

THE FRIENDS OF THE WAITE ARBORETUM INC.



WAITE ARBORETUM

NEWSLETTER

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On Monday 16th February, Friends gathered in Urrbrae House for their general meeting, and to hear Roger Bungey's talk on the Wollemi pine. For those who may not have attended, here is a précis of his fascinating presentation.

The Wollemi Pine – A relic from antiquity!

On a September day in 1994, David Noble, a young NSW National Parks and Wildlife Officer hiking with two companions, came to a ledge on a cliff face above a canyon they were exploring in the Blue Mountains. They abseiled to the bottom, passing through two icy streams, and suddenly found themselves in completely different vegetation from the usual coachwood and sassafras rainforest, and discovered a stand of 23 large unfamiliar trees in this previously unexplored canyon.

The trees were of a species not seen before in over 200 years of European settlement and survivors of 40,000 years of aboriginal fire stick farming. The area is 100 km northwest of Sydney, and is part of the Great Dividing Range, which had proved a great barrier to the early settlers and their westward movement following their landing in 1788. The park contains steep rugged mountains, crevasses, and about 500 canyons, one hundred of which have probably never been entered by white man.

Foliage, pollen-producing male cones, and the coco pop-like bark were eventually successfully collected, and botanists were convinced it was from the family Araucariaceae, but unsure of the genus. After extensive testing, it

was pronounced a new genus and species and given the name *Wollemia nobilis*.

Meanwhile, palynologist, Mike Macphail, expressed interest in the tree. Palynology is the study of fossil pollen. Pollen grains are fairly indestructible and have patterns and etchings on them, making them identifiable to a species.

Examining pollen grains from a male cone under his microscope, Macphail was ecstatic to find they were identical to fossil pollen grains considered to be up to 90 million years old, which scientists in the oil industry had been studying from core samples from drilling exploration for 30 years, but were unable to link to anything living. What Macphail and his colleagues had previously known as *Dilwynites* was now known around the world as Wollemi pine.

Dilwynites had experienced a population crash two to three million years ago and all but disappeared from the fossil pollen record. A gradual climate change had eradicated the Wollemi pine on the Australian continent except for this one ancient, untouched location of 23 trees.

Propagation is carried out at the Mount Annan Botanic Gardens. The seedlings grow quickly, more so than under the forest in the canyon, probably because of the better light and warmth. The seeds are slow to germinate but then grow quickly and at 3 years of age can be over 2 metres high with 70 branches, which is very rapid growth.

Five months after this discovery, a second site with another 17 trees was found in the same canyon, about 2 km from the first. Geneticist, Dr Rod Peahall of ANU analysed samples of foliage from both sites; his DNA analysis showed there was absolutely no genetic variation whatsoever in all the samples he tested. Such genetic uniformity only occurs in humans in identical twins or clones. It was concluded that in Wollemi pines, it was due to a long history of inbreeding. This means that evolution in the tree has ceased or slowed down to such a degree that it is undetectable.

The location of the trees is kept secret, and to harm them is punishable with a fine of up to \$220,000, or 2 years imprisonment.



“The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources on earth.”

Frank Lloyd Wright

VOLUNTEERS WITH SOME OF THE NEW TOOLS BOUGHT WITH THEIR \$600 GRANT



JUDE TYLER PAT MURCHISON VERNA FAIRLEY JIM MURCHISON

Some of our faithful volunteers having a jam session with their beautiful new instruments, bought with the *Volunteer Support Fund* grant from the South Australian Government.



From the Waite Arboretum Aboriginal Trail:

Wilga *Geijera parviflora* (family Rutaceae)

Geijera, an attractive tree from the arid lands, is an entirely Australian genus containing five species. Two of these, *G. linearifolia* and *G. parviflora*, are adapted to semi-arid conditions. *Geijera parviflora* is a beautiful tree with a dense, rounded crown and pendulous light green foliage. The small white or cream coloured flowers occur from March – November. The tree is moderate

to slow growing, is deep rooted, drought resistant, and is an excellent tree for street planting, windbreaks, shade, honey and fodder. The Aboriginal people used the leaves as a topical anaesthetic. [This species is currently being trailed as a street tree through the TREENET project.]

Native grape *Cissus hypoglauca* (family Vitaceae)

Native grape is a scrambling vine found in northern and eastern Australia. The fruits are edible but astringent, and were used by the Aborigines to cure sore throats. The tubers of some species of *Cissus* were also eaten, after being roasted on heated pieces of termite nest of hot stones covered with a sheet of tea-tree bark.



We would like to do a brief profile on each of our volunteers and Friends who might be so kind as to write a paragraph about themselves for us. This issue, Rosemary Sawley, our wonderful carer of the roses and committee member, has bravely elected to be our first:

I lived in the small suburb of Thorngate near the north parklands of Adelaide until I was married, the youngest of three children in the W. E. Michell family and grew up with much talk of agriculture, sheep, wool and wool sales. As a little girl, I remember many visits to the Thebarton factory, jumping into piles of scoured wool (sweet smelling) and being taken for tours of the tannery (not so sweet!).

After my schooling at The Wilderness, I did a three-year course at the North Adelaide Kindergarten Training College (as it was then known) working at Glenelg, Springbank, Kadina, Myrtle Bank and Port Adelaide before I married my husband Brian Sawley in 1964. In 1969 with our two young daughters, we went to England for two years, travelling extensively in our campervan. Our third daughter was born in 1972 and my life was then filled with schools, children's activities and voluntary work, which has continued to this day.

Like many people in Adelaide, I knew very little about Urrbrae House and the Waite Arboretum. In 2000 our youngest daughter celebrated her wedding in the grounds of Urrbrae House and I realised what a treasure the area was and became a garden volunteer. Not long after that Cicely Bungey approached me to join the Arboretum Committee as Secretary, a position I have now held for four years and have found to be of great interest.

With my late mother's baby grand piano on loan in the Drawing Room of Urrbrae House and with two examples of wool combing machines from the Mitchell factory on show in the Peter Waite garage, I feel very much a part of the Historic Precinct. I admire the hard work of all involved and enjoy working with the happy band of volunteers each Tuesday morning.

Rosemary Sawley



The Green Man

The foliate head—part man, part vegetation—is to be found in his hundreds in the medieval churches and cathedrals of Western Europe, including Britain. This image acquired the name 'Green Man' from an article written in 1939 by a Lady Raglanⁱ, who associated it with folklore. Before that date, it was known simply as a 'leaf-mask' or a 'grotesque'. There is no denying that the name Green Man is ancient in origin. An older English name for the countryside was 'greenmans', and the great number of English pubs called 'The Green Man' points both to the popularity of the name and its antiquity. There is no evidence, however, that the Green Man appears on inn signs prior to the early 20th century in his form as a head of vegetation—he seemed always to be shown as a forester or as Robin Hood.

The leaf-mask from which the Green Man ultimately derives began to appear in Roman art during the second half of the 1st century and became widespread throughout the Empire. He is to be found on the arch of Septimus Severus in Rome and in locations as far apart as Baalbek in Lebanon and Bordeaux in France. Kathleen Basford, in her book *The Green Man*ⁱⁱ, suggests that the survival of the image was ensured by the salvaging of four capitals with foliate heads from a 2nd century Roman temple by Nicetius, a 6th century bishop of Trier, who had them remounted on pillars in Trier Cathedral. This cathedral was one of the strongholds of Christianity, and it is not difficult to assume that, sanctioned by display there, this pagan image easily took root in Christian church ornamentation. Basford goes on to say that the motif, though pagan in origin, evolved during the early medieval period to become part of the symbolic language of Western Christianity.

No doubt many a medieval artist/craftsman expressed his own feelings and ideas through these images, thereby extending its evolution. The main change distinguishing later figures from their ancient prototypes is the type of vegetation used—from the classical acanthus to the hawthorn and other types of plants growing north of the Alps. It is easy to see an association being made between a hawthorn leaf-mask and the idea of 'the May-King' and the revival of nature and springtime.

Basford says “the Green Man often evokes the horrors of *silva daemonium*. A Green Man who, at first glance may seem the very personification of springtime and *summer-is i-comen in*, may, on closer inspection, reveal himself as a nightmarish spectre... There are very few benevolent or serenely smiling faces: more typically they frown. The eyes glare balefully, or stare unfocussed into space, full of dark foreboding and sometimes suggesting various levels of inebriation; bellicose, morose, even comatose.” The imagery of the Green Man can be ambivalent. He can be at once both beautiful and sinister. It must be remembered that at this time large areas of Western Europe, including Britain, were covered in forests, and in some instances were probably scary places.

I spent 1962/63 in the U.K., and it was during this time, on a visit to Exeter Cathedral, that I made the acquaintance of this hybrid figure. There he was, sprouting vigorous vegetation from his mouth, on a gilded corbel in the choir, supporting a Madonna and Child on his head. I wondered at his significance. On that first visit, I found one other example, looking out over the remaining eighteen or twenty others that lurked in various parts of that amazing building. Then, as a result, I became aware of him in many places, both sacred and secular. Walking through St. Anne’s Gate to St. James’s Park, there he was on the keystone of many of the houses. On visits to the bank in Albemarle St. in the West End, he appeared in art nouveau style on some of the buildings. A visit to Kew Gardens revealed him on metal work on the main gates, and in Florence I noted that Michelangelo used a series of the image in a frieze on one of the Medici tombs in the Basilica of San Lorenzo and from then onwards, I looked out for him wherever I went.

It was not until 1991, when I came across Kathleen Basford’s book, that I realised that the figures I had been looking at for thirty years were known as Green Men, and noted, on more recent visits to Britain, that he was now being widely promoted in cathedral bookshops and in tourist venues.

It occurred to me that the Waite Arboretum would be a suitable setting for an Urrbrae Green Man. Jennifer Gardner was enthusiastic about the idea, so I asked Gillian Robertson if she would be prepared to make one. Gillian was also enthusiastic, and together, we decided that, in the probable absence of any horrors from ‘wood demons’ in the arboretum, a relatively benign figure would be the appropriate choice. Gillian then got to work and has created, not one, but two splendid images for us.

I hope you all enjoy seeking them out.

Barbara Kelsey.

ⁱ Raglan ‘The Green Man in Church Architecture’ (*Folklore* No. 50, 1939)

ⁱⁱ Basford, Kathleen *The Green Man* (D.S. Brewer, Cambridge, 1978; reprinted 1996, and in P.B. 1998, 2000, 2002, 2003)

*A copy of Kathleen Basford's very popular book 'The Green Man' (1978) is available for inspection at the Arboretum office – a gift of Barbara Kelsey.



Jennifer and Chris Breaden with one of Gillian Robertson's Green Men.



Somewhere in the Arboretum...

Good news for the Elm Avenue!

Funds have been secured to enable our Elm Avenue to be irrigated and mulched. The Elm Avenue, comprising 69 English elms planted in 1928 & 1929 are an important visual and historical element in the landscaping of the Waite Institute and the Arboretum. The Elm Avenue is listed on the National Trust Register of Significant Trees.

The trees are senescing prematurely due to water stress. Some are in a moderate state of decline and one specimen has already died. Irrigating the trees by moving sprinklers is time consuming and therefore costly. It is desirable to create a more favourable environment for the trees so that they can live longer and look better.

Measures to be taken have been recommended by a qualified arborist and include the following:

1. Mulching. This is most important as mulch will reduce water loss from the soil, help decompact the rhizosphere and eliminate competition from grasses. The mulch will be to a depth of 75 mm and extend to the canopy line.

2. Watering. An irrigation plan has been designed which involves two rings of in-line drippers, spaced at 1 m centres, under the canopy of each tree. The system will be on automatic timers, so can operate at night.

A big thank you to Andrew Brokenshire, Manager, Waite Campus Services for securing the funds for the Arboretum work.

Jennifer



"I am reminded of the story of Marshal Lyavtey, who once asked his gardener to plant a tree. The gardener objected that the tree was slow growing and would not reach maturity for a hundred years. The Marshall replied, 'In that case there is no time to lose. Plant it this afternoon.'"

John F. Kennedy

***Pinus edulis* Pinyon, Nut Pine**
Arboretum trees # 614 (D13), # 615 (E13)

That square of land to the north of the old kindergarten site and jutting out into the playing field has been difficult to plant. Most of it is heavy 'Bay of Biscay' soil, intractable and wet in winter and cracking deeply in summer. It is the soil whose cracks extend to so many buildings. Originally there were some conifers there and an ill-judged attempt to establish a succulent and arborescent monocotyledon collection. Some of these survive but mostly to the margins of the area. Oaks have now been planted near the kindergarten site with mixed plantings in the main body of the area.

In the north-west corner (jutting out into the playing field) are two *Pinus edulis* that seem to be doing well. Nut Pine is native to south central USA Arizona, Utah, Colorado and New Mexico just getting into Mexico in the north-west corner of Chihuahua State. It grows on dry rocky slopes at 1600-2400m with a rainfall of 300-600mm but is frozen in winter. It should do well in the Adelaide Hills.

It is a relatively small conifer forming a rounded tree to 10m and branches low down. The needles are in twos, thickish and incurved. The cones are small, 2-6mm long, almost globular, reddish orange and open at maturity. The seeds are relatively large, 10-13mm long and 6-8mm wide and are widely sought after by rodents, birds and man. The relatively soft shell makes them more attractive too. The American Indians harvested them and stored the seeds for winter use.

As far as I know they have not been readily available here but would be worth chasing. The final tree is not too large. It should grow readily with just a little more rain than in the Arboretum and could provide you with some fresh pine nuts. Our trees were planted in 1984 and 1985 and the better of them is now 3m tall.

David E. Symon



HELP REQUIRED

Catering for the annual **TREENET symposium September 2 & 3**, will be the **only fundraiser for the Friends** this year. **Your help is needed** to make it a success, as a record attendance is hoped for. Please contact the Secretary, Rosemary Sawley, on 8379 7102 if you would like to be on the organising committee, or help on the day(s).

Volunteer Ginny Ellis has secured a paid position with SA Great. Congratulations, Ginny! She was an invaluable help in the Arboretum office and her cheerful personality is greatly missed. A new volunteer with good organisational, office and computer skills is needed to assist with Arboretum activities and the smooth running of the TREENET symposium. If you have a day a week to spare, to work in lovely surrounds, and would like to be involved with very worthwhile projects, please contact Jennifer 8303 7405 (after 1 May) or David Lawry in the TREENET office (8303 7078).