

NEWSLETTER

SPRING 2014

NUMBER 81

FRIENDS OF THE WAITE ARBORETUM INC.

www.waite.adelaide.edu.au/waite-historic/arboretum

FORTHCOMING EVENTS

FRIENDS OF THE WAITE ARBORETUM EVENTS

Free Guided Arboretum walks

The first Sunday of every month
at 11.00 am.

Walks meet in front of Urrbrae
House

Jacob Cordover & Rupert Boyd

Classical guitar concert at
Urrbrae House on

Friday November 21, 2014

6 - 7.30 pm

Enquiries and bookings please
contact Beth Johnstone on
8357 1679 or
bgrich@ozemail.com.au

Joint Friends Christmas Party

Monday 1st December

5.30 pm – 7.30 pm

Autumn visit to the historic house and grounds of Anlaby.

Details in the Summer
Newsletter.



Patron: Sophie Thomson

President: Henry Krichauff, **Vice-President:** Marilyn Gilbertson OAM

Secretary: Norma Lee, **Treasurer:** Dr Peter Nicholls

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Committee: Beth Johnstone OAM, Robert Boardman, Andrew Walters,

Ron Allen, Dr Wayne Harvey, Terry Langham, Dr Jennifer Gardner (ex officio)

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Photography: Eileen Harvey



Pyrus calleryana in full flower this spring. Photo Jennifer Gardner

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FROM THE PRESIDENT

With spring well and truly upon us, we are enjoying the wonderful fresh new foliage and colourful flowering of many of the deciduous trees and shrubs, not to mention the assortment of native and exotic herbaceous plants. Soon we will be seeing the gradual drying out of the current verdant landscape to take up the browns and gold of our hot dry summer.

With little rain to mention since the last day of July, the landscape has shown remarkable resilience to such a prolonged lack of significant rain. This can probably be attributed to the big downpour in February followed by reasonable winter falls. As a result the Arboretum looked in excellent condition to be shown off in early September at the 15th Treenet National Street Tree Symposium. The state of upkeep of the whole area was impressive with the mowing and selective herbicide use making accessibility for the walking tours easy. Jennifer and Andrew together with various helpers deserve a pat on the back.

The Treenet theme this year was "Remarkable Trees", with a selection of 10 of the more outstanding and suitable specimens to fit the theme. The four programmed tours of 40 minutes duration, each with three groups of approximately 15 delegates were escorted by the Arboretum guides in what has to be described as perfect weather. As you can see from these numbers the attendance at the Symposium this year totalled around 200. A big thankyou is due to all those who assisted in the success of the day. This annual symposium tour is a big feature of the FWA calendar and in the past has been a generous contributor to our finances. However, over the last two years a different system of funding for the Treenet organisation is being used which has meant no money over and above the actual running costs has been available to distribute.

On this same day an impressive display of Ron Allen's wood turning using some of the extensive range of salvaged wood from the Arboretum was on view in Urrbrae House. This was well attended along with a display of material associated with

Matthew Flinders in the Drawing Room. This included various books and a range of prints by Bauer and Westall, which are part of the collection of Dr Lance McCarthy who is the instigator of the Flinders Investigator Garden at Flinders University.

The talk given by Charlie Buttigieg in July and the excursion event for this year, the guided walk through the Mallee collections at the Adelaide Botanic Garden in August, are described elsewhere in this Newsletter.



Jennifer presenting flowers to members of the inaugural Committee of the FWA.

Photo Lynette Zeitz

Our recent 'birthday' celebration of 20 years since the establishment of the FWA was an enjoyable and very successful afternoon tea held in Urrbrae House on Friday 9th September. A pleasing number of nearly 50 attended. These included the inaugural President, Tony Whitehill, his two successors, Roger Bungey and Cicely Bungey; inaugural guides Anna Cox, Isabella Rawnsley and Mary Tester and several Life Members. Approximately 20 apologies were received including Immediate Past President, Bryan Milligan and inaugural guide Tommie Siekmann. Thanks especially to Beth and Marilyn for organising the event and to Allan Woodman for providing the birthday cake and the flower bouquets presented.

Upcoming events: keep in mind the Jacob Cordover and Rupert Boyd classical guitar concert on Friday 21st November.

Henry Krichauff

IN THE ARBORETUM FROM THE CURATOR

The 15th Treenet National Street Tree Symposium was a great success with ~200 attendees, excellent presentations in the National Wine Centre on Day 1 and perfect weather for Day 2 workshops in the Waite Arboretum. The workshops were very well received by delegates and topics were: 'Managing Resident Wildlife During Tree Removal / Maintenance' (James Smith / Lee Anderson / Rod Bailey), 'Monitoring & Maintenance of a Living Collection – formative pruning with an arboretum of forests' (Adam Burgess / Mark Richardson) and Great Ways to Plant Trees – Fact or Fiction' (Steve Moss / Martin Ely). The Arboretum guides prepared and presented a 'Remarkable Trees' walk. Volunteer assistance is essential for the success of the symposium. Apprentices from the Adelaide Botanic Gardens helped shepherd groups and FWA assisted with Day 2 organisation and at the reception desk on Day 1. My special thanks to the guides and the energetic support of Marilyn, Beth and Peter Nicholls. I congratulate Director Glenn Williams and the Treenet Management Committee for a stimulating and well organised symposium. Every presentation was videoed and is available for viewing on <http://treenetmedia.com/>



Planting a memorial oak in the Arboretum at Treenet. Photo Jennifer Gardner

On 29 August a ceremony was held at the Creswell Gardens in the parklands adjacent to the new stadium, to mark the 100th anniversary of the planting of the War Memorial Oak, the world's first memorial tree to honour the fallen in World War I.

Organiser of the ceremony, David Lawry Director of Treenet's national Avenues of Honour Project, propagated acorns of this English Oak and one of the progeny was planted near its parent. Children from the Gilles St and Sturt St Primary Schools also participated by placing 60 crosses to represent the 60,000 Australians who died in the conflict. Another of the War Memorial Oak progeny was planted in the Waite Arboretum at the symposium.

The Friends 20th anniversary celebration was a delightful occasion. It was lovely to see so many long-standing members and an enjoyable reunion of the foundation guides who formed the Friends. I thank Beth and Marilyn for the organisation and delicious catering, Allan Woodman for the decorated cake and Arboretum posies for the inaugural FWA committee members. Leah Grantham, Director Stakeholder Relations warmly thanked the FWA for their two decades of support on behalf of the University.

Over the last three months members of the Mediterranean Garden Society, the Heritage Rose Society and the Rose Society of SA have come along to weekend working bees supplementing the ongoing efforts of our regular Tuesday morning garden and Arboretum volunteers. The pruning of our hundreds of roses in particular is a huge task and the support of these community groups is greatly appreciated.



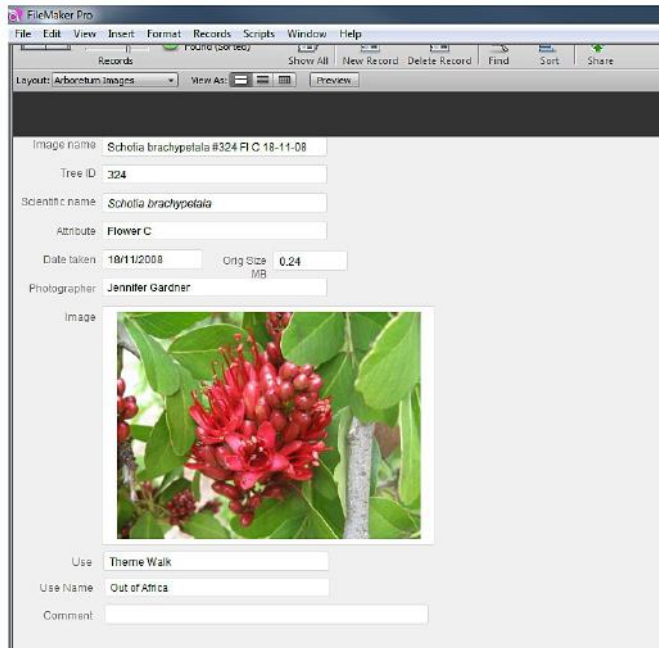
Nature Ninjas team with Jennifer Gardner and Marian McDuie. Photo Nature Ninjas

In the last newsletter I reported on my participation in the Federal GovHack and the 'Unleashed' competition by making the Arboretum datasets available free to the public through the SA Government Data Portal. My colleague Marian

McDuie and I were delighted when one team, calling themselves the Nature Ninjas, primarily staff from TAFE SA, took up our dataset with an App utilising the State Flora open data. The Ninjas took out several prizes - the National People's Choice, the SA Science, Research and Environmental Data category and the Premier's \$30,000 Award. The latter will enable further development of their App 'What Grows Here' with the potential links to our Arboretum datasets.



Example of image labelling:
Calodendrum capense #933 FI M 27-6-14



Sample of image record. Photo Jennifer Gardner

Meanwhile, Marian McDuie and I have continued to work on the development of the Arboretum App in collaboration with App developer Carlos Cavalho, Oak Systems (an appropriate name!). Version 1 will be ready for release in the near future and I would welcome feedback from the Friends on the ease of use and suggestions for improvements.

This will inform future versions. Initially the pop-up information on the 'Near Me' and 'Search' functions will be limited for most specimens to the information currently on the metal labels and there will be only one or two self-guided walks. Over time more text, images and walks will be added.

My next big project is to build the image database by sorting and choosing from my hundreds of existing images and adding to them. If you would like to assist with this project and contribute your photographs from the Arboretum please contact me first on 8313 7405 for further information. To be useful every image must be carefully selected in each category (habit, flowers, fruit etc.), systematically labelled with a template that I have devised, and preferably of high resolution.

Jennifer Gardner

FRIENDS OF THE WAITE ARBORETUM NEWS

NEW MEMBERS

We warmly welcome the following new members:

- Dr Jennie Gardner and Family , Parkside
- Dr David Shepherd and Family, Hawthorn
- Mr Vincent Langham and Ms Sarah Gehling, Mitcham

FWA Community Wiki

Earlier this year, as part of their coursework, two students from UniSA each designed a website for the FWA. The committee chose that designed by Ann Lewis. This community website is separate from our presence on the University website and you can explore it at: <http://www.communitywebs.org/friendsofwaitearb/>

Committee member Terry Langham will be responsible for the website. If you have any queries, comments or suggestions please contact Terry on terrytpot@hotmail.com

Friends of the Waite Arboretum 20th Anniversary Celebration



Inaugural President Tony Whitehill with current President Henry Krichauff.

Photos Lynette Zeitz

There is a tide in the affairs of men, which, taken at the flood, leads on to fortune; (so said Brutus in Julius Caesar. Act 4, scene 3.)

There were equally wise people around in 1994 because in September of that year the inaugural meeting of The Friends of the Waite Arboretum was held in the drawing room of Urrbrae House. There were 54 people present including the then Director of the Waite Institute, Professor Harold Woolhouse.

On 24 January 1995 the Friends became Incorporated.

The Friends Committee has been renewed with other personnel during the intervening twenty years, however the commitment to the Arboretum has remained a central focus. Those who have served on the committee speak of the Arboretum with respect and even reverence. The recognition that Peter Waite made this available through his generous donation to the people of South Australia is like a shining beacon to many. It is that history and ambience which has brought, and continues to bring, dedication and commitment from so many.

The feeling of being in a special place is often mentioned by regular users and is certainly the driving force of the many volunteers in the Arboretum and gardens. These people, with many who have toiled tirelessly through the years, both maintain and improve the areas. This in turn brings more admirers as they tend "their patch". Thus



there has developed a circularity which has continued these twenty years and brought accolades from a wider source, but particularly from those who live in the vicinity of the Arboretum.

So it was with very great pleasure that the current President (Henry Krichauff) and committee acknowledged the twentieth anniversary of the foundation of the Friends group by sharing afternoon tea with many of those who had given time to voluntary service at Urrbrae.

It was a wonderful experience to have present some of those who had been on the original committee, plus others who had served as guides and in other capacities.

Tony Whitehill who was the Inaugural President, cut the anniversary cake. Others present from those early days were Anna Cox, Isabella Rawnsley and Mary Tester. The current Director, Stakeholder Relations, University Engagement Branch (Leah Grantham) and the Curator (Dr Jennifer Gardner) presented these special guests with posies of flowers from the Arboretum as recognition of their much appreciated service. There were several people who could not attend on the day, but who sent apologies. Amongst those present was our local Mayor, Michael Picton.

The Friends groups have continued to raise funds and to comply with the Aims of the Constitution and it is hoped, will continue to do so for the next twenty years and thereafter. We wish them well.

Beth Johnstone

ARBORETA

The Waite Arboretum is a widely recognised part of a national network of significant arboreta.



Palms in the Waite Arboretum.

The Directory of Australian Botanic Gardens lists about 140 botanic gardens and other living plant collections throughout Australia, of which about 23 use the term "arboretum" in their name. Three of those arboreta are in South Australia: the Waite Arboretum, Currency Creek Arboretum and Roxby Downs Arboretum. Those 23 national sites labelled as "arboreta" vary in size from less than 5 ha to over 300 ha, with an average size of 40 ha.

The Waite Arboretum has 2,300 specimens planted across 30 hectares. Each specimen has been selected and planted with the principle of no supplementary watering after establishment. This 'no watering' principle was designed to guide tree selection for plantings on the Adelaide plains.



Conifers in the Waite Arboretum.

The objectives of the Waite Arboretum are; to demonstrate and evaluate the performance of Australian and exotic trees,

to maintain and develop a resource for teaching and research,

to provide an area for recreation and guided walks, and

to contribute to the conservation of biodiversity.

All arboreta have the common element of being a collection of living trees and bushes established largely for scientific and informative purposes. Creating collections of living woody plants is not new, and could have its origins several millennia ago when selected trees were planted in designated areas for utilitarian purposes. (The pharaohs are believed to have planted groups of exotic trees to supply frankincense, ebony, pine and cedar.)

Arboreta became more popular in the western world as exploration and expansion into unfamiliar regions during the 18th and 19th centuries led to increases in plant collections – both living and preserved. The term "arboretum" was probably first used in the 18th Century. Curiosity and commercial interests were the primary drivers to the early arboreta.



Eucalypts in the Waite Arboretum.

It is generally accepted that Australian arboreta were also established with a commercial purpose – to identify species that would benefit the new colonies and to establish trees that would provide wood for future needs. Arboreta now have multiple purposes beyond just the utility of species, and we can list the conservation of genetic material, retention of local biodiversity, or simply as an attractive open space as other worthwhile purposes.

Wayne Harvey

Friends Tour of the Mallee collections at the Adelaide Botanic Garden

In mid August, an ideal sized group of 15 Friends of the Waite Arboretum were conducted on a tour by Steve Higgins, the ABG horticulturist responsible for the Mallee Collection. We met at the Schomburgk Pavilion where Steve explained the significance of "the Mallee" and its importance, culturally to aborigines, agriculturally to crop production and its natural attributes as a form of highly adapted vegetation, which is a survivor in what can be quite inhospitable climatic conditions.



Friends in the Whipstick Mallee. Photo Terry Langham

First stop was the Whipstick Mallee along the front of the old tram barn, now the Plant Biodiversity Centre. Here the various plantings are now developing well since being established 10 years ago. The soil is introduced sandy loam with a covering of gravel, which acts as an ideal barrier for moisture retention. Several mallee Eucalypt species including the attractive pink or cream flowered *E kingsmillii* and some *Callitris glaucophylla* grow as the upper story above *Grevillea lavendulaceae*, the rare Northern Flinders Daisy, *Senecio megaglossus*, Porcupine Bush, *Trioda irritans* and a selection of normal grasses. A single Quandong, *Santalum acuminatum* was fruiting well.



Quandong in Whipstick Mallee

Near the Wine Centre we looked through the three year old *Eremophila* collection, with quite a number in flower. Adjacent to this area we saw interesting examples of plants growing with minimal water in

small, restricted courtyards, or walled garden settings. These are a good example of the suitability and adaptability of these tough, yet attractive mallee type plants.



Steve Higgins in the *Eremophila* beds.
Photo Terry Langham

Immediately adjacent, across the road is the more extensive Mallee Section. Steve pointed out that considerable attention has been given to making the layout resemble as much as is possible what the real mallee association is like. This ranges from the actual surface of the low fertility sandy soil to the top of the tree canopy where in between, grasses and small shrubs grade up to the trees with the eye-catching variation in leaf size and shape and the grey/green shades of the vegetation.



Mallee section with soil clear of mulch.
Photo Terry Langham

The original practice, like so many other sections of the ABG, was to cover the ground with mulched plant material. In the mallee area, where watering is not practiced, the mulch encouraged the growth of water resisting mycelia which formed a water resistant, impervious layer. Once the decision was made to completely remove the mulch, the 'clean' surface could then replicate the conditions, which

occur naturally. This is where the appropriate fungal growth forms a binding crust, which allows water to penetrate easily and seeds to germinate, while stabilising the fine, easily disturbed sand. With the thick mulch cover there was no way any self-seeding could occur. The extensive range of plants in the Mallee Section is far too large to mention any in particular, but best to walk around this iconic group of plants and appreciate their wonderful adaptability. I would mention however, that we did note the progress of the Native Caper, *Capparis mitchellii*, which was propagated by David Symon

from a Waite Arboretum specimen and officially planted last August.

After this most interesting walk of just on two hours we all left quite inspired by Steve's boundless enthusiasm and interest in his field of endeavour, not to mention the preparation he'd made for our visit. We were all very appreciative of the time he and Peter Borgelt, (his assistant) devoted to this very successful excursion.

Henry Krichauff

The Heritage Trees of Anlaby – Listening to the Forgotten Stories from our Past

In recognition of National Tree day on Sunday 27th July, an illustrated talk under this title was presented to the Friends of the Waite Arboretum. The guest speaker was Mr Charlie Buttigieg, a Melbourne-based horticulturalist, who has researched and nominated historically significant trees on the Significant Tree Register of the National Trust of Victoria for many years.

In late 2012 Charlie began the Anlaby Heritage Tree Project at one of South Australia's most significant pastoral properties – Anlaby, near Kapunda. The project concluded in May this year with no less than 620 tree specimens covered by 60 National Trust of SA heritage registrations. It is now the largest collection of National Trust registered trees in one location under private ownership in Australia. This highly significant fact was strongly emphasised during the talk. The afternoon gathering of some 41 guests was captivated by some of the amazing discoveries that Charlie and his co-worker have made.

The significance of these trees can relate to their age, as far back as the early 1840's, to their rarity or to the source of the original plant material. On the latter point it was noted that local nurseries were generally overlooked, with overseas sources being more the norm. Spain was especially mentioned, as this was the country, which also supplied many of the original Merino sheep for the historic Anlaby Merino Stud.

Of the large number of trees registered Charlie made special mention of a dozen or so.

The original 367 metre long carriageway was planted to River Red Gums, *E. camaldulensis* amazingly spaced exactly 14ft 7ins (4.5 metres)



John, Wendy and Andrew Morphett with Charlie Buttigieg. Photo Glenn Williams.

apart and the width of a horse drawn vehicle. With the growth of the trees, this soon proved to be too narrow, so a new Oak Carriage-way, mostly of Algerian oaks *Q. canariensis* was planted c1865-70, nearby. This was later abandoned for the present wide driveway leading from the now main entrance and comprises both River Red and Sugar Gums, *E. cladocalyx*. Adjacent to this avenue is a group of large Western Myall, *Acacia papyrocarpa*, which are reputed to have been grown from seed collected during the inaugural, epic south to north motorcar trip to Darwin of Henry Dutton and Murray Auger in 1908.

In the garden of the Station Manager's Homestead, planted in 1906, is a large but unique blue Deodar Cedar, *Cedrus deodara*, with vivid blue foliage. This tree is thought to have been positioned here to complement the Victorian Blue paintwork of its front door and window shutters. The distinct blue-grey foliage of this sport has shorter needles in stark contrast to the green toned needles of the normal trees' foliage. The origin of

the original seedling can only be guessed. The survival of Deodar Cedars in the harsh, dry and windy conditions of many rural areas is a surprising attribute of the species.

Spreading away from this area is the extensive tree collection, spaced out and planted in the style of an English rural landscape. Noteworthy of course is the wide range of mature, massive and large canopied specimen trees. There appears to have been no favouritism towards either endemic or exotics. The state of growth of these well developed, balanced forms indicate that the growing conditions have been quite conducive, even in our hot and harsh summers.



Colin Moss, Charmaine Wakefield ,
Charlie Buttigieg, Mayor Michael Picton.
Photo Glenn Williams.

Trees that Charlie made mention of include those in the plantation area behind the main garden with canopy spans of the order of 20 metres and over, trunk girths 3-4 metres and height up to 20 metres in the case of the larger trees. Of note he mentioned a Smooth-barked Apple Myrtle or Sydney Red Gum *Angophora costata*; the African Podocarp, Common Yellowwood, *Afrocarpus falcatus* , (the seed or seedling for this could have been collected by Henry Dutton on one of his big game hunting trips to South Africa); Deodar Cedars; English Oaks and Algerian Oaks. Under the outer canopy of one Algerian Oak grows a 4 metre tall Balearic Box, *Buxus balearica*, from Southern Spain, the Balearic Islands and North Africa. The numerous Algerian oaks are thought to have been brought out as seedlings or acorns wild harvested from either Southern Portugal or Spain between 1852-1865. Others mentioned included Holly Oak, *Q. ilex*; Turkey Oak, *Q. cerris* ; European Nettle Tree, *Celtis australis*; Weeping Myall, *Acacia pendula*; River Oak, *Casuarina cunninghamiana*; Osage Orange or Horse-apple,

Maclura pomifera; Field or Common Maple, *Acer campestre* and a Wheatley Elm, *Ulmus minor* (several of these are in the private garden). This elm species with 'its lofty height' is rare in cultivation in SA, where it is the only known and verified specimen in this state from the early twentieth century. It is a prime example of the size these trees can attain and supports the desired park land setting together with oaks and poplars which the original plantings aimed to achieve throughout the property. Of particular note is a group of three Algerian Oaks planted as a private World War 1 memorial to the three farm workers from Anlaby who lost their lives during the war.

Charlie's questioning mind was directed to a fascinating tree showing abnormal indents of the leaves and bearing acorns, which were not typical English Oak. Following much consultation with specialist botanists here in Australia and overseas, it transpired that this was a hybrid known to exist in the National Arboretum of New Zealand and at Hackfalls Arboretum in NZ where a tree had been planted in 1970. This oak hybrid *Quercus x coutinhoi* was growing at Anlaby approximately 10 years before it was botanically described in 1910. It occurs as a natural hybrid where its parents, the Portuguese Oak, *Q. faginea* and *Q. robur* share the same habitat. It has subsequently been found to occasionally occur in Portugal and Spain, where it has been known to occur in oak collections where these two species are growing in close proximity. Because of its rarity, plant material with the collection code number CB 6901 has been lodged at the Sir Harold Hillier Herbarium in the United Kingdom. This herbarium is the international collection for the genus *Quercus* held by the International Oak Society. This tree is the first confirmed specimen of its type in Australian botanical history.

The extensive amount of painstaking work undertaken by the present owners, Peter Heyward and Andrew Morphett since they purchased the property in 2002 can't pass without notice. They abandoned their successful careers in Sydney to become wholly engrossed in the extensive rehabilitation required to start the massive undertaking of returning this famous old property to a semblance of its former glory, after many years of neglect. The fact that now the property has been found to be the repository of such a collection of identified trees tends to put even more responsibility on their shoulders. We all wish them well in their endeavours.

Henry Krichauff

Outeniqua Yellowwood, *Afrocarpus falcatus*



Afrocarpus falcatus in the Waite Arboretum.

Photo Ron Allen

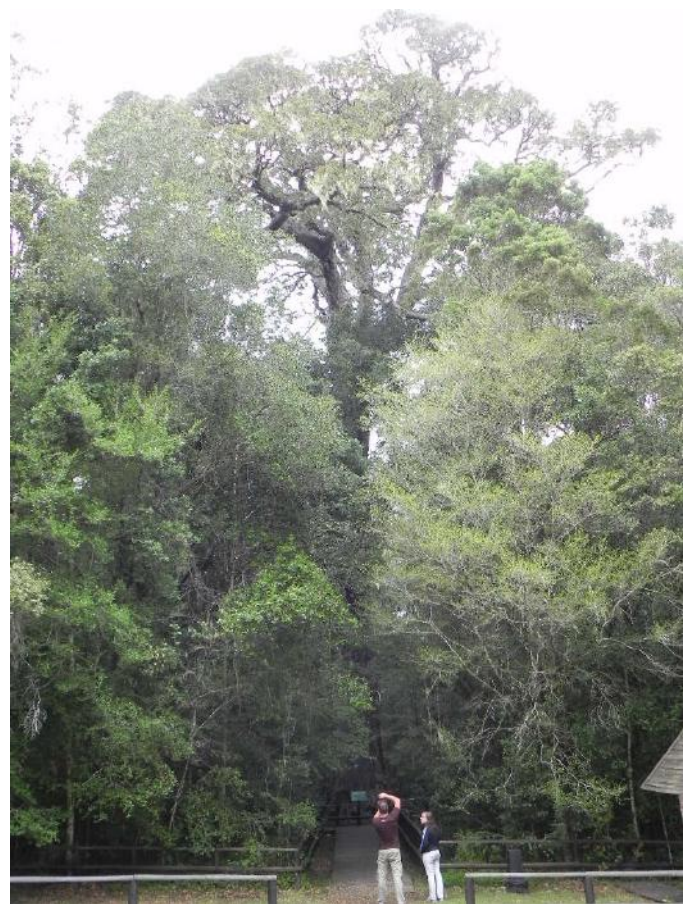
Afrocarpus is a genus of conifers belonging to the podocarp family - Podocarpaceae. Prior to 1989 Outeniqua Yellowwood was known as *Podocarpus falcatus*.

Podocarpus is from Greek *podos*, a foot and *carpo*, fruit, referring to the fleshy foot stalk of the fruit, very readily seen with Illawarra Plum *Podocarpus elatus*, where the fleshy stem is plum coloured and edible, in fact quite tasty. In the late 1980s several African species formerly classified in the genus *Podocarpus* were reclassified. The reason for the separation is mainly based on the absence of a fleshy receptacle at the base of the seed and on chromosome number, but there is still disagreement about this. However, with recent molecular data, support for the recognition of *Afrocarpus* as distinct from *Podocarpus* is generally agreed. The genus *Afrocarpus* contains two species although some argue that six should be recognized.

The specific name, *falcatus*, is from Latin and means 'sickle shaped' referring to the shape of the leaves. Outeniqua is derived from the region of the Outeniqua Mountain Range in the southern part of South Africa, one of the areas of the trees natural habitat. Other common names are: Podo, Yellowwood, East African Yellowwood, Bastard Yellowwood.

Yellowwood belongs to the Gymnospermae division of seed-bearing plants, differing from Angiospermae by the fact that the ovules are not enclosed in carpels, and they are commonly known as naked seeds. Podocarpaceae is one of only seven Gymnosperm families found in South Africa. Both *Podocarpus* and *Afrocarpus* are protected in South Africa.

Afrocarpus falcatus is a tall evergreen conifer often growing up to about 45 metres tall, but known to have reached 60 metres. At higher elevations and in exposed, coastal habitat it rarely exceeds 25 metres tall. The trunk can be 2 to 3 metres wide. Yellowwood is one of the tallest and largest trees in South Africa, and some have been designated by the Department of Water and Forests as Champion Trees, including the Eastern Monarch at 39 metres. Of interest, the tallest tree in South Africa is a Sydney Blue Gum (*Eucalyptus saligna*) at 79 metres. *Afrocarpus* includes the largest known podocarps outside of New Zealand where Totara (*Podocarpus totara*) is substantially larger. The tree was heavily exploited in earlier days and the 'giants' were felled for timber, thus the lack of large trees and therefore its protected status today.



One of the remaining 'giant' *Podocarpus falcatus* in the Outeniqua forest near Knysna, South Africa.

Photo Terry Harvey

The tree has a beautiful form. The flush of bluish-grey leaves in spring contrast beautifully against the older, dark green, mature leaves. The leaves are arranged spirally along the branches, with parallel veins and smooth margins. The leaf is curved with a tip which is sharply pointed (falcate). They are small and narrow, up to 4.5 centimetres long by about 6 millimetres wide. They are green to yellowish, hairless, and leathery and somewhat waxy in texture.



Afrocarpus falcatus bark. Photo Ron Allen

The bark is interesting, being smooth and ridged on younger stems and peeling off in flakes on the older trees.

Yellowwood is a dioecious species, with male and female flowers on separate plants. The male cone is brown with spiralling scales and measures 5 to 15 millimetres long by 3 millimetres wide. It grows from the leaf axils. The female cone has one scale bearing one seed between one and two centimetres long. The gray-green seed is drupe-like with a woody coat covered in a fleshy, resinous skin. The Waite Arboretum has two *Afrocarpus falcatus* on the eastern boundary of the lake, both of which currently have some fruit. One has some large fruit, more than 20mm in diameter showing the thick fleshy outer covering. This pair of trees is separated by an Australian Podocarp – Illawarra Plum (*Podocarpus elatus*), which easily shows the similarities.



Male cone (left) female cone (right)

The trees bear fruit irregularly, only every few years. The main agents of seed dispersal are fruit bats, which eat the fleshy covering and discard the woody seed. Many birds, animals and rodents feed on the fruits. These may not be effective seed dispersal agents, because it appears that seeds that have been digested in this manner do not germinate well. In order to propagate new plants it is very important to remove the fleshy part manually as it contains an inhibitor, which seems to suppress germination.

Outeniqua Yellowwood occurs naturally from the southern Cape, northwards to the Limpopo (the northern most region of South Africa) and also eastwards to Mozambique. Some of the largest individuals occur in the Knysna-Amatole montane forests, where some specimens are over 1000 years old.

The tree is widely planted in large gardens, parks and as a street tree.

Sawn
Yellowwood
showing the
colour and grain.
Photo Ron Allen



The wood is
valuable and is
very similar in

appearance to Australia's Yellowwood (*Flindersia xanthoxyla*). The colour is pale yellowish with little difference between the heartwood and the sapwood. The wood has a fine even grain and is of moderate weight – about 670 kgm per cubic meter (c.f. most pines – about 550 to 600 kgm per cub. meter). It was used extensively for furniture, roof beams, floorboards, door and window frames and boat building. Some of the famous yellowwood antiques seen throughout South Africa were made from the wood of this specific tree. The straight stems of these trees were once used for the topmasts of ships.

The bark is used for tanning leather. The ripe fruit is edible but is very resinous. The sap is traditionally used as a remedy for chest complaints.

Ron Allen

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www.conifers.org/po/Afrocarpus_falcatus.php

SPRING IN THE ARBORETUM



Pyrus pyraster, Wild Pear (above and right), thought to be an ancestor of the cultivated European pear, bears hard, astringent fruit which are edible when fully ripe.



Brachychiton bidwillii, Little Kurrajong is a decorative small tree which drops its deeply lobed palmate leaves before flowering. As it ages the tree flowers more profusely eventually producing bunches of up to 50 flowers directly from the trunk as well as those on twigs and branches. Flowers are bell-shaped and vary in colour from orange-red to salmon-pink. Origin Queensland and NSW.



Yucca filifera is a fast growing, branching large yucca. Leaves are stiff, olive-green and form spherical heads at the ends of branches. It bears large cream inflorescences of bell-shaped flowers. Origin Mexico.



Cercis siliquastrum, Judas Tree has deep pink pea-like flowers which are borne in clusters along the branches and trunk before the spring foliage appears. In autumn the yellow leaves contrast with the chocolate brown seedpods. Origin S. Europe and W. Asia.



Hymenosporum flavum, Native Frangipani has sweetly scented flowers which open cream and age to a rich yellow. Fruit capsules are hard and brown, containing numerous closely packed layers of brown, papery seeds. Origin Queensland, NSW, New Guinea.



Flindersia australis, Crows Ash has large inflorescences of cream flowers (below) which develop into woody capsules (above) each carrying a winged seed. Origin Australia



Cassia brewsteri, Leichardt Bean, is an attractive small tropical tree with pinnate leaves and, in spring, a stunning display of pendulous racemes of yellow and orange flowers. These are followed by brown seedpods up to 45cm long. Origin Queensland

