisholm
polandii Rev W. Poland
shiressii W. Shiress
sieberi F.W. Sieber

(Some insight to the enthusiasm of early botanists can be gained from a study of the travels of F.W. Sieber (1789-1844) a botanist born in Prague. He travelled the world and returned to Europe with 300,000 specimens.)

Only one species is named in honour of its geographic occurrence.

comboynensis Comboyne District, N.S.W.

Callistemons as Bird Attractors

Callistemons are well-known as trees which encourage birds to the garden. Their main appeal is to the nectar feeders. Although the majority of Callistemon flower in late winter and spring it is possible, with careful planning, to extend the flowering beyond this period e.g. *C. viminalis* will often flower into the summer and sporadically throughout the year. Guyra Hybrid flowers intermittently throughout the year except during mid-winter. *C. 'Injune'* flowers during the December-January period. As well as providing food supplies for nectar feeders the insect feeders also find a lot to interest them amongst the foliage and their predation on harmful insects reduces the need for chemical control. A scattering of Callistemon and Grevillea species throughout the garden will provide an almost year round supply of nectar.

Propagation

Callistemon seed germinates readily and seedlings do not appear to be very susceptible to fungus diseases which may cause damping off. The bog method is a very easy and successful way of germinating seed. Seedlings should be pricked out into individual tubes as soon as they are large enough to handle easily, probably at about the 4-6 leaf stage. It should be remembered that Callistemon grown from seed may not be true to type particularly if seed has been collected in an area where a number of species are growing in close proximity. We have a volunteer seedling in our garden which has been identified as a hybrid of *C viminalis* and *C pachyphyllus*. It is about 4 metres high and has the weeping habit of *C viminalis*. Unlike *C viminalis*, however, the seed capsules remain unopened on the plant and do not open until they are removed.

Callistemon cuttings strike readily although the time to develop roots may vary from a few weeks to some months. A cutting medium comprising 80% sharp sand and 20% peat moss with a small amount of Nutricote or similar slow release fertiliser seems to be satisfactory. I always use a hormone powder and must assume it is beneficial. Cuttings must not be allowed to dry out and humidity can be maintained by either a misting system, in the case of large numbers or by enclosing the pot in a clear plastic bag for small numbers. If the plastic bag method is used ensure it is not subject to direct sunlight as this creates too much heat and cuttings will be destroyed.

Nutrition

Callistemon respond favourably to fertilisers which should, in general, be applied in late summer and late winter/early spring. A general purpose fertiliser with NPK ratio of around 10:3:6 is suitable but Callistemon do not appear to be intolerant of higher phosphorus levels as are members of the Proteaceae family so if you have any plants of the Proteaceae family growing nearby keep the phosphorus level down. My gardens are now well established and are fairly heavily mulched with trimmings, prunings, natural leaf fall etc. from various plants in the garden. The only fertiliser I use is an occasional dressing of sulphate of ammonia or similar to maintain nitrogen levels. To date, I have not experienced any problems with chlorosis but it can be a minor problem on some soils around S.E. Queensland. If chlorosis does show up it can be readily resolved by applications of iron chelates. Symptoms of magnesium deficiency are similar to that of iron deficiency. This can be corrected by an application of magnesium sulphate (Epsom Salts). I have had success (on members of other genera) with a mixture of chelated iron, magnesium sulphate and sulphate of ammonia. Mix the chelated iron as recommended and add 30-40 grams of magnesium sulphate and of sulphate of ammonia to each 5 litres of water. Water thoroughly into the root zone. Treatment may need to be repeated after 4 weeks or so if the problem hasn't cleared up.

Gary Leske of Port Pirie, South Australia advises that he is having some success with chlorosis control by use of slow-release iron combined with a small amount of Sierra-Blend Osmocote.

Some Uncommon Varieties

Over past years many Callistemon cultivars have been introduced. Some of these have fallen by the wayside and some have become very popular. An outstanding cultivar which has become popular and which has shown to be adaptable to a wide range of climatic conditions is *C 'King's Park Special'*. It originated as a selection from seed sown at King's Park and Botanic Garden in Perth. Its parentage is uncertain but may have *C viminalis* somewhere in its ancestry. It is an upright shrub to 3-4m with attractive, slightly greyish foliage. Flowers are deep red and, in Brisbane, are produced in profusion from later winter through to mid summer with occasional flowers during the year. It is one of the easiest of Callistemon to propagate from cuttings which, during the warmer weather, will develop roots in 2-3 weeks.

Some Others are:

C citrinus 'Angela' is one of the very few bi-coloured Callistemon. The inner part of the flower is white and the outer part is red with golden anthers. It is a small semi-open shrub to 2 m which produces a profusion of flowers in spring.

C 'Happy Valley' is probably an undescribed species which occurs in a small area near Stanthorpe in Queensland. It grows as an open shrub to about 3m. Inflorescences are open, long and narrow. Stamens are pinkish-mauve with maroon anthers. The unusual feature is that the style of each individual flower is considerably darker in colour than the stamens and this gives the whole inflorescence the appearance of being multi-coloured.

C 'Wilderness White' grows to about 4m and produces masses of clear white flowers during spring. Foliage is pale green.

C 'McIntosh' grows at Redlands District Special School as a fairly dense shrub some 1.5m high by some 3.5m wide. It carries a profusion of dark red flowers from late winter through to late summer. Its parentage is unknown but it maintains a dense, bushy shape without pruning.

C 'Boullia' may be an undescribed species which originated at Boullia in far west Queensland. It grows quite large - to 7-8m and produces a good showing of bright red flowers in spring.

C 'Braeside' comes from the Darling Downs of Queensland and is a medium shrub to 2m. Flowers are pale red and produced in spring. It appears to be one of the few Callistemon which doesn't tolerate pruning. My plant is recovering very slowly from a moderate pruning some 4 years ago and I have had a couple of other reports of similar behaviour.

C 'Perth Pink' is growing and flowering well in Brisbane. Flower colour is deep pink with flowers being produced in clusters at the ends of branches during spring and early summer.

C polandii (dwarf) The Girl Guide Hut at Bracken Ridge has a number of low-growing (1.2m) dense shrubs in their grounds which have been there for at least 5 years and possibly longer. They have maintained their dense, bushy shape. Queensland Herbarium has identified these plants as C polandii. I put cuttings down but they have been very slow to strike.

C 'Woolomin Sparkler' Barbara Graham of Woolomin N.S.W. has registered this cultivar. It flowers at least twice per year with bright red brushes with golden anthers. It maintains a dense habit without becoming leggy and hasn't required pruning in its 9 years. It arose from a batch of seedlings from a delicate pink form of C salignus.

Callistemons in Our Garden

In our garden we have 40 Callistemon species and/or cultivars. The oldest were planted in 1979 and some have been planted nearly every year since then. We have had very few losses. Soil on our block is a red/brown sandy loam which is up to 1.4m deep and which is underlain by red sandy clay and then by red/grey heavy clay. Internal drainage is very good. The only fault, if you could call it that, is that it dries out very quickly and, therefore, needs to be watered regularly. Callistemons we have growing are: 'Glasshouse Gem', 'Glasshouse Country', 'Glasshouse Beauty', 'Glasshouse Superb', 'Glasshouse Ngun Ngun', 'Glasshouse Pink Sensation', pachyphyllus (pink, green, red and var. viridus), viminalis pink, 'Captain Cook' pink, Mr. Foster, recurvus seedling, viminalis x pachyphyllus, comboynensis, recurvus dwarf, citrinus alba, citrinus 'Angela', salignus, Packers Selection, Adina, Braeside, Guyra Hybrid, Endeavour, Western Glory, Injune, Eureka, Eldorado, Rose Opal, Austrafiora Firebrand,

Purple Splendens, pearsonii, polandii, pinifolius, Little John, subulatus pumila, Howies Fireglow, Woolumbin and viminalis.

Many of these plants have flowered and produce a good display each year but some of them have not yet reached the flowering stage. The only disappointment so far, if you could call it that, is C Purple Splendens. It has grown well but produces only a few flowers each year. However, there is very little time during the year when there is no Callistemon in bloom.

Membership

A current list of members is attached.

Cutting Bank

I can arrange to provide cuttings from a wide range of Callistemon species and cultivars. If you would like to try some please let me know.

Acknowledgements

Some of the information contained herein has been obtained from previous newsletters of the Callistemon Study Group and from various publications by S.G.A.P. and other persons, groups and organisations associated with Australian Plants.

Regards,

Col Comfort

P.S. Just a reminder that subscriptions are due at 30th June, 1992. Subs will remain at \$5 for 1992-93 but with increases in postage and photo-copying costs it may be necessary to increase subs after that.

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