

Le chêne gomme (*Arillastrum gummiferum*) – New Caledonia's eucalypt

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The term eucalypt is normally used as the common name for the genus *Eucalyptus* (Myrtaceae: Leptospermoideae), the recently segregated genus *Corymbia*, and *Angophora*. These are all typical Australian trees, with just a few *Eucalyptus* and *Corymbia* occurring in New Guinea, eastern Indonesia, and the Philippines.

Both from classical morphological similarities (Johnson 1972; Briggs & Johnson 1979) and the more modern cladistic and DNA investigations (Ladiges & Humphries 1983; Ladiges *et al.* 1995; Steane *et al.* 2002; Udovicic & Ladiges 2002; Ladiges *et al.* 2003), the term "eucalypt" has had to be widened to accommodate four other myrtaceous genera - *Eucalyptopsis*, *Allosyncarpia*, *Stockwellia*, and *Arillastrum*. Thus seven genera are now reckoned to form the eucalypt group, in two clades.

***Eucalyptopsis* clade**

Eucalyptopsis papuana C.T.White is a rainforest tree found in Papua New Guinea (White 1951).

Allosyncarpia ternata S.T.Blake is a large spreading tree endemic in Arnhem Land and Kakadu National Park, Northern Territory, Australia, where it is found in sandstone escarpment country (Blake 1977).

Stockwellia quadrifida D.J.Carr, S.G.M.Carr & B.Hyland is a large rainforest tree endemic to the Atherton Tableland, Queensland Australia (Carr *et al.* 2002; Elick & Wilson 2002).

***Eucalyptus* clade**

Eucalyptus is a genus of c. 700 species, nearly all from Australia.

Corymbia was formally recognised by Hill & Johnson (1995) as a separate genus (bloodwood and ghost gum eucalypts) from *Eucalyptus*, and has largely (though often reluctantly) been accepted as a separate genus. It comprises c. 140 species from Australia, with some extending to New Guinea.

Angophora is a genus of 15 species confined to eastern Australia.

Arillastrum gummiferum (Brongn. & Gris) Pancher ex Baillon (syn. *Spermolepis gummifera* Brongn. & Gris) occurs only in the southern part of New Caledonia, and strictly on ultrabasic soils (Sarlin 1954; Dawson 1970,

1992) at altitudes of 50 to 350 m.. As well as being of phylogenetic interest as a eucalypt relative, it is (or was) one of New Caledonia's most economically and ecologically significant trees. It grows gregariously in mainly pure stands and is one of the largest trees of the maquis minier (up to 35 m tall and 110 cm diameter), though it has been much diminished in abundance by logging, and also by fire to which it is very sensitive. Log lengths were typically 8 to 12 m. Its wood is dark red in colour, strong and durable, and impregnated with resin, and has been much exploited as roundwood for mine props, railings, and telephone poles, and piles. As sawn timber it was used for heavy construction, exterior joinery, flooring, and for the keels of boats (Sarlin 1954). The famous bridge (Pont Perignon) in the Parc Provincial Rivière Bleue is built from it. There are several small plantations of it established by the Forestry Department at Champ de Bataille and Ouénarou.

We encountered *Arillastrum* on the road between Lac en Huit and Prony (Figure 1), where it was in full flower in early December 2003 – good timing for us as the tree only flowers every seven years or so. The tree in general appearance is more reminiscent of *Lophostemon* than *Eucalyptus*. The inflorescences are cymose, and the most striking feature of the individual flowers is that the stamens are in four bunches, with the longer outer stamens lacking anthers (staminodes), and the inner fertile stamens becoming progressively shorter to the inside. The fruits are hard and woody, and not unlike eucalypt capsules.



Figure 1. *Arillastrum gummiferum* at Prony. Note the stamens in four bunches (Ewen Cameron).

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Woody plants of the Auckland Domain

Mike Wilcox, Colin Bradshaw & Ewen Cameron

Introduction

The Auckland Domain of 76 ha has an impressive collection of trees and can rightly be claimed to be Auckland's original Botanic Garden. Planting started in the early 1850s in the Government Gardens, centered on the ponds and numerous trees and shrubs were introduced for propagation and trial. Several of the oldest Norfolk Island pines (*Araucaria heterophylla*) and a giant sequoia (*Sequoiadendron giganteum*) were planted by the visiting Duke of Edinburgh in 1869 (Adam 2004). There are both formally planted areas and wild areas on the fringes which have an interesting vegetation of both natural and planted trees and shrubs, native and exotic.

In this account we concentrate on the woody flora, with only passing reference to herbaceous plants and ferns. Surprisingly little has been documented about the Auckland Domain's flora, apart from mention of a few particular species in past ABS Newsletters or Journals. Over 650 specimens have been vouchered over the years in the Auckland Museum herbarium (AK).

Auckland Botanical Society visit on 20 March 2004

Our group met at the Band Rotunda at 10 am, and had a busy excursion looking at trees in the vicinity of the Band Rotunda-Formal Gardens-Valkyrie Fountain, the nursery, the bush areas of the Glade and Lovers

Walk, the Domain Walk and *Araucaria* grove, finishing at 3 pm at the Wintergarden. Those taking part were: Daphne Blackshaw, Quentin Blackshaw, Colin Bradshaw (co-leader), Elizabeth Bowie, Margaret Brothers, Phil Brown, Viv Brown, Jan Butcher, Ewen Cameron, Pam Carmont, Leonie Clunie, Nigel Clunie, Brian Cumber, Colleen Foster, Kaye Haslett, Jean Hatch, Rosa Henderson, Annette Lindsay, Morag McDonald, Alistair McArthur, Carol McSweeney, Gary McSweeney, Marjorie Newhook, Juliet Richmond, Bronwen Rouse, Doug Shaw, Clive Shirley, Malcolm Simpson, Beverley Sinclair, Shirley Tomlinson, Alison Wesley, Barbara White, Mike Wilcox (co-leader), Tony Williams, Maureen Young.

Band Rotunda-Formal Gardens-Valkyrie Fountain

This part of the Domain has undoubtedly the richest variety of planted trees. Among the many fine specimens here can be found radiata pine (*Pinus radiata*), kanuka (*Kunzea ericoides*), puka (*Griselinia lucida*), hybrid wharangi (*Melicope x mantellii*), wavy-leaved tanguru (*Olearia angulata*), northern rata (*Metrosideros robusta*), pohutukawa (*Metrosideros excelsa*), Queensland kauri (*Agathis australis*), American holly (*Ilex opaca*), hornbeam (*Carpinus betulus*), Atlas cedar (*Cedrus atlantica*), Huntingdon elm (*Ulmus xvegeta*), European ash (*Fraxinus excelsior*), evergreen magnolia (*Magnolia grandiflora*), crape myrtle (*Lagerstroemia indica*), Cape chestnut