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Northern Group Newsletter

August - September 2023

August the last winter month, or this year, the beginning of the spring flowering season? Hard to tell.



Baurera rubioides attracting attention in early August (photo taken at Tas. Native Garden)

Thursday 3 & Saturday 5 August Working Bees, Cambridge St. Reserve

Dale Luck reported:-

We are well into the weeding programme at Cambridge St. with over 50% of the Reserve now reasonably free of weeds. Gorse, broom and cotoneaster are getting quite hard to find now. Some spraying has been done and is

starting to take effect. The August working bees concentrated on removing wood piles from the bushland parts of the Reserve, ready for Council to pick up and take away.

There are thick growths of exotic grasses in parts of the Reserve, and we need to tackle them next – some advice has been sought from Anna Povey. Dale noted that some of the early wildflowers are starting to show signs of flowering.

Sounds like a good place and time for members to ramble.

Saturday, 5 August Propagation, Windsor Park Nursery

Janet's list included a range of tasks. One was in response to the wet winter weather that led to a loss of some of the shade house cuttings. These were sorted and punnets cleared out where necessary. Pleasingly, Janet reported, the addition of perlite to the propagation soil mix seems to be having a positive effect. Some of the heat pad cuttings needed potting up; also some *Bursaria* seedlings. Both in the shade house and underneath the outside benches the liverwort was sprayed with white vinegar. Another productive, well supported propagation day.

Tuesday 15 August General Meeting

The meeting began as usual and approval of treasury payments was made before Andrew addressed the meeting, seeking a volunteer to take on the role of organiser at the Cambridge St. Reserve. He detailed the responsibilities of this role which ideally would suit a member of the working bees. Further Member Recognition Certificate discussion followed with the decision to have a small committee discuss the paper to present at a future meeting. December 8th is the date for the Christmas party to be held at Lansdale St. Hall.

Plant of the Month: *Orthoceras strictum*

Jeff Campbell

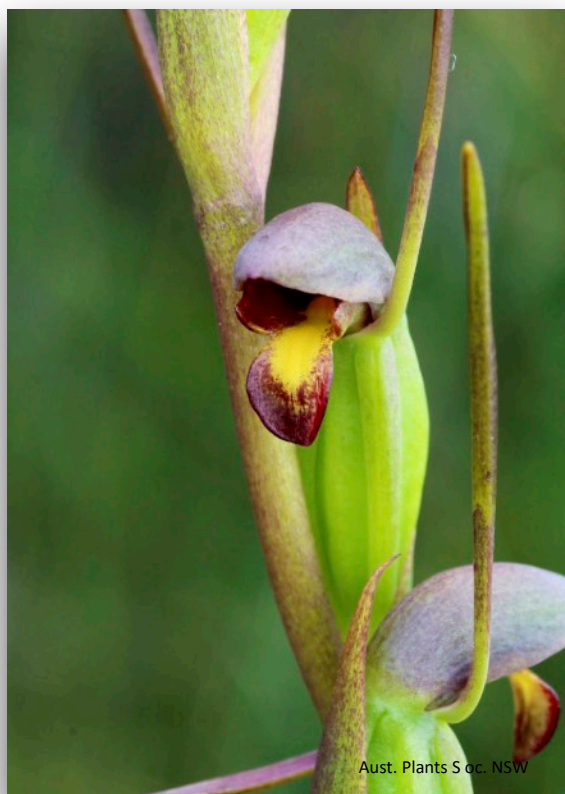
Jeff chose *Orthoceras strictum* because as he said, 'It is a pretty orchid.' Uncommon but widespread it is found in Tasmania, New South Wales, Queensland, South Australia, Victoria, even New Caledonia where it grows in a wide range of habitats from grassy forest to heath.



It was named by Robert Brown in 1810 and is commonly known as bird's-mouth orchid or horned orchid.

It grows from 30 to 60 cm high; has 2 to 5 grass-like leaves; is self-pollinating and is usually solitary. It flowers between December and January, sometimes November.

In 40 years of looking for orchids Jeff has only seen it three times: once off the Lefroy Road, once near Coles Bay and once in northern New South Wales.

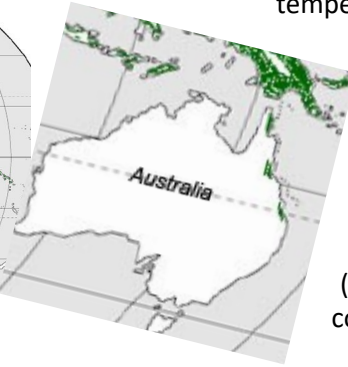
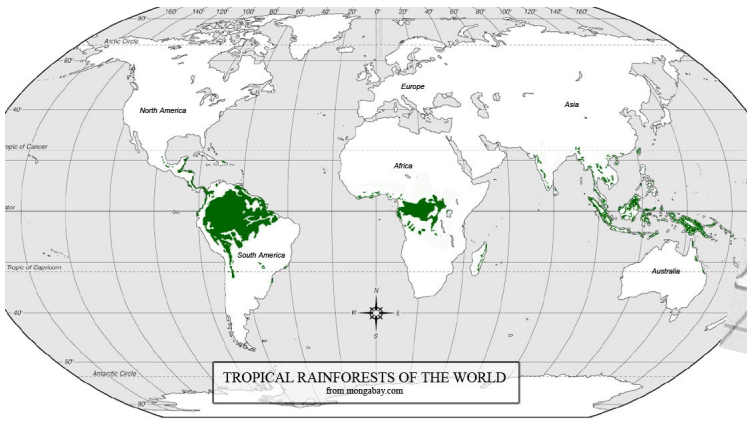


Aust. Plants Soc. NSW

Speaker: Ian Thomas

Tropical Rainforest and an obscure but important connection to conservation in Tasmania!

Tropical rainforests fall between the Tropics of Capricorn and Cancer i.e. areas of constant temperature and high rainfall.



< Look closely for the three patches in Australia of this complicated and chaotic tropical rainforest - its diversity of species (animals and plants) is constrained by latitude.

With very few exceptions, the most diverse ecosystems in the world are in this tropical belt.

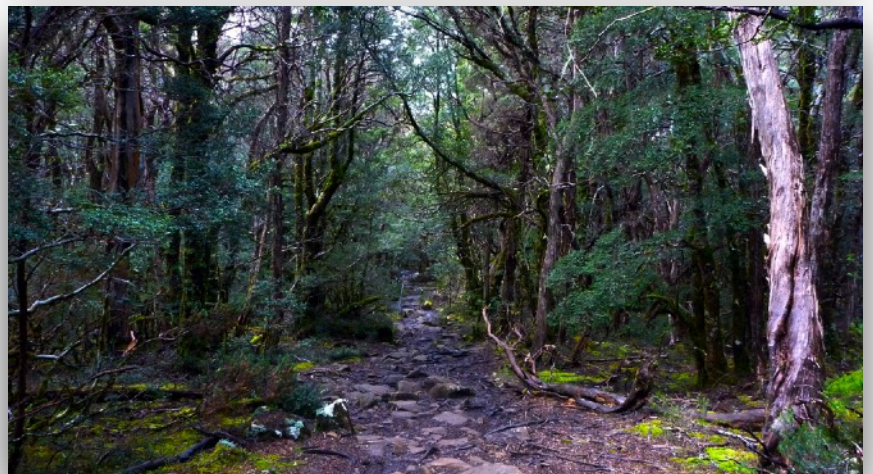
In northern Queensland there are 4,700 species of vascular plants, 1180 genera, 210 families. In addition all of the seven most ancient fern families are represented. >

But as Ian said, 'Either north or south diversity drops off due to energy availability.'



Tasmania's cool temperate rainforest is just as important and historically significant but it has much less diversity.

A typical *Nothofagus*, *Eucalyptus* patch found anywhere in western Tasmania. >



Working in rainforest is difficult but scientific work is more effective with the use of canopy cranes such as this one at Cape Tribulation. Every tree in its range of approximately 8,000 square metres has been documented. It is part of an ongoing experiment to monitor the trees' progress well into the future.

In an aside, Ian was moved to clear up a few misleading general claims. One often made is that our tropical rainforest is the oldest in the world. 'It's not,' says Ian, 'nor has it remained unchanged.' Such claims need to be refuted. We should question and be realistic about how big things are, what they contain or what their history is.

Next Ian used a graph showing a pollen record derived from an approximately 200m deep sediment core taken at Lynches Crater (north of Atherton Tablelands). It showed that between 80,000 - 10,000 years ago the dominant tropical rainforest declined - almost disappearing to be replaced by sclerophyll forest. Then around 10,000 years ago rainforest reclaimed its dominance while the sclerophyll forests almost disappeared. However, Ian stressed, the rainforest seen today is new, having developed over the last 10,000 years.



Rainforests (above) are structurally complex environments with a forest floor, an understory and a dense canopy where the crowns are touching, and through which there are emergent giant trees crucial for all animals - bats are an important example.

Trees are forced to adapt. In the quest for light they become very tall with extensive root systems necessary to get nutrients to maintain the growth. They need to be strongly supported with buttressing, dense wood. It takes a lot of time to accumulate the carbon so they are slow growing. Ian described this as a costly process.



This is not so for those plants which are fast growing and have adapted by twining around trunks (left) or attaching with thorns, tendrils, adhesive structures (right).

Plants use these strategies to get to light, gain nutrients, and are reliant on older trees for mechanical support.

Note from Ian, 'liana' differs from a 'vine' as it begins life above the ground and hangs down. A 'vine' starts from ground level.



Supported on a low palm tree *Calamus australis* has weeping canes which whip around in the wind and hook onto other trees to climb - an intriguing adaptation.

Epiphytes growing on, and therefore supported by, other plants are able to put their energy into producing very large leaves while some plants such as the fan palms (*Licuala ramsayi*) have reduced the growth of woody tissue so that their energy is used to grow large leaves to get light.

The Cathedral Tree in the Atherton Tablelands near Cairns is a perfect example of tree adaptation. This enormous fig tree, *Ficus virens*, has been engulfed by other trees growing in its crown. These have developed from birds dropping seeds which have germinated and slowly sent their roots down to the ground to root again and eventually coalesce into what Ian described as 'a giant structural form with the original tree decaying in the middle, providing nutrient for the new fig.'

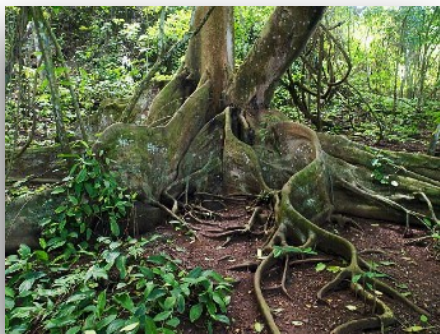
Other fascinating rainforest adaptations include: plants which flower on the trunks of trees e.g. *Syzygium cormiflorum*. It probably developed alongside small mammals and is pollinated by them as they move up and down the trunk, eating the flowers and moving between trees. Other plants have big gaudy flowers and fruits e.g. *Jagera pseudohus*. Cassowaries eat this fruit - a necessary step in the germination process for the *J.pseudohus* seed. However, cassowaries, often through roadkill, are declining and as a consequence *J.pseudohus* is threatened.

Ian also pointed to further worrisome developments. Because of global warming plants are flowering out of season. The returning bats, for example, miss the flowering time and their food source, and of serious concern, pollination is not occurring for these plants.

For *Castanosperma australe*, rats are needed to gnaw through the pods to eat the beans for the germination process to occur, but with clearance of habitat for sugar cane farms the rat population is diminishing, and with it the black bean tree.



The rainforest is rich in Proteacea flora evolving from Gondwanan times when tectonic plate movement pulled Australia closer to Asia, allowing plants and animals to enter Australia from the north. As a consequence, North Australia has an Asian element and an Australian element. This is unique and accounts for the rainforest having the greatest diversity.



People think of rainforests as having rich fertile soil but this is not necessarily so. A lot of rainforest soils are highly acidic with tropical conditions causing soil leaching. Most of the nutrients are found in the vegetation, in particular the leaf fall.

Consequently rainforests have shallow, extensive root systems which take advantage of the incredibly quick rotting of leaves, allowing nutrients to be taken up by the fungi and the roots. The plants are repeatedly recycling their own nutrients.

Northern Australia has many deciduous species but these are deciduous because they adapt to the lack of water in the dry season.

Nothofagus gunnii - not the only deciduous tree - is deciduous because of day length and maybe temperature.

In addition plants employ mechanical and chemical defences. For example *Calamus australis* (photo above) has vicious spikes to also deter predators while other plants such as *Dendrocnide moroides* have powerful chemical defences to deter insects and animals (also humans). Ian described the excruciating, lasting pain conferred on anyone who is unfortunate enough to walk unsuspectingly into a patch of this Urticaceae family member.

Rainforests have a mixed size/age structure and are almost never even-aged. This is a result not so much of fire disturbances but instead from the massive impact of cyclones. Cairns experiences one about every 5 years. The rainforest grows back from seeds in the soil but it is not going to be the same. It will take many years for the emergent trees to grow back.

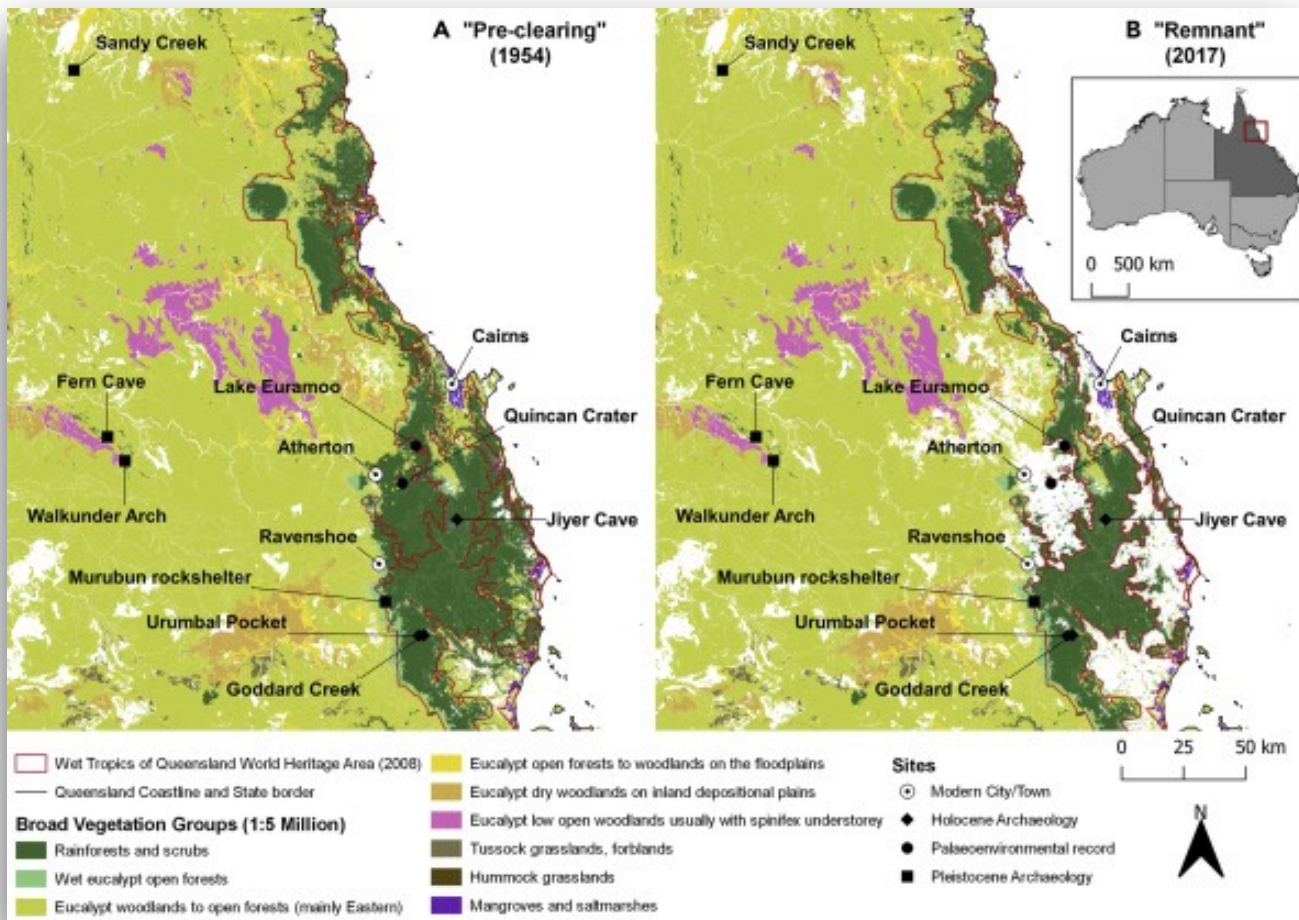
There are more frequent, smaller disturbances caused by aged trees which having grown rapidly die young thus affecting the make-up of the rainforest.

Cyclone Yasi 2011 >



To conclude his presentation Ian ended with information on ecological islands, touching upon the original August subject. His ever so informative rainforest presentation was slotted in at short notice to replace Phil Cullen who was unable to attend on the night.

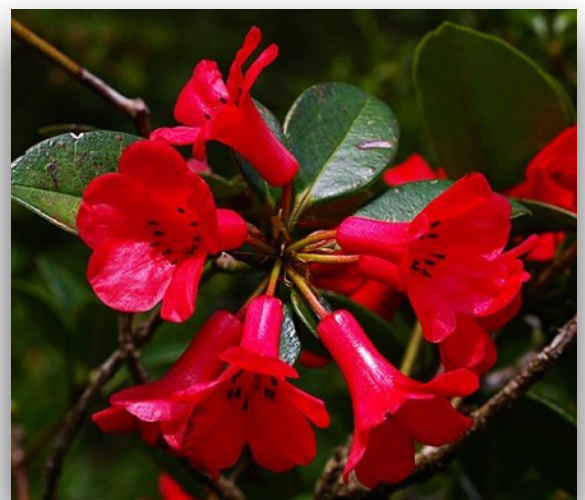
Ecological islands are isolated remnants. Consider Mt Kilimanjaro in Tanzania. It is an alpine mountain about 6,500 metres high surrounded by an enormous expanse of savannah plains, making it a terrestrial island. Closer to home in Victoria in the north west, also in the Gippsland and near Melbourne, Ian listed three patches of mallee which are islands in a sea of other vegetation - remnants from when mallee was abundant. Finally he showed the change in rainforest cover between 1954 and 2017 noting south of Atherton the rainforest, where solid cover has dwindled to ecological islands. By 2017 rainforest fragmentation is massive!



In north Queensland the largest degree of endemism and rarity, the most diversity is found on the high mountain tops and sadly with global warming it is diversity that will suffer. It is happening now and plants and animals such as the striped possum, also a species of tree kangaroo, won't exist in a 100 or maybe even 50 years time. Here in Tasmania, Ben Lomond and Cradle Mountain are also 'islands'. With diminishing snow cover like this year, mid altitude eucalyptus scrub will slowly be able to encroach on the alpine and sub alpine grasslands and flower fields at the cost of alpine diversity.

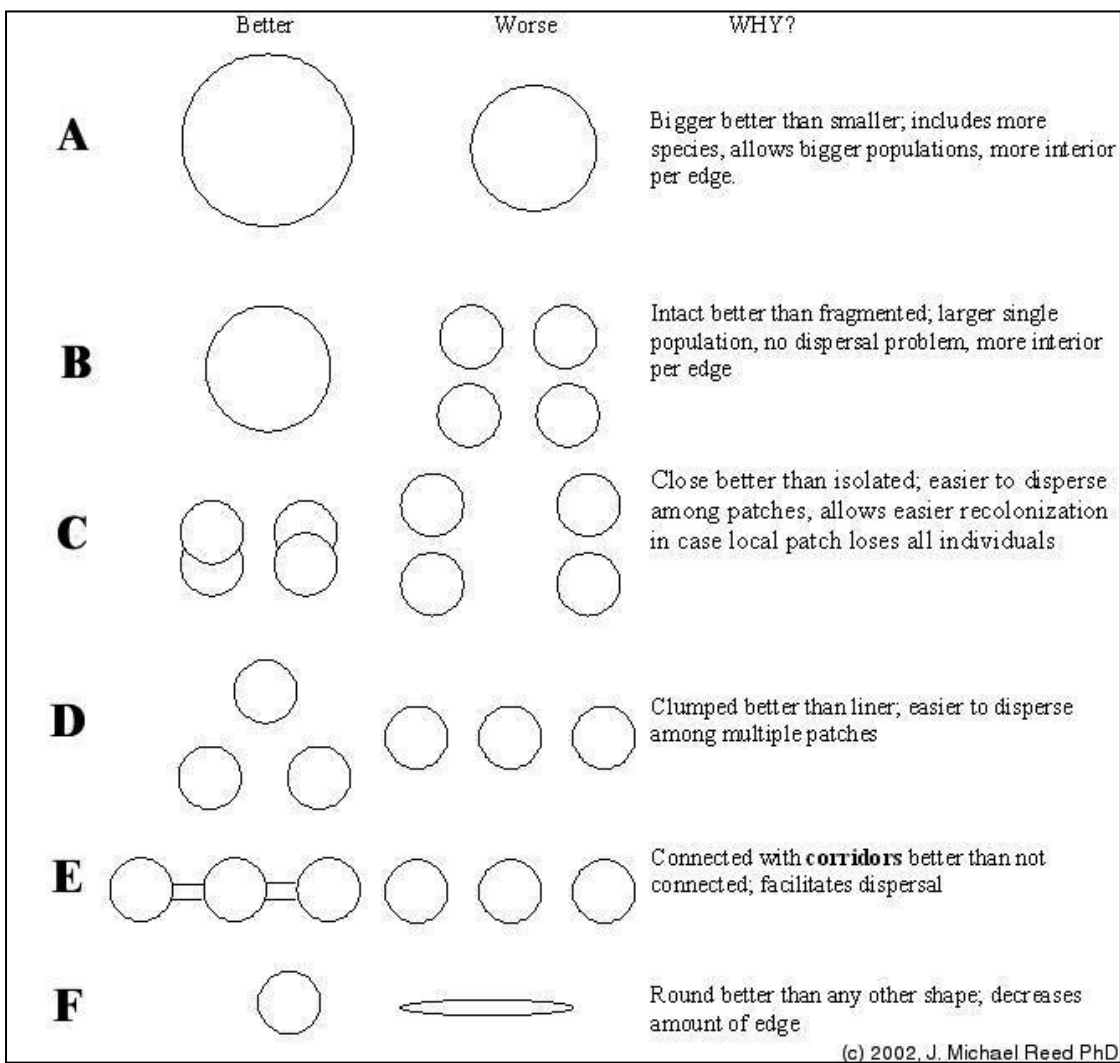
In the same way North Queensland's incredible diversity is disappearing. This striking example is *Rhododendron lochia*. It is Australia's only native rhododendron.

It grows on top of Mt Bartle Frere in the cloud forest which is under threat from global warming.



There are so many influences on 'island' biota

Dispersal characteristics plus the competitive ability of the flora/fauna together with environmental conditions have an influence. As island isolation increases, the species become fewer in number; large areas have more species than small areas. It is such information that can guide the management of the small reserves such as Cambridge Street. The following diagram lists the rules and reasons for reserve design. (IUCN)



To conclude: urban islands are super important but as Ian stressed they are super vulnerable and faced with widespread challenges. There are the physical and biotic challenges from climate change, fires, land clearing, weed invasion, disease or trampling.

In addition there are the regulatory challenges which can include mis-interpretation of lines on maps. The use by authorities of preferred consultants is more likely to favour a project. There is the dubious nature of off-sets, and the watering down of obligations leading to a lack of flora/fauna surveys in site preliminary work.

So much was covered: a comprehensive view of rainforest, its complex structure, amazing natural wonders and gradual decrease together with a sharp view on ecological islands and their conservation importance with the final point on urban 'islands' - especially relevant and informative to our group in its endeavours to clean up our local reserves.

★ A full night concluding with a much appreciated supper supplied by Daphne.





Suzanne’s message was for members to join the working bee, and ‘to enjoy the garden while helping to tidy, weed, prune or mulch.

It is always an exciting time of the year with a variety of plants beginning to colour up’ - some like this *Hakea decurrens*, strikingly so.



★ Saturday 2 & Sunday 3 September, Launceston Horticultural Show, Evandale

Setting up day was Friday but with the earlier Show date many members were unable to help so it was mainly left to four very busy people to collect and arrange an unexpectedly pleasing array of flowers, considering it was so early in the season.



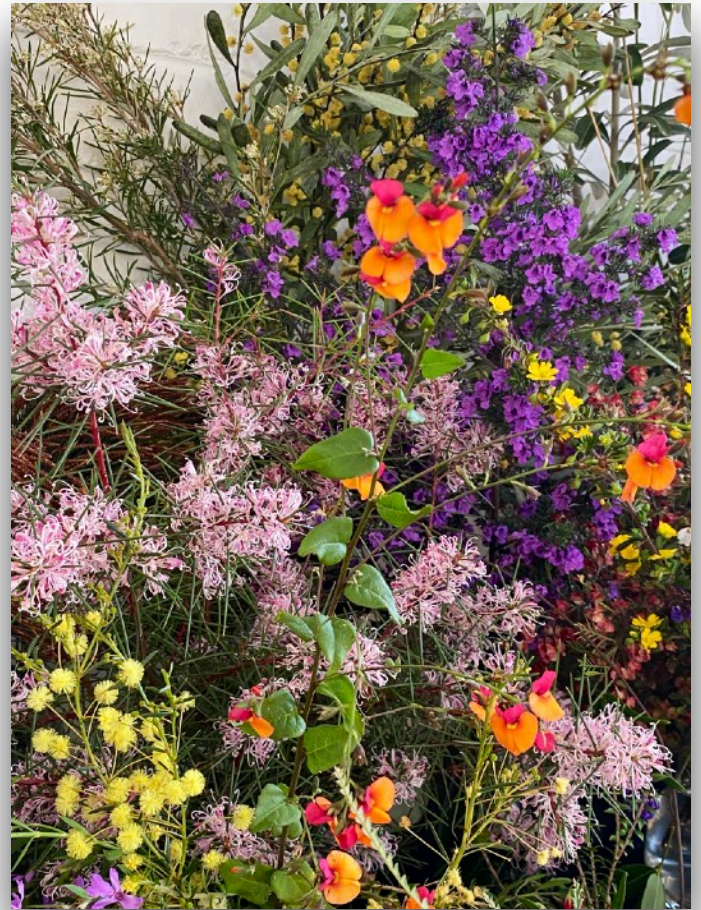
Our society’s patron, the Governor, opened the show and according to Rosemary V. was impressed with the crowded, colourful display.

< Job done after a long afternoon!



< This *Dryandra* sp. from Daphne and Peter Longman’s garden drew the attention of many.

Sections of the native flower display tables:



Above left: a *Grevillea* species (centre) with *Euryomyrtus ramosissima* (left) and *Alyogyne heugelii* (right).

Above right: an *Acacia* sp. (left) with *Hakea decurrens* draped across the centre while a rich purple *Prostanthera rotundifolia* dominates the top corner. The splotches of orange are *Chorizema cordata*.



The overflow buckets were also a mass of colour with *Hakea epiglottis* and *Grevillea australis* just a couple of those with honey scented bush flowers.

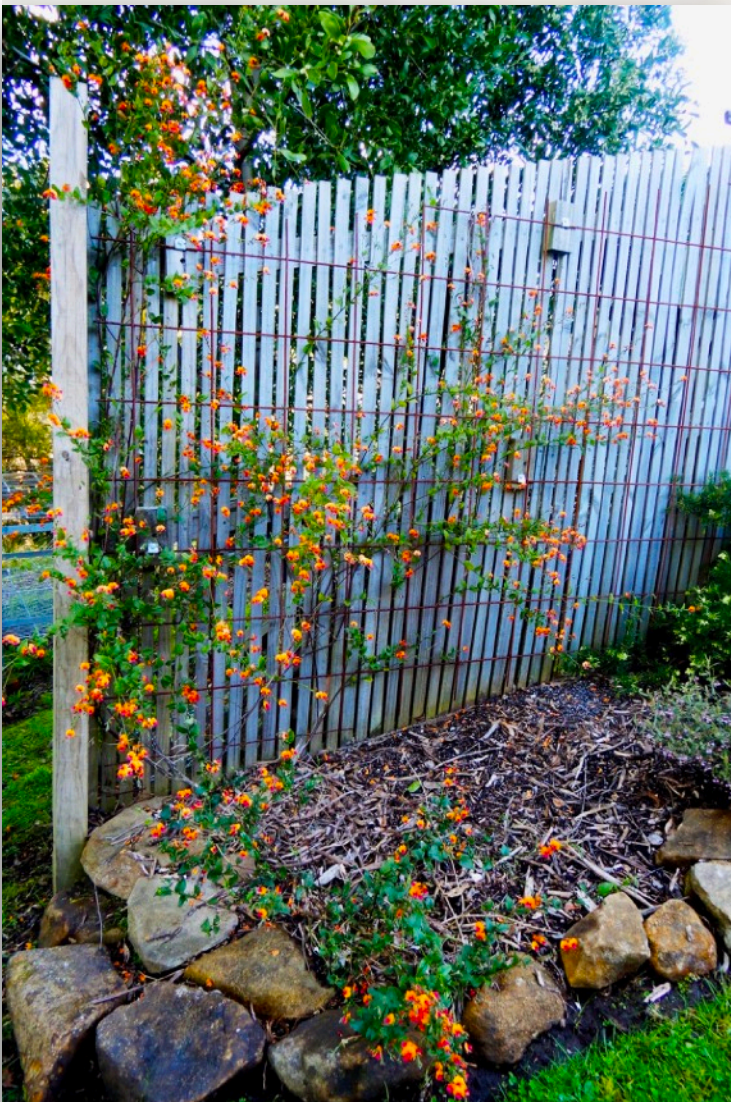
Rosemary's garden news.

Once in a while something different happens in the garden and it is all by pure chance. In my previous garden I tried to grow *Chorizema cordatum*, a lovely shrub from Western Australia with two toned coloured pea flowers in pink and orange. I never had any success in twenty years, no matter where I tried in the garden.





Marion Simmons used to shake her head when I would tell her of the failures. She always thought it was one of the easiest plants to grow.



Here in Gravelly Beach, I planted one against a fence Alf built about 4 years ago to hide storage of left over fencing materials. I did not give it much of a chance, but it took off straight away and has not stopped growing.

On the fence Alf put some left over reo mesh for support for a climber.

The *Chorizema* in front thought, 'Oh, there is a frame for climbing so I will climb.' The plant stems put themselves behind the mesh naturally and just kept growing. Now the plant is higher than the fence and some stems measure two and half metres in length.

It actually seems to prefer growing up and along the mesh instead of bushing out like the 1 metre by 1 metre shrub it is supposed to be. It did not flower very well last year, but I forgot to give it a good prune after flowering the year before. It gets a regular prune now, and it responds well to this.

So, now I have a climbing *Chorizema* with room for planting shrubs in front.

Acacia leprosa



The story of this vivid acacia started in 1995 when two Victorian bush walkers found one seedling from which the Royal Botanical gardens obtained twelve cuttings. Fortunately two of these survived and today *Acacia leprosa* 'Scarlet blaze' now radiates its presence in suburban gardens.

Note:
'The flower's red colouration is derived from the filament of the flower. The anther remains a golden yellow colour typical of the species.'

(Adam Dimech's Blog)

