Araucaria cunninghamii **Hoop Pine** **Family: Araucariaceae**

The Hoop Pine is a large to very large tree. It is a common emergent in subtropical, warm temperate, dry and littoral rainforests. It is an iconic species of the dry rainforest communities around Lismore. Alex Floyd lists one outstanding tree in the Nulla Five Day State Forest as 62m tall and 1.3m in diameter.

The Hoop Pine Forest at Lismore Rainforest Botanic Gardens was originally planted as a demonstration of the potential of Hoop Pine to replace Camphor Laurel.

Araucarias evolved as part of the Gondwanaland flora. There are 18 species worldwide found in Australia, New Caledonia, Norfolk Island, New Guinea, Argentina, Brazil, Chile and Uruguay.

Araucaria cunninghamii var. *cunninghamii* occurs from the Macleay River in NSW to east central Queensland at 0–1,000 m elevation. While *Araucaria cunninghamii* var. *papuana* – grows in the mountains of Papua New Guinea and Irian Jaya, at 100–2,700 m elevation. Hybrids of these two varieties have been developed and are an important part of plantation forestry in Queensland.

The leaves on young trees are awl-shaped, 1–2 cm long, about 2 mm thick at the base, and scale-like, incurved, 1–2 cm long and 4 mm broad on mature trees. The cones are ovoid, 8–10 cm long and 6–8 cm diameter, and take about 18 months to mature. They disintegrate at maturity to release the nut-like edible seeds.

References:

Floyd, A.G. 1990, ***Australian rainforests in New South Wales, Vol 1.*****,** Surrey Beatty & Sons, Chipping Norton, NSW.

Harden, G., McDonald, B. and Williams, J. 2006, ***Rainforest trees and shrubs: a field guide to their identification,*** Gwen Harden Publishing, Nambucca Heads, NSW

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Eupomatia laurina Bolwarra Family: EUPOMATIACEAE

Commonly named Bolwarra or Native Guava, this primitive flowering plant is endemic to Australia and New Guinea. It grows as a shrub or small tree, occasionally reaching 15m tall and 25cm in diameter, but more commonly is a multi-stemmed shrub to about 3m.

The flowers are cream and highly fragrant

In an unusual symbiosis, the flowers can only be pollinated by small weevils in the genus Elleschodes (pictured below).

Fruit (Photo T.M.Tame ©The Royal Botanic Gardens & Domain Trust)

References:

Floyd, A.G. 1990, ***Australian rainforests in New South Wales, Vol 1.***, Surrey Beatty & Sons, Chipping Norton, NSW.

https://plantnet.rbgsyd.nsw.gov.au/cgibin/NSWfl.pl?page=nswfl&lvl=sp&name=Eupomatia~laurina

Davidsonia jerseyana **Ooray,Davidson's Plum CUNONIACEAE (Davidsoniaceae)**

Ooray is a small, slender tree to 10 m tall, with a stem diameter of 15cm with few branches and large ornamental leaves. The compound leaves are 35–60 cm long with 11–17 irregularly toothed oblong to oblanceolate leaflets, mostly 6–30 cm long and 3–10 cm wide. The upper surface is glabrous; petiole 5–20 cm long, petiolules 1–2 mm long.

The showy pink-red flowers are clustered in long, pendulous panicles up to 30cm long. They are cauliflorous, arising directly from the trunk. Flowering time is from October to February. The blue-black fruit resembles a European Plum. It is obovoid, 3–5 cm long and about 4 cm in diameter, sparsely covered with golden-brown hairs. Fruit ripens from April to October.

Ooray is listed as Endangered in NSW and nationally. It has a limited geographical distribution restricted to NE NSW from the Queensland border to Wardell in the south. It was always uncommon and has been heavily impacted by land clearing. So, despite being widely planted as a bushfood, the wild population has been seriously depleted and much of its genetic diversity has been lost. Plants chosen for commercialisation are selected for a few characteristics (e.g. heavy and early bearing, large fruit, etc.) and do not represent the full range of genetics that have allowed this plant to survive millennia of environmental changes.

References:

Floyd, A.G. 1990, ***Australian rainforests in New South Wales, Vol 1.***, Surrey Beatty & Sons, Chipping Norton, NSW.

Harden, G., McDonald, B. and Williams, J. 2006, ***Rainforest trees and shrubs: a field guide to their identification,*** Gwen Harden Publishing, Nambucca Heads, NSW

https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Davidsonia~jerseyana

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Elaeocarpus williamsianus **Hairy Quandong Family: ELAEOCARPACEAE**

Hairy Quandong is a small to medium sized tree up to 15m tall and 18cm in stem diameter that tends to be multi-stemmed from the base. It has rusty hairy shoots and leaf venation that give it its common name. Leaves are simple, oblanceolate, 9-18cm long and 2-5cm wide, the apex rounded. Margins are entire or have 8 to 10 blunt teeth. The upper surface is glossy green while the underside is dull and densely hairy.

Greenish white flowers in racemes are borne amongst the leaves in November and December. They are 2.5–5 cm long; pedicels 2–4 mm long. Petals ca.12 mm long, each divided into about 24 linear lobes. Stamens 32–38, not awned, filament longer than the anther.

Globose blue fruit 20–30 mm in diameter with a deeply sculptured stone with 3 longitudinal grooves. (Fruit Photo Coffs Harbour Regional Landcare)

Elaeocarpus williamsianus, the Hairy Quandong is one of the rarest plants we have in our collection at Lismore Rainforest Botanic Gardens. It is listed as an Endangered species both in New South Wales and nationally. The Hairy Quandong is extremely rare, although 170 Hairy Quandong stems have been found, they are mostly root suckers and there are only 11 genetic individuals or “genets” known. The genetic diversity of Hairy Quandong is very low, fertile seeds are extremely rare and vegetative reproduction has almost entirely replaced sexual reproduction.

References:

Maurizio R., Gross C.L., Jones R. and Hunter J., 2004, ***The impact of clonality on an endangered tree (Elaeocarpus williamsianus) in a fragmented rainforest*** https://www.sciencedirect.com/science/article/abs/pii/S000632070300260X

Floyd, A.G. 1990, ***Australian rainforests in New South Wales, Vol 1.,*** Surrey Beatty & Sons, Chipping Norton, NSW.

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Rhodamnia rubescens **Scrub Turpentine** ***Family:*** **MYRTACEAE**

Scrub Turpentine is a small to medium sized tree attaining a maximum height of 25m and a diameter of 50cm. The bark is reddish brown, deeply fissured and flaky. The leaves are simple, opposite, lanceolate or elliptical, 5 to 10 cm long. They are green above with a few scattered hairs, grey or brownish and densely hairy below and distinctly three-veined from the base. Net veins are most prominent on the underside.

Small white, fragrant flowers, about 8mm in diameter appear in clusters from August to October. Healthy trees flower prolifically attracting swarms of both native and feral bees.

The fruit is a globular, red berry, turning black at maturity. The berries are about 6mm in diameter. It ripens from October to December. Several types of birds eat the berries and act as vectors for their spread.

It is widely distributed in all types of rainforest (except Cool Temperate Rainforest) from Bateman's Bay north to Maryborough in Queensland. It is a hardy pioneer, often seen as a "paddock tree" on cleared land.

Unfortunately, since the arrival of Myrtle Rust in Australia, healthy trees are a rarity. Though once common and widespread, the conservation status of Scrub Turpentine has gone from being classified as of "Least Concern" to "Critically Endangered", solely because of the impact of the fungus *Austropuccinia psidii* which causes Myrtle Rust.

Here at Lismore Rainforest Botanic Gardens, we are working with the Australian Network for Plant Conservation, Mt Annan Botanic Gardens and Saving Our Species, NSW to preserve as much of the genetic diversity of Myrtle Rust impacted species as possible, and to identify pants with higher natural resistance to this major disease.

References:

Floyd, A.G. 1990, ***Australian rainforests in New South Wales, Vol 1.***, Surrey Beatty & Sons, Chipping Norton, NSW.

https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Rhodamnia~rubescens