

Garden Highlights, April 2017

This month we highlight conifers from New Caledonia, a special place for plants. 75% of its plants are endemic, ie. they grow wild nowhere else in the world. A quarter of these endemics are vulnerable, at risk of decline or extinction, as a result of plant collecting, land clearance and mining. To help reduce this risk, the New Caledonia government prohibits the export of all plant material.

These conifers are related to the Bunya Bunya Pine *Araucaria bidwillii* and Norfolk Island Pine *Araucaria heterophylla* of Australia, the Giant Kauri *Agathis australis* of New Zealand and the Monkey Puzzle Tree *Araucaria araucana* from Chile. New Caledonia has a greater diversity of these conifers than any other region, with 18 of the 41 species worldwide, despite its land area (18,576 sq km) being just under twice that of the Melbourne metropolitan area.

Since the flowering plants began taking over the best environments in the world from about 100 million years ago, conifers have hung on in the most challenging areas, with snow cover, nutrient-deficient and toxic soils, and scarce water. New Caledonia's conifers cope with all these challenges (except snow-fall).

When the great meteor strike caused the extinction of so much life 65.5 million years ago, all the *Araucaria* and *Agathis* of the northern hemisphere disappeared. Probably 3 of the species from the large southern continent, Gondwana, survived. These then diversified in Australia and New Caledonia.

1. Captain Cook and his crew were the first Europeans to see what is now called the **Cook Pine *Araucaria columnaris***. It is also referred to as the Column Pine, because when growing together in a forest they look like columns, similar to the great columns of basalt rock in the Organ Pipes National Park in North Keilor, west of Melbourne Airport. These majestic trees were planted around the main village square to signify the power of the tribal chief and were important in the spiritual life of the Kanak people. The Cook Pine is located outside the Botanic Gardens, 180m from its entrance beside the Playspace. (See the map overleaf.)

2. When mature, the **Biramule *Araucaria biramulata*** also has a column shape, but with sparser foliage than the Cook Pine.

3. **Mueller's Pine**, also called **Candelabra or Cat's tail Pine, *Araucaria muelleri*** is one of the conifers that grows on steep slopes where the soil contains toxic concentrations of iron, nickel, cobalt, chromium and manganese. It is in danger of extinction in the wild.

4. While the Kauris are in the same family as the New Caledonian Pines (*Araucaria*), they have much larger leaves. **Scrub Kauri *Agathis ovata*** can live for 500 years, but are Critically Endangered in their only wild location. Their roots are being damaged by wild pigs, and a fungus (*Phytophthora*), similar to the one devastating New Zealand's giant Kauris, has been recorded in these wild trees. Botanic gardens are important for preserving these significant trees.

What's on in April 2017 (More details on Friends website)

Bat Watch, Thursday 6 April 5:30pm (Booking, web: Events Geelong)

Botanic Art for Beginners, Weekend 8, 9 April 9:30am - 4:30pm, \$150 \$120

Discovery Walk '**Vital Veggies – Healthy Herbs**', Sunday 9 April 2:00 pm Gold coin

Discovery Table, Sunday 16 April 1:00 - 3:00 pm.

Ladies Kiosk free event, Sunday 23 April 10:45am - 3:00pm

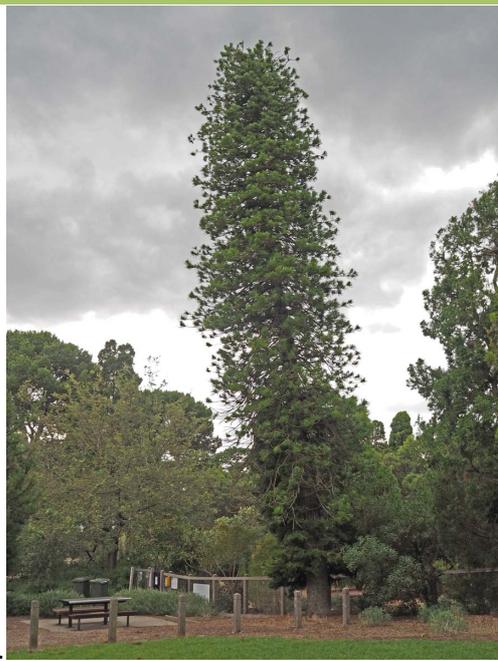
Wildlife Photographer of the Year, National Wool Museum, till 14 May.

The **Friends' Nursery is open** on Wednesdays 9:30am - 12:30pm.

Free Guided Walks, each Sunday 2:00pm, Wednesday 11:00am.

The **Curiosity Cabinet** is displaying Arid Environments

The **Tea House** is open every day.



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This information was developed
by the Volunteer Guides
Friends of
Geelong Botanic Gardens

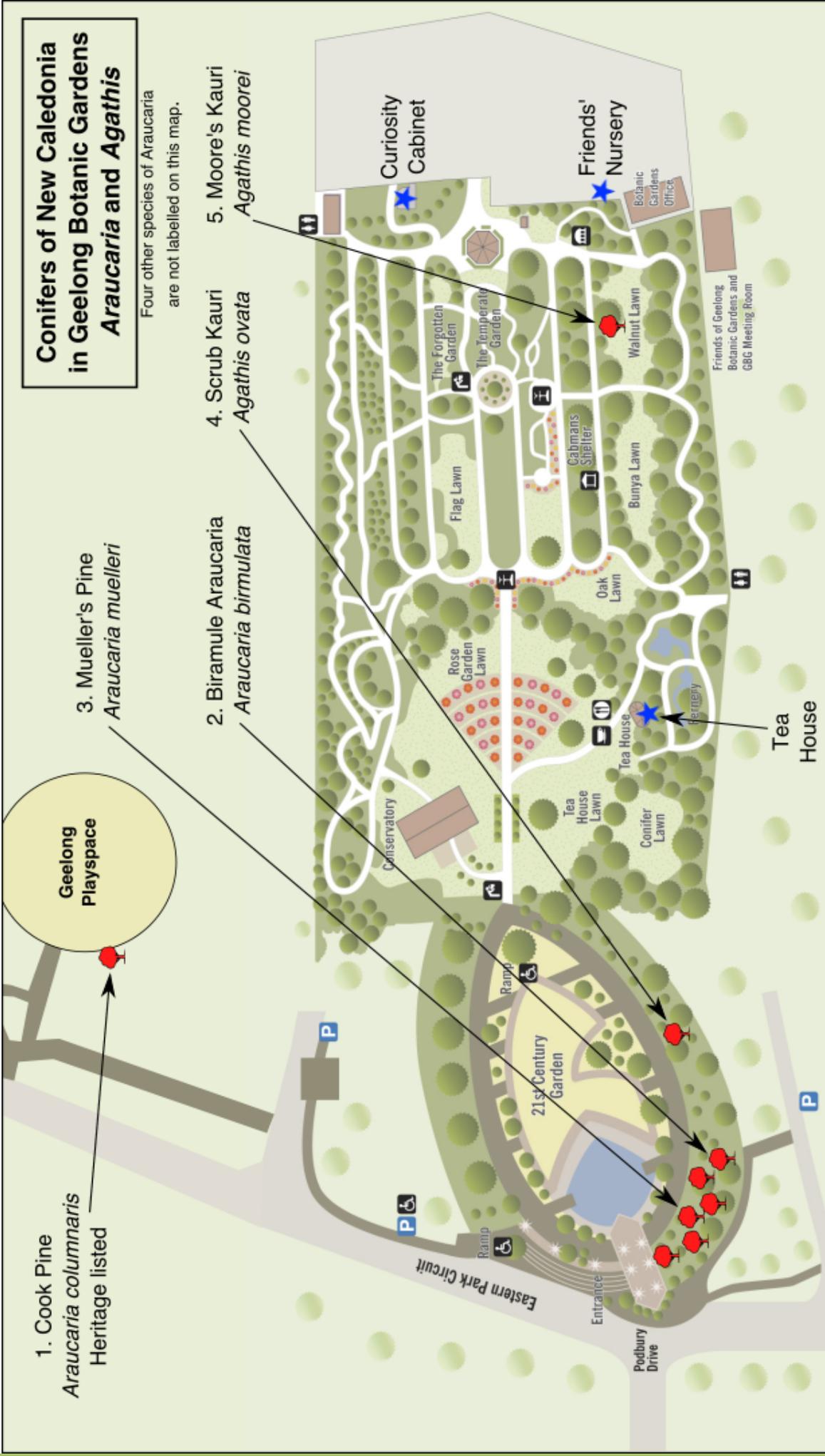
Over page: Map showing plant locations

www.friendsgbg.org.au

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www.geelongaustralia.com.au/gbg/

Geelong Botanic Gardens Map



1. Cook Pine
Araucaria columnaris
Heritage listed

3. Mueller's Pine
Araucaria muelleri

2. Biramule Araucaria
Araucaria birmulata

4. Scrub Kauri
Agathis ovata

5. Moore's Kauri
Agathis moorei

**Conifers of New Caledonia
in Geelong Botanic Gardens
Araucaria and *Agathis***

Four other species of *Araucaria*
are not labelled on this map.