

# *Eucalyptus Study Group Newsletter*

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Study Group Leader: Warwick Varley  
PO Box 456, Wollongong 2520  
Email: [tallowwood@hotmail.com](mailto:tallowwood@hotmail.com)

Eucalypt Study Group Website  
<http://asgap.org.au/EucSG/index.html>

Treasurer and seedbank please post subscriptions to:  
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Account name: ASAGP Euc. Study Group

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Greetings all, I am taking over the role as the study group leader, and am looking forward to offering a diverse range of material where the common variable amongst all articles will be the genus *Eucalyptus*. My name is Warwick Varley, and I have been employed within the tree industry for almost 20 years, primarily as an arborist and teacher (TAFE) of arboriculture and horticulture. My interest and passion revolves around trees and the native environment. However Eucalypts have always rendered a particular interest, not only due to their beauty and iconic status within Australia, but due to the regularity with which they arise within my work. This not only prompted me to learn more about the identification of the genus, but also the individual traits offered by the specific species. It is this latter point that intrigues me most, where characteristics (be it wood density, durability, habit, uses, etc.) between the species within the same geographical range can be as different as chalk and cheese. As the group leader I am looking forward to sharing the material I have gathered over the years from my own experience and articles I have filed. However I can't help but reinforce that as a study group, the purpose is for all members to offer submissions and share their own experience and knowledge of the genus. Over the years I have collected numerous resources about the genus, and I plan on offering these within the newsletters, as well as data sheets I have compiled on specific species. This issue I have started with the species, *Eucalyptus cladocalyx*, primarily due to the recent introduction to the nursery industry of the cultivar 'Vintage Red', also known as the world's first red foliated Eucalypt.

***Eucalyptus cladocalyx*** F. Muell.

Common name: Sugar Gum

Subgenus: *Symphyomyrtus*

Name: The species name is Greek and is composed of *clados*, meaning branch and *calyx*, referring to the leafless branchlets bearing flowers. The common name was derived from the sweet taste of the seedling foliage due to the presence of glucoside.

Origin: Endemic to South Australia, occurring in three disjunct areas; Flinders Ranges, Kangaroo Island and the Eyre Peninsula

Environment: Dominant in dry sclerophyll open forest and as a component of savannah woodland, the natural distribution has a range of soil types (solanized brown soils, deep sands and ironstone gravels), however all are shallow. The poorer soils along with the amount of rainfall, may dictate the size of the tree, where poor sites provide specimens around 8-15m in height (Dbh; < 0.4m) and better conditions offer trees up to 35m with a Dbh of 1-1.5m, however the genetic diversity within

natural populations may also be responsible for variation of the habit. The species within Eyre Peninsula are generally stunted and contorted and range up to 13m, Kangaroo Island have straighter habits up to 20m, and the Southern Flinders ranges have an erect forest class up to 30m high.

Habit: small to medium tree with a clear, straight stem, however shorter contorted stems can occur, this may be inherent, a result of adverse growing conditions, or a combination of both. The bark is smooth throughout the stem and crown, and the colour is generally off white, however seasonal bark shedding will provide patches of yellowish grey and bluish grey. The crowns appear thin and open, because of the foliage being predominately concentrated in clumps towards the end of the branches. The juvenile leaf is orbicular, often broader than long (approximately 5cm x 8cm) dark green and discolourous, the adult leaf is lanceolate (11-15cm long x 2.5cm wide), dark glossy green and strongly discolourous. The flowers are white and the flowering period is January to April. The buds are cylindrical to urceolate with a small pointed tip and the fruit (capsules) are ovoid to urn shaped, ribbed and approximately 1cm long by 0.7cm wide, with 3-4 valves, see photo.

Uses: South Australian Woods and Forests has distributed the species as early as 1878, and it has been planted commonly throughout the south western slopes of NSW and rural communities of Victoria. The timber was used for poles, posts, general construction and railway sleepers as well as fuel<sup>2</sup>. The species was regularly used on the plains of western Victoria for shelter-belt and windbreaks, where the trees were periodically coppiced so as to maintain the lower crown density of the windbreak and the timber by-product carted off to the mill. The species is currently used within plantations in Africa, Spain and Portugal. The species has also been used within the urban nursery market where plantings in parks, street trees and backyards within Sydney and Melbourne exist. The flower provides a good source of nectar and honey, and is considered an exceptional source due to the consistency of flowering period.

Attributes: Planting has been widespread throughout Australia, and this is testament to the tolerance to the wide range of climates. The species is considered fast growing and will tolerate a range of soil types (sandy to clay soils) however requires a well drained soil and will not tolerate water logging. The species has low to moderate salt tolerance, where growth will be retarded with an EC reading in excess of 5 dS/m. The species is tolerant of dry conditions, coastal, windy climates (exposed locations) and frosts, however mature trees have been known to die after years of excessive wet conditions. It has a low susceptibility to insect attack, however can be affected by Christmas beetle, leaf beetle, sawfly and scale, and is classed as a host to *Armillaria* (root pathogen). The timber is hard, of moderate strength and durability (ie. resilience to termites and decay) and has a density of approximately 1100kg m<sup>-3</sup> (The density of Eucalyptus wood ranges between approximately 550kg m<sup>-3</sup> to 1200kg m<sup>-3</sup>).



Photo 1 Mature *Eucalyptus cladocalyx*, Como, Sydney



**Photo 2, bark colour due to decorticate.**

Varieties:

***Eucalyptus cladocalyx var. nana***

Common name; Bushy Sugar Gum

Photo

A dwarf variant reaching a height of 8-10m with a much denser crown than the species. Research suggests the genetic origin to be from the Eyre Peninsula population, and the earliest published reference occurs within the Yates Farm Annual of 1937. Used predominately as an ornamental for residential settings, screening and street plantings, the variety catered for similar attributes that the species does with the added tolerance for pollution.



Fig 3. Tumby Bay, Eyre Peninsula. (Photograph: C. Gardiner 2000)

**Photo 3, *E. cladocalyx var. nana***



***Eucalyptus cladocalyx* ‘EUC78’**

Common name; Vintage Red

Photo

This was registered in May 2008 (Plant Varieties Journal, Volume 21, Number 2, 29 August 2008), and released as a decorative ornamental and titled as “the first red foliated Eucalypt to be released anywhere in the world”<sup>1</sup>. This grafted cultivar (root stock is the species) shares all the same features as the species tree but for the distinctive dark red foliage. When young the branches and juvenile leaves are almost black, and with maturity the colour can alter from bright red to purple and grey depending on the exposure to the sunlight and the age of the foliage. Estimated to reach between 10-20m with a spread of 5-10m, the variety is considered to be extremely drought tolerant and once established will live on natural rainfall in any part of Australia and will tolerate light to moderate frosts.



**Photo 4 , *Eucalypt cladocalyx* ‘Vintage red’, close up image of the juvenile foliage. Specimen in a 200mm pot**

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## Website of Interest

National Register of Big Trees, created in May 2009, this site is aimed at locating and recording the largest specimen of every tree species within Australia. Nominations are invited of large trees, where a point system is calculated (using the height, diameter and crown spread) for ranking within the site. Everybody is invited to measure and nominate a tree that they feel is significant in size. The specific goal of the register is to provide a link and support for all local authorities and organisations of significant trees within there area. ....And of course, the Eucalypts take the limelight in this register. Below is an example of one of the trees listed (author in photo).

<http://www.nationalregisterofbigtrees.com.au/index.php>

Species: *Eucalyptus (Corymbia) maculata* Hook.

Common name: Spotted Gum. This tree has been named 'Old Blotchy'

Location: Termeil, NSW, 10 min east of Princes Hwy, Dept. of Forestry land.

Height: 55m

Diameter @ breast height: 3m

Crown spread: 25m



Articles and questions are most welcomed (actually they are wanted). Please send all correspondence to my;

email address [tallowwood@hotmail.com](mailto:tallowwood@hotmail.com)

or PO Box PO Box 456, Wollongong 2520