

***Eucalyptus* in the Christchurch area**

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This article represents notes for observations on living *Eucalyptus* species around Christchurch. While not a comprehensive list of all specimens in the city, it allows the reader to see examples of the variety of species in and around Christchurch and to be able to put names to living specimens. Although an ideal document of this sort would be greatly enhanced by many photographs, they have not been provided because the reader is encouraged to get into the “field” and experience the real plants. Descriptions of localities are given and where possible, more than one site is indicated to give a choice of viewing.

Introduction

I feel conflicted while writing of introduced plants in this local botanical journal, but all of us in Canterbury are very familiar with *Eucalyptus* trees, particularly “bluegums” (*E. globulus*), which have a lengthy part in the history of Canterbury and elsewhere in New Zealand. Beyond actual written records it is difficult to establish just how early the Australian eucalypts appeared here, but we could assume that as a source of shelter, timber and firewood, certain *Eucalyptus* species arrived almost as soon as pastoralism. In a catalogue to an exhibition on the artist Margaret Stoddart, Julie King includes a photograph (page 22) of the Stoddart cottage at Diamond Harbour in the 1890's (King 1997). On a ridge beyond the cottage is a row of tall trees, almost certainly *E. globulus*, Tasmanian bluegum, which when measured in scale with the house, must be 20 m tall. Given the exposure of that ridgeline and the summer droughts of western Banks Peninsula, I would suggest that those trees in the 1890's photograph are at least 20 years old, perhaps even more than 30 years, giving a planting date of perhaps pre-1860 or 1870 at the latest. Remnants of *E. globulus* remain above the cottage today and a 1980's photograph (page 23) shows large *E. globulus* on that ridge, probably part of the original population shown in the 1890's image.

The cover photograph of the book about James Edward Fitzgerald, first Superintendent of Canterbury, entitled *Fitz* (Roberts 2014) shows Fitzgerald leaning against a eucalypt in the garden of Alfred Barker in 1868. The appearance of the trunks in the multi-stemmed tree in the photograph is quite consistent with bluegum (*E. globulus*). To have reached that size by 1868 the tree must have been planted very soon after Barker's arrival on the Charlotte Jane in December 1850. The growth rate had been impressive.

Early photographs suggest that there were no trees on Barker's house site at the northeast corner of Worcester Street and Oxford Terrace prior to his

arrival. By 1860 a photograph shows the form of a rapidly growing tree, probably the eucalypt in question, beside and taller than his house [refer <http://canterburyphotography.blogspot.co.nz/2009/04/alfred-charles-barker.html> (accessed 2 July 2014) where the house in the middle of the fifth image in a series is Barker's home in 1860, the only property with significant trees. Also refer <http://cantage.wordpress.com/showcase/dr-a-c-barker-photographs/> (accessed 2 July 2014) for other photographs by Barker where this tree is used as a backdrop, for instance, of Mete Kingi, and elsewhere in *Fitz* (Roberts 2014, p. 281)].

Elsewhere there is evidence of early *Eucalyptus* plantings. For example, in Nelson, at the entrance to Nelson College for Girls is a huge specimen of *E. globulus* planted around 1857, and part of the trunk of another huge *E. globulus*, the Otterson Gum, in Lower Queen Street, Richmond stands as a memorial to a tree planted c. 1847. There is an undated Tasman District Council plaque alongside the stump.

Lady Barker describes a journey to stay at a house “...sixty five miles from Christchurch, nearly due north...” in a note dated 1865 (Barker 1870). After travelling by coach for two days, she remarks that as she arrived at her destination in near darkness: “I could just perceive we had entered a plantation, the first trees since we had left Christchurch.” She describes the new surroundings as seen next morning, including comment on clumps of tall trees in the garden and in addition: “...as a background there is a thick plantation of red and blue gums to shelter the garden from the strong N.W. winds”. Clearly these gums were of significant stature, and if we assume them, conservatively, to be at least 15 years old to fit her description, they must have been planted by 1850.

Identifying eucalypts

Identification and naming of *Eucalyptus* species has mostly been done using Euclid (Anon. 2006), an impressive Lucid-based interactive electronic key and information source that deals with 894 taxa included in the three related genera *Eucalyptus*, *Corymbia* and *Angophora* (although most of information refers to *Eucalyptus*). The Euclid key has 120 characters that can be used for identification, but in my experience, by the time I have used 10 characters I have either obtained a clear identification or I am reasonably certain that I am not going to get an identification from the information available. In New Zealand, we are not privileged to have a natural geographic distribution of *Eucalyptus* so those otherwise very useful characters are not applicable. As well as the key in Euclid, each taxon has a separate page of description, comments, and history along with photographs to illustrate important features.

Collections from Christchurch and nearby rural areas have produced positive identifications on 45 *Eucalyptus* species, and there are samples of perhaps 20 more species for which I am not confident to attach a name at this stage. In the

descriptions of the 24 species given below, I have attempted to include just a few points about each species so that the readers can feel reasonably confident that they are actually looking at the plant on the list. If there is more than one eucalypt at that site, there can be some certainty as to which is being described. Where identification is not reasonably certain, or the locality is difficult to describe, I have avoided putting those trees on the list given here.

Characters that are likely to be more useful in identification are: the nature of the bark (presence of rough bark up the trunk, and texture of the rough bark); leaf shape, size, colour, and venation on mature plants; juvenile leaf presence and shape; bud shape and size, and pedicel length; capsule (fruit) shape and size, and whether valves (at the mouth of the capsule) are exerted or not; and the number of buds in an inflorescence, and peduncle features.

Localities are biased towards the south and west of the city because that is where most of my travelling is done. While the localities had *Eucalyptus* specimens at the time of submission, the number of mature trees is reducing as wind and zealous tree contractors take their toll. For example, between drafts of this manuscript, two species have been removed from the list because of their disappearance from known sites.

Eucalyptus descriptive comments and localities

E. globulus (Tasmanian bluegum)

Common and prominent. Many larger specimens have die-back leaving dead branches that remain on the tree for long periods. This is useful in identification from a distance. Recognisable from the large (e.g. 2 cm or more in diameter), ribbed, often warty-exterior capsules that occur on the ground beneath the tree.

- Probably the largest specimen in Christchurch is outside 314 Yaldhurst Road, between Cutts and Withells roads. There is little or no die-back in this tree.
- Girl Guide centre entrance at Cracroft, Cashmere Road beside bridge over the Heathcote River.
- Mandeville Street, next to its junction with Riccarton Road, opposite St James Church.

E. viminalis Group

Apart from *E. globulus*, this is the most prominent large eucalypt seen around Christchurch and die-back is not a feature. The word “group” is used here because there is a group of species that cannot be separated except through juvenile characters, which are seldom seen here because of a lack of seedlings. However, where there is evidence of juvenile features (some seedlings present or very occasionally juvenile leaves on reversion shoots on trunks) all but one has been genuine *E. viminalis*, and that one exception is outside

Christchurch. Buds in threes, Lower bark usually rough, peeling back in strips. Upper bark nearly white.

- About opposite 265 Waimairi Road, three trees, all the same species (increasingly dominating the view when driving north on Waimairi Road).
- 421 Cashel Street, just inside fence from road frontage. Because there will be re-building here, this specimen might be removed in the near future.
- Ilam Fields driveway off Waimairi Road (see details below in note on *E. stellulata*).
- Kennedys Bush Road (see details below in note on *E. microcorys*).

E. grandis

Leaves are glossy green on the upper surface and lighter, dull below. Leaf secondary veins are close and parallel. Only one specimen has been seen in Christchurch so far.

- Entrance to Portstone Nursery, 465 Ferry Road. Tall tree, rather vigorously pruned.

E. perriniana (spinning gum)

Characteristic juvenile foliage of broad, oval, glaucous leaves which are opposite and connate, occurring through parts of the canopy. The common name comes from when the juvenile pairs have died and broken from the stem but still have the stem as a shaft about which they can spin in the wind.

- Waimairi Road, street frontage of Westburn School.
- Barbadoes Street near corner with Moorhouse Avenue, frontage of CPIT car park (amongst other trees), looking south down the line of trees just inside the car park boundary and opposite Marion College; *E. perriniana* is the second eucalypt in the line (the first being *E. delegatensis*). This specimen of *E. perriniana* has surprisingly few juvenile leaves visible. Now a construction site, some of those trees might be sacrificed in the near future.

E. nicholii

This species has rough, soft, furrowed bark to the upper branches, and grey-green leaves that are small for this genus, e.g. average 10 cm long. Quite common in Christchurch.

- Corner of Matipo and Princess Streets.
- Corner of Memorial Avenue and Ilam Road, outside the Ilam Medical Centre.

E. cinerea

Along with *E. cordata*, this is one of two species in Christchurch where the whole tree looks distinctly grey owing to the glaucous leaves, stems and fruit, which are much greyer than any other eucalypt here. The species name *cinerea* refers to the ashen colour of the foliage. The most obvious distinction between these two grey species is that *E. cinerea* has rough, furrowed bark to its upper branches while the other species, *E. cordata*, has smooth bark almost throughout.

- University of Canterbury car park alongside Clyde Road between Arts Road and University Drive, on a mound, on your left as you go into Arts Road from Clyde Road.
- Cashmere Road, just inside a fence immediately on the left after turning from Kennedys Bush Road, (at property number 127 Kennedys Bush Road).
- Frontage of No. 39 Lunns Road.

E. cordata

See notes above for *E. cinerea*.

- Gloucester Sreet, north side between Madras and Barbadoes streets.

E. pulchella

The leaves of this species are the narrowest among eucalypts (e.g. up to 1 cm wide), and with the bright green colour of the delicate leaves and near white bark, *E. pulchella* can be a most attractive tree. Not surprisingly the species name derives from Latin for "beautiful". Bark mostly smooth to the base.

- No. 449 Memorial Avenue, road frontage outside the Commodore Hotel.
- Burnside Park road frontage with Memorial Avenue, two specimens almost opposite No. 346. The other eucalypt on this frontage is *E. delegatensis*.
- University of Canterbury car park alongside Clyde Road between Arts Road and University Drive, west side of car park beside the entrance to the Fine Arts Sculpture Yard.

E. delegatensis

A tall, straight plantation tree but the Christchurch trees have grown singly and are branched from near the ground, giving the canopy a reasonably characteristic dome shape. Juvenile leaves, (only occasionally visible) are blue-green and pendulous. Inflorescences have up to 15 buds, which are club-shaped. The trunk has a stocking of rough bark usually only a few metres up the trunk, peeling back to leave smooth bark.

- Cashmere Road frontage of Princess Margaret Hospital. This is a remnant of a majestic group of three; the other two succumbed to the formation of a car park.
- South-west corner of Ensors Road and Brougham Street (2 specimens).
- An impressively large tree with a twisted trunk in the Christchurch Botanic Gardens west of the Peace Bell, amongst several other labelled *Eucalyptus* trees.
- Burnside Park frontage with Memorial Avenue, several specimens along with one of *E. pulchella*.
- Burnside High School on the grounds visible from Memorial Avenue: two impressive trees.

E. camaldulensis (red gum, river red gum)

This species is the most widespread eucalypt in Australia. The species name goes back to the first description in Naples, in 1832, of a tree found growing in Camalduli, Italy! The capsules are in groups of 7 and have the valves strongly exerted as prominent teeth. Terminal branches are notably drooping and the smooth bark is often clearly mottled or streaked.

- By standing on the bridge over the Avon River between Riccarton Avenue and the Botanic Gardens and looking upstream, a specimen of *E. camaldulensis* is seen leaning out over the river with branches drooping down over the water (beautiful in the low afternoon sunlight).
- Corner of Main and Mt Pleasant roads. Look up the hill to the right, to the eucalypt with distorted branches. (The eucalypt a few metres further up the road from this is *E. ovata*.)

E. ovata

Named because the term “ovate” is used in *Eucalyptus* descriptions to denote the shape of capsules, which are triangular in profile, although the name could equally apply to the leaves which are more often oval to ovate in shape than the common lanceolate/falcate shape of most eucalypts. Leaves are glossy green and usually characteristically slightly undulate.

- Mt Pleasant Road, just up from Main Road, the second eucalypt on the right from the corner.
- Hendersons Road, frontage between Sparks Road and Cashmere Road (part of a plantation).
- Burwood Hospital, as you move in from the entrance on Mairehau Road (opposite No. 256), a large multi-stemmed tree on the left, close to the driveway and as you approach buildings. (The large tree seen over the fence from Mairehau Road is in the *E. viminalis* group.)

E. gunnii

Leaves comparatively small, e.g. to 9 cm long, elliptic to ovate and tip often mucronate, grey-green to blue green. Glauous orbicular juvenile leaves commonly at base and through canopy. Bark smooth or with a short stocking of orange-brown rough bark. Smooth bark often with some green colour.

- Lunns Road frontage, multi-stemmed tree outside about No. 50.
- Ferry Road frontage, just east of driveway to Arcadia Motel, No. 564.
- Cashmere Road, in Oderings Nursery car park, west side border almost opposite the building entrance.

E. leucoxylon

Common as a decorative tree because some selections have red flowers although the wild type flower colour is usually white. High value for birds because flowers can appear in early July and some will still be present in September. At the author's residence, the amount of flowering varies considerably between years but in one recent good year, six bellbirds spent a significant portion of each day for those critical three months on a group of *E. leucoxylon* trees, with the added advantage of not competing for nectar with bees and wasps at that time of year. Light brown flaky bark at the base, with smooth bark above. Buds in 3s, often with peduncles and pedicels arched downwards.

- On Halswell Road, Halswell is a multi-stemmed tree outside Craythorne's Public House beside the corner with Nicholls Road.
- Parkhouse Road / Curletts Road corner, turn into Treffers Road and into the car-park on that corner. The medium tree with spreading branches, nearest to the buildings is *E. leucoxylon*. There are several specimens on either side of the Curletts Road overbridge, mixed with other eucalypts. *Eucalyptus leucoxylon* are the smaller trees with lighter and darker blotchy bark, and often with red flowers in late winter and spring.

E. pulverulenta

Small tree or shrub with canopy of long, arching branches clothed with short (e.g. 5 cm), grey, orbicular to ovate, opposite, (persistent juvenile) leaves. The name derives from the Latin for "powdered" or "dusty" referring to the whitish-grey colouring of the foliage. Classed as "Vulnerable" in its home territory of southeast New South Wales, Victoria and Tasmania. Prolific cream flowers in late autumn.

- Hendersons Road, north side between Rowley Avenue and Sparks Road, inside the fence of No. 170. See several straggly plants with the branches appearing above the wooden fence.

- Clarence Street, very similar to the form at the previous site, shrubby plant with branches hanging over the fence at Nos. 112-116, quite near the north side corner with Blenheim Road.

E. pauciflora

Best known as Snow Gum but there are several subspecies ranging through varied geography in eastern Australia and even to the warmth of near the Queensland border. The real Snow Gum is ssp. *niphophila*, growing up to the timberline where the gnarled form of the trees and colour range of the bark make them very artistic subjects. The tree at the first locality described below shows some of those features and you could almost imagine you are looking at a Rata tree in Otira Gorge. The most useful diagnostic feature of *E. pauciflora* is that the leaf secondary veins are bent to become parallel to the midrib.

- Spreydon, Cobham Street, just inside the fence at No. 77.
- Entering North Hagley Park from Armagh Street Bridge, travel along the path to Victoria Lake on your left and just when the path becomes parallel with the lake edge, look right and see a multi-stemmed, leaning tree with light-coloured smooth bark to its base.
- From Birmingham Drive, turn into Halls Place and move from the end to Marylands cycleway and turn right. Ahead on your right is a eucalypt tree with smooth bark and drooping branches.

E. microcorys

Leaves dark, glossy green above and dull, lighter green below. The whole tree looks compact and reasonably dark green. Bark rough and soft to upper branches, grey to reddish brown. This species is placed on its own in the genus because of some unusual features, particularly in its buds. Only positively identified in one site so far.

- Kennedys Bush Road, as you start up the hill past the Halswell Quarry turn off, the first large tree just inside the fence on the bank on the left, is *E. microcorys*. (The next eucalypt up the road is the white-branched *E. viminalis*.)

E. litoralis

Tree with light brown flaky bark up into the smaller branches. Buds in groups of 7 on a peduncle that is flattened or with a narrow wing running down it. Capsules and buds usually with one or two ridges running down the length. Only identified at one site so far.

- Nicholson Park, upper part. Enter the car park left off the top of Scarborough Road. Go through the park entrance near the far (northern) end, move downhill past the toilet block, through the stone steps and down several metres. Look 90 degrees to your right to see several knobbly, brown, robust stems from a rough barked, domed base about 2 m in

diameter. (Slightly to the right but nearly in front of you as you leave the stone steps is a specimen of *E. pulchella*.)

E. regnans

One of the tallest eucalypts often portrayed in dense stands of very tall, straight trunks. Not seen in that form in Christchurch but the most characteristic feature is that it is one of three tree species that have two inflorescences per axil. Unfortunately, not all reproductive axils have two peduncles but where the pairing is encountered, and the bark is smooth after a few metres up the trunk, the species will be *E. regnans*. Only one site encountered so far near the city.

- Tai Tapu Road (Highway 75), just at the southern end of the Tai Tapu golf links. Travelling south, about 70 m past No. 606 (currently a red letterbox on the right), a robust tree on the west side of the road on private property just inside the roadside fence.

E. sideroxylon (red ironbark)

Commonly grown as a red-flowered small tree (although flowers in the species can show a range of colours including white). Can be seen around Melbourne in centre and side plantings along roads. Inflorescence has 7 flowers and bark is rough to the upper branches, deeply furrowed, hard and is often dark grey or almost black. Canopy usually grey-green.

- Hillmorton, frontage of 29 Redgrave Street.
- Sockburn, outside No. 12 Symes Road, (Mi Woollies shop). There are two eucalypts here. The larger tree with grey, soft bark is *E. nicholii*, but its multi-stemmed neighbour with the very hard, dark bark is *E. sideroxylon*.

E. tricarpa

Similar in characteristics to *E. sideroxylon* but with only 3 flowers per inflorescence.

- University of Canterbury, turn from Clyde Road into Arts Road and as you drive past the car park (on your left) look across the lawn to the right. A single tree in the lawn between you and the end of the Library Warehouse, is *E. tricarpa*.

E. stellulata

Small tree with rough bark at base but soon the trunk is smooth. Defining feature is the inflorescence with up to 15 narrow fusiform buds in a stellate cluster almost sessile on the branch. Only once identified by me in Christchurch.

- From Waimairi Road, take the driveway that has a brick wall at one side and the number "106" at the entrance, alongside the newly built University

buildings. As you move along the drive towards the Ilam Fields, you pass three eucalypts (and some other trees). *Eucalyptus stellulata* is the middle, smallest of the three. It has a dark grey “rough” bark (rough in eucalypt terms but looking a bit like a *Fagus* trunk), to about 3 m then smooth bark which is dark coloured, being a mid-grey. This is unexpected because most eucalypts with smooth bark have its colour much lighter than the rough bark below it. Unless there is wind-blown material on the ground, look up and see branchlets against the light to observe small sessile bundles of radiating buds. (The third eucalypt, nearest the Ilam Fields, is in the *E. viminalis* group.)

E. nitens

Tall, straight trees when left to grow untouched in a stand. Commonly grown for timber and firewood. Rough bark peeling back a short way up to leave a smooth trunk. Capsules barrel or cup-shaped, small (e.g. 7 mm in diameter) in tight bundles of 7 on a short peduncle. Recently dry capsules on the plant can have a shiny surface. Often showing near the base are opposite, ovate, glaucous juvenile leaves on square stems.

- Shelter-belt, Kennedys Bush Road, west side almost opposite No. 117, between Glovers Road and Cashmere Road.
- Centennial Park, corner of Lyttelton and Rose Streets. This specimen shows slightly denticulate margins on the leaves and could fit the definition of closely related *E. denticulata*, but other features fit it with *E. nitens*.

Corymbia descriptive comments and localities

A genus separated from *Eucalyptus* reasonably recently because of a number of significant morphological differences, although some taxonomists would prefer to keep these species within *Eucalyptus*. Two species are likely to be encountered, and superficially they can look very similar. Both have dark green, glossy upper surface to the leaves with lighter, dull green below, secondary veins are close and parallel. Capsules are characteristically large (e.g. 2 cm x 2 cm or larger) and urn-shaped to nearly globose. Both species are stocky trees planted for their great show of red flowers in midsummer. Slightly frost-tender, they are almost restricted to hill sites.

C. calophylla

When a fresh leaf is held up to a bright light, many transparent dots (glands) are visible in the transmitted light. (A hand-lens will help.) Although not usually available, the seed is black and does not have a membranous wing.

- Cashmere Hill, Hackthorne Road, inside the street frontage of property No. 89.

C. ficifolia

Few or no gland dots visible in the leaf. Seed brown, winged.

- Cashmere Hill, Hackthorne Road, just inside roadside stone fence at No. 43. (The street number is absent but the site is one back from the numbered 43A and opposite 38.)
- Akaroa, Beach Road, a line of trees just north of the fire-station and across the road from the beach.
- Halswell hills, Corgwyn Avenue (off Cashmere Rd), several small trees in a street planting on the east side of the road.

References

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E. delegatensis. Photo taken by the technical editor from the directions given in Maurice Sinclair's article (see p. 29) - one of two specimens on the south-west corner of Ensors Road and Brougham Street.