

Touring South-West WA

Australian Plants

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All photos in this issue by Jim Barrow unless otherwise indicated. Cover: *Banksia attenuata* photographed at Two Peoples Bay.

Australian Plants articles

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Introduction: Where to see WA wildflowers

John Aitken, Joint Editor, *Australian Plants*

Congratulations to Dr Jim Barrow for his second edition of Australian Plants, which focuses on where to see WA wildflowers. Jim's first edition in September 2011, which discussed the wildflowers of the south west of WA, was highly acclaimed by readers. I am confident that readers will just as enthusiastically receive this issue. When I visit WA in September-October this year I will be taking both of Jim's issues of Australian Plants as a reference as to where to go and how to find the wildflowers that WA is so justifiably famous for.

Preface, Jim Barrow

When my wife and I first set out on a trip to look at wildflowers, more than 30 years ago, we scarcely found any. We simply did not know where to look. Even though Western Australia is rightly known as the wildflower state, agricultural development has meant that wildflowers can now only be found in reserves and along relatively few roadsides. In the intervening years, we have learned where some of these good spots are, partly as a result of excursions organised by the Wildflower Society, partly from trips we have undertaken and partly from helping to organise wildflower tours including those for the ASGAP 2005 meeting. I thought it would be a good idea to share some of this knowledge with you.

First, I deal with some practicalities such as when to come. It is surprising how often the Wildflower Society is asked for advice on this. Then I deal with specific routes, divided for convenience into the north, the east, the south-coast and the south-west. I realise that many of you will have already visited us at least once and I have therefore tried to emphasise some of the less well-known spots. Examples are the Butchers Track, Elachbutting Rock, Red Gully, Quairading, Corrigin, Mullewa, Ravensthorpe, and the Whicher Range. I have also, somewhat iconoclasticly, tried to emphasise less well-known plants. For example, at Mullewa, everybody wants to see the wreath flower. I therefore felt I had to mention it but I gave much more space to the native grape, which I think is much more interesting.

The problem is not how to fill the required 45 pages. One could easily do that three times over. The problem is what to leave out. Inevitably, I will have left out somebody's favourite spots and I have only had space to give others very superficial treatment. Oh well, think of the opportunities that leaves for someone to write future articles!

Practicalities

We used to confidently say that the south-west of Western Australia had a reliable climate. It always rained in winter and it never rained in summer. In recent years winter rainfall is much less reliable, but nevertheless the description is still broadly true. This pattern means that most plants struggle through summer, recover in autumn and winter and flower in spring. So for your first trip, come in spring. But when in spring? That depends on what you want to see.

When to come

Much of the tourist publicity emphasizes "everlastings": daisies for which the flowers are surrounded by papery bracts. Often the term is used rather loosely to include any brightly flowered ephemeral. There are two problems with this emphasis. First, agricultural development has all but eliminated these plants from the better watered areas and secondly, good flowering years are fairly rare. They only happen when the rain falls at the appropriate time and this seems to happen with decreasing frequency. For example, 1996 was a fantastic year and 2009 was almost as good. It is therefore difficult to plan in advance, but when it does happen it really is fabulous. It should be on every flower lover's "bucket list".



An unusual patch photographed near Mullewa 10 September 2009. Unusual in that there are at least 6 species present including *Cephalipterum drummondii* (white form), *Myriocephalus oldfieldii, Velleia rosea, Goodenia pinnatifida* and *Waitzia acuminata*. Mostly there are broad swathes of single species.

So what to do? If you are fortunate enough to live in Western Australia, it is easy; there is always a lot of local publicity in a "good" year. If you live elsewhere, contact the Mullewa tourist bureau in early August (08 9961 1500). If they tell you it is a good year, jump into an aeroplane, then hire a car or a camper van and travel to the triangle bounded by Mullewa, Mt Magnet, and Wubin. You won't regret it! Best time for "everlastings" is probably mid August to early September.



A more typical view of everlastings taken 11 September 2009 in the Coalseam National Park, south of Mullewa. The species here is *Cephalipterum drummondii* (yellow form).

But what about that long term trip, the one you have been planning for several years but haven't quite got around to making yet. When should you come? That depends. As a general rule, September and October are the peak flowering. Some groups flower outside this period: for example, many "Epacrids" flower earlier, many Verticordias flower later. So whenever you choose to come you will be too early for some flowers too late for others. Best compromise is probably mid September to mid October.

Navigation

How do you decide where to go? First you need a broad concept, an idea of how long you want to spend, of how far you wish to travel each day and which regions you particularly want to see (you cannot see it all!). For this purpose, I have provided a sketch map (see later), but a fold-out map would also be handy. Such maps are hopeless for detailed navigation. For this purpose you need a map book. I recommend *Roads & Tracks, Western Australia*. It is very detailed and includes many of the reserves that provide good hunting for the wildflower seeker. Use such maps to select where to go. To work out how best to get there, you may wish to use a GPS. Of course you can manage without one, but its use may well ensure that you and your partner are still speaking at the end of the trip.

When you are planning your trip, do not forget to use Google maps preferably in "satellite mode". This will help you locate reserves. These days, when many of us have a "computer in our pockets", you can even use such aids in the field.

Accommodation and travel

One alternative is to hire a car and to rely on motel or similar accommodation. In the bigger country towns, the caravan parks often have "villas" to rent. Especially if there are more than 2 people, these can be good value. Note: many Western Australian towns are small, and they are often a long way apart. Just because a spot is marked on the map, don't assume that accommodation will be available there. As a general rule, the coastal towns are fairly well supplied. That is because there is demand through a large part of the year. Only a few inland towns have motel accommodation and the quality is, shall we say, somewhat variable. Furthermore, the "tourist season" is fairly short so don't assume that there will be vacancies if you just rock up. It could be that a tourist coach has booked all the accommodation in town, and the next town is 100 km away. The message is therefore: plan your trip in advance, research the accommodation alternatives and where possible book in advance.

The other alternative is to hire a caravan, or campervan or to bring your own. Those of you who are into this kind of travel scarcely need to be told the advantages the biggest of which is the flexibility. Just about every country town has a caravan park, but again the quality is somewhat variable. And there is always "free camping".

A tick of disapproval

There is so much to see and do that all flower lovers are bound to enjoy their visit to Western Australia. Yet there is one slight disadvantage, which I feel I am bound to mention. We do have kangaroo ticks. They are common in bushland, especially north of Perth but they even occur in Perth itself. I recently picked one up while walking in Bold Park, in the Perth metropolitan area. They are unpleasant and you need to know how to decrease the chances of being bitten, how to remove the tick if you are bitten, and how to decrease the local reaction.

The ticks go through three stages of development. They may climb any vegetation they find and drop when disturbed by a passing animal, including a wildflower enthusiast. If the tick is lucky, it lands on the passing animal and then climbs, seeking a place of attachment. They also detect movement and will seek resting animals. So your first strategy is to be aware of, and avoid if possible, the tracks made through the bush by kangaroos and certainly to avoid kangaroo resting places. Wear jeans, long-sleeve shirts and a broad brimmed hat. Tuck your jeans into your socks and spray your shoes, wrists and hat with an insect repellent.

Despite such precautions, if you spend a lot of time in the bush, you are going to occasionally pick up a tick. Opinions differ on the best way to remove them. Some advocate applying alcohol (externally!). Alcowipes are said to be effective. We always take a bottle of clear nail polish with us. We find that the solvent kills the tick and once the polish has set, the tick can be removed with a pair of forceps. Often the tick is in an awkward place and you may need a close friend to help you to remove it. As far as is known, the ticks do not carry any nasty diseases, but they usually produce an itchy local reaction. Get your GP to prescribe "Elocon" ointment (note ointment not cream). It greatly decreases the problem.



A kangaroo tick (*Ornithodoros gurneyi*) greatly magnified. It is the tiny ones such as this that are most likely to find their way past your defences.

Start in Kings Park

Curb your enthusiasm to get out into the bush for at least a day or so. Spend some time in Kings Park in Perth. If you can, park in the main parking area and walk down towards the botanic garden. Or save yourselves a day's car hire by using the free bus from the city. Especially in September there is a wonderful demonstration of how Australian plants can be used in gardens and, best of all, the plants are labelled! Follow the path over the bridge and walk up into the remainder of the botanic garden to the Roe memorial. Return using the upper paths. If the main car park is full, and it often is in September, park near the Roe memorial and do the trip in reverse.

Many people spend all of their time in the park in the "developed" areas. We all like lawns and gardens. But you will surely want to at least visit some of the bush areas. A good access point is from the car park above the Pioneer Women's Memorial. Most of the plants along these paths in this area carry name labels.



A small part of the display garden in Kings Park in September. The plants visible include *Conostylis candicans, Schoenia filifolia* (yellow); *Lechenaultia biloba* (blue); *Brachyscome iberidifolia* (mauve); *Macropidia fuliginosa* (black Kangaroo paw); a smoke bush (a *Conospermum*); *Pimelea spectabilis* (white); *Melaleuca fulgens* (middle ground, reddish flowers); *Eucalyptus caesia* (weeping tree); and background *Eucalyptus calophylla* (Marri).



An older part of the botanic garden — part of a walk near the Roe memorial

The bush areas of Kings Park are far from their original condition. In the early days, it was used as a source of timber and of firewood. During the first world war, most of the Xanthorrhoeas were removed and used as a source of picric acid, which was used in explosives. Frequent fires have also opened the canopy and have changed the balance of trees. Because it is on a limestone hill, soil fertility is high (by Western Australian standards) and there is serious weed invasion. One of the worst weeds was Perennial Veldt Grass (*Ehrharta calycina)* but this is now fairly well controlled with a selective herbicide.



Control of Veldt Grass has allowed red and green Kangaroo Paws (*Anigozanthos manglesii*) to thrive and Kings Park is now one of the best places to see them.

Putting it together

Choosing an itinerary depends on the purpose of your trip. For example, for a coach tour, only a few stops are possible each day and they have to be fairly long. It takes a long time to get people off and back on to a coach. But for a private group, travelling by car, you can stop as often as you choose and remain at a particular spot for as little or as long as you wish. For the purposes of this article I assume you are travelling by car and can make lots of stops.

Getting the places you want to visit into some sort of logical sequence is not easy, nor is finding wildflowers. I hope this article will help you to find them and to enjoy your visit.

The blue route — the north

This route takes you through some of the best wildflower country north of Perth. There are several alternative points at which you may choose to turn inland and thus vary the duration of your trip.

I recommend choosing the Brand Highway rather than the coastal route because there are so many good places for the wildflower enthusiast. Here are a few of them.

About 12 km north of Muchea, you may choose to turn off to the right into Ioppola Road. This road takes you up the Darling scarp and provides an opportunity to see some of its plants. If you are interested in eucalypts, a reserve on the southern side of the road has a small stand of the rare *Eucalyptus lanepoolei.*

A further 2 km north on Brand Highway brings you to Airfield Road on the left. A little over a kilometre down this road there is a patch of ironstone soil which usually has a fine display of everlastings (see *Australian Plants*, September 2011).

The main road by-passes Gingin. In the triangle formed when the bypass road leaves the main highway there is another patch of ironstone soil. This one has a rare form of the green kangaroo paw (*Anigozanthos viridis* ssp *metallicus*).

Gingin is a pleasant small town with a crystal brook running through the valley. The brook was infested with Taro (*Colocasia esculenta*), but this has been successfully controlled, permitting the native vegetation to return. This includes a fern *Cyclosorus interruptus* which occurs here and also in the extreme north of the state in the Kimberley.

Returning to the main highway, our favourite spot is at the corner of



This sketch map is designed to help you choose your itinerary. It is designed so that you can "mix and match". For example you might decide to choose one of the blue routes. They are designed such that you may choose to have a short trip or a rather long one. However, instead of returning to Perth, you might switch to a red route, perhaps then the purple route and finally return via part of the green route. Although I have indicated arrows on the map, the journeys could be undertaken in the opposite direction.

Note that several of the towns, especially Mullewa, Merredin and Dalwallinu have information centres with people keen to help you.

Wannamal Road West. Here the council keeps the vegetation low in order to protect the sight lines. Low growing plants therefore thrive, including the unusual Winter Bells (*Blancoa canescens*). This plant is closely related to Conostylis and to the kangaroo paws.



Winter Bells (*Blancoa canescens*)



Conostylis aculeata

On the northern side of Wannamal Road West, and a few hundred metres from the corner, you will find some plants of the Rose Banksia (*B. laricina*) see *Australian Plants*, September 2011.

A little over 10 km north of Wannamal Road West, on the eastern side of Brand Highway there is a small reserve known as "Red Gully Reserve". It is about 2.2 km south of the Red Gully Road itself. Drive into the reserve; it has ample firm parking. It provides a good opportunity for you to inspect a breakaway. Walk up the fairly steep slope keeping your eye open for orchids (you should see several) to the top of the breakaway. On the other side you will see the bright yellow flowers of *Dryandra echinata* growing just where you would expect dryandras to grow, on the laterite capping at the top of a breakaway. There are also several patches of "kwongan" (low heath-like vegetation) in this reserve. Attractions include the pale pink *Dryandra carlinoides*.



Dryandra echinata



Dryandra carlinoides

The next suggested stop is further north, exactly opposite the "B 50" post. That is, 50 km from Badgingarra. At the back of this reserve the local council has established a gravel pit. That sounds frightful, but the disturbance has allowed several unusual plants to grow. This includes the fairly rare *Grevillea thyrsoides* which displays its flowers outside the edge of the plant. There are plenty of good firm places to park here and much to see.



Grevillea thyrsoides. You can see why a council might use this area as a source of gravel.

Soon after you pass through Cataby you will find the Badgingarra National Park on your left. You have now entered one of the best wildflower areas in the world. Almost every roadside from now on will reward you with a display of flowers. But you have to get out of your car and look closely. If you turn left into Bibby Rd, the Drummonds Reserve, about 4 km from the turn provides a good picnic and camping spot. You might choose to continue to Cervantes from where you can access "The Pinnacles", one of the must-see spots in WA for tourists. There are many limestone pillars but they don't call it the Pinnacles Desert for nothing; there are not many plants there and the few that are there have not benefited from the tramping of thousands of tourists' feet. However, just south of the road into Cervantes there is a little known small lake, Lake Thetis. This has a fairly good growth of stromatolites. In truth, they are not very impressive. Neither are the ones in Shark Bay, but if you can say you have seen them here, it could save the long journey to Shark Bay.

Cervantes and Jurien Bay will have an increasing supply of accommodation now that a road (Indian Ocean Drive) provides a direct connection to Perth. You could easily spend several days here, visiting Hi Vallee farm, and exploring the roadsides, and the National Parks, especially Mount Lesueur (more later), Alexander Morrison, and Beekeepers.



This plant, common in the Badgingarra area, often causes head scratching. It *looks* like a Melaleuca - but isn't. Its genus has only one ovule per cell whereas Melaleucas have several. It is *Conothamnus trinervis*.

One of the most attractive groups of plants in this area is the "smoke bushes", so called because the flowers are supposed to suggest drifts of smoke. All smoke bushes are Conospermums — but not all Conospermums are "smokey".



Conospermum unilaterale. Note, as the species name suggests, that the flowers tend to be on one side of the stem.

No matter where else you go in this region, you must visit Mount Lesueur National Park. This has recently been made much easier by the construction of a tourist drive through the park. Not all maps will show this, so some fairly precise instructions are in order. The drive is a one-way loop road from Cockleshell Gully Road. The entrance is from the south and so you will find it easily if you enter Cockleshell Gully Road from the Jurien Road. The drive is engineered to prevent high speeds and this is appropriate because you will find yourself wanting to stop every few hundred metres. The drive is only 18 km long, but allow at least four to five hours.



Isopogon asper is often thought to be confined to the Darling range and is so indicated even in the Flora of Australia. However a separate population occurs in the Badgingarra area.



Isopogon dubius, one of several very attractive pink Isopogons, is here at the northernmost extremity of its range.

Very roughly, Cockleshell Gully Road forms the boundary between two soil types. West of it, most of the soils are derived from limestone and tend to carry a rather different vegetation. This is especially obvious in early September when the coastal dunes are swathed in a golden blanket of "Dune Moses" (*Acacia lasiocarpa*).



Guichenotia macrantha occurs on the limestone soils in this area. Until recently, it was regarded as being in the family Sterculiaceae, but this family is now considered to be part of Malvaceae. It seems to adapt quite well to gardens and is often grown in Perth gardens.

Eventually, you will have to tear yourself away from the Badgingarra area. And where else should you go if not to Eneabba and yet more attractive plants, for example, at Western Flora caravan park. Slightly further north, Dongara is an attractive town. Because it is on the coast, there is a fairly good range of accommodation available.

Now you have a choice. If you are short of time, turn inland, and visit the Coalseam National Park (*Australian Plants* September 2011) just north of Mingenew. Then either continue inland in order to turn south, or perhaps turn north to visit Mullewa (more on this later.) Otherwise, continue north to Kalbarri.

As you go further north, the eucalypt of stream banks and wet areas will change to the river red gum, *Eucalyptus camaldulensis* instead of the flooded gum *E. rudis* of the South-West. You will see some famous examples on the Greenough Flats. The west winds are so strong that the trees lean almost horizontally to the east.



Conospermum acerosa. One of the many attractive plants to be seen at Kalbarri. Note that it is a "non-smokey" smoke bush and that the individual flowers are arranged in groups to form inflorescences.

Take the Port Gregory Road from Northampton. This will bring you to the southern edge of the Kalbarri National Park. Kalbarri town is a holiday resort situated at the mouth of the Murchison River and is also used as a base by rock lobster fishermen. There is a range of accommodation available, but, as usual, it is advisable to book. Plan to spend at least two nights here. Explore the coastal cliffs and nearby vegetation on your way in and spend the next day exploring the inland vegetation and the gorges of the Murchison River. When you are ready, leave by the Ajana road.

Now you face another decision. You might decide to begin your return southward as indicated on the map, going via Mullewa, or you might choose to go yet further northward to Shark Bay.

If you do decide to move northwards, you pass into much drier country. The rainfall is also less reliable and certainly less effective as some of it falls in the hotter months when evaporation is high. You are therefore moving away from agricultural country into "pastoral" country. Stock are grazed on the native vegetation.

It is a long way to Shark Bay, and unless you are there in August or very

early September, you are unlikely to see displays of everlastings.



Ptilotus exaltatus, a very appropriate name for this plant growing in pure shells at Shell Beach. Little else grows there. The shells are there because the small bivalve can tolerate the high salinity (caused by the high evaporation) at this end of Shark Bay, but its predators can't, so it builds up into enormous thicknesses.

Shark Bay has the world's major population of stromatolites. They are aggregates formed by cyanobacteria which are sometimes called blue-green algae. In Shark Bay they cluster along the beaches mainly in the intertidal zone. Near the edge they are rather squat but they are a metre or so high in the deeper water. The sites they grow in are warm and sheltered, with a high mineral content and therefore few predators to eat the bacteria. The bacteria secrete small quantities of a carbonate waste. This is glutinous and traps particles of silt. The bacteria then grow up through the layer so formed.

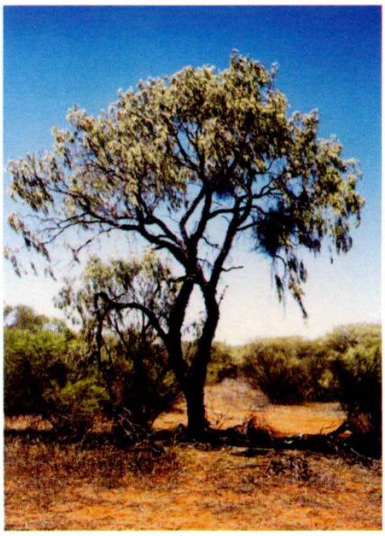
It is only recently that there has been much interest in the stromatolites. As the tourist traffic has built up, it has been necessary to protect them from damage. You are required to walk only on an elevated board walk which looks down on them. The ones you see are dead. They formed during a period about 5000 years ago when the sea was a bit higher. It is only out in the deeper water, that there are tall columns — the ones they show for the tourist photos, but it is not possible to see them.



Stromatolites at the southern edge of Shark Bay.

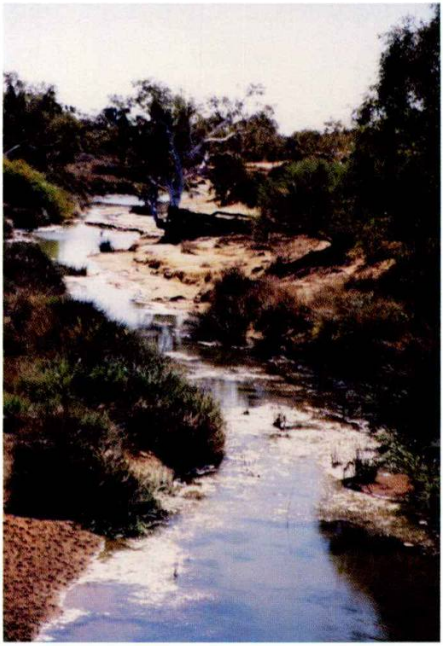
It is also a long way back from Shark Bay, and a bit boring to traverse the same stretch of road. Consider taking the Butchers Track instead. It heads inland about 25 km south of the Overlander Roadhouse. Only take this track if your vehicle is reliable and you have adequate fuel, water and food. Furthermore, this track will eventually take you to Mullewa where there is only limited accommodation. It will be fairly late when you get there, so make sure you have a bed for the night before you start off.

Do not be put off by these restrictions; it is an adventure into the "real outback". Unless you wish to arrive at your destination with red hair, keep the air-conditioning on and the windows up. The climate is hot and dry so the iron oxides in the soil (and the road dust) tend towards the red of haematite rather than the yellow of goethite and the low content of organic matter makes the colours specially bright. You cross a vast flat sandplain. Geologically, it is a sedimentary basin to the north of the granitic shield, with rocks of Permian to recent age. There are some typical mesa-shaped remnants and also fields of longitudinal dunes. Much of it is a dense thicket of acacias, hakeas, *Thryptomene decussata* and *Grevillea eriostachya*. There are occasional stands of the native cypress *Callitris columellaris* which can reach 10 m and occasional mallee eucalypts. Where the shrub layer is more open, there are pastoral stations on which sheep graze the native vegetation. One of the prominent plants along the roadside is *Duboisia hopwoodii* (a Solanaceae with small white flowers with lines inside). This is "pituri" — a very important plant for the aboriginal people. After mixing with ashes, it was used to provide a chewing stimulant. As such, it was an important article of trade between groups.



A quandong tree (*Santalum acuminatum*) along the Butchers Track. Note the almost bare ground between the acacia bushes in the background. The remnants of two mistletoe parasites can be seen on the tree. This is a case of a parasite on a parasite. The mistletoe is therefore given a species name to record how unusual this is: *Amyema miraculosa*.

About 80 km along the track, you will come to a watercourse, part of an ancient drainage system. Surprisingly, it often seems to have some water in it. Make this one of your stops, because the plants found here



A small stream, part of the ancient drainage system, crosses the Butchers Track.

are rather different.

Plan to stop at the Murchison Shire office where there is a small museum of local history. Planted along the road are several *Eucalyptus torquata* trees, Coolgardie gum. It has very attractive pink flowers and a very pretty and characteristic ribbed operculum. You will see it planted near many wheatbelt towns. Once when asked the name of this eucalypt by an English lady, I politely answered "*torquata*". Whereupon, somewhat taken aback, she repeated her question very softly. Think about it!

Mullewa is only a small town, but with a tourist bureau situated in the council offices. It is staffed by keen wildflower enthusiasts. Every spring there is a queue of tourists wanting to know where they can see the wreath flower. This has become the local icon plant; a pity to put so much emphasis on one plant when there is so much else to see. This includes an attractive plant with grey leaves and yellow flowers that thrives along roadsides. You will be surprised to learn that it is *Ricinocarpos velutinus* and therefore the same genus as the wedding bushes.



The eagerly sought wreath flower (*Lechenaultia macrantha*) is most easily found in disturbed areas, such as roadsides.



The under-appreciated but very attractive *Lechenaultia linarioides* "always" seems to be in flower. It ranges from Shark Bay to south of Perth.

Even more interesting is the native grape. I first saw it in the early 1990s, but could not identify it because the only book then available said "no species (of the Vitaceae family) normally present in the temperate regions of Western Australia". I subsequently found that it is *Clematicissus angustissimus* and this also caused a problem because the specific name indicates that the leaves are extremely narrow. I had only seen regrowth from a damaged plant for which the leaves are fairly broad. On the mature plant, which climbs up bushes, the leaves are narrow. The fruits, which are indeed grapes, occur in bunches just like the commercial grapes, but the bunches are perennial and at any one time may carry ripe fruit, green fruit, opened flowers, and flower buds. The grapes taste rather bland but with a peppery after taste.



Native grape *Clematicissus angustissimus* regrowth after damage in a camping ground at Coalseam National Park.



Fruiting bunch on *Clematicissus angustissimus*. Note ripe fruit, "raisin" fruit, green fruit, open flowers and flower buds present simultaneously.

When you can tear yourself away from Mullewa, take the Mullewa-Wubin Road. Along this road, there are many opportunities for side trips. A common one is to Canna where there is often a good display of everlastings on the "old camp site". (You will recognise it when you see it.) The owners of Canna store will direct tourists to other good sites including wreath sites. Slightly further south, the Pintharuka cemetery is a well-known location for wreath flowers; and what better place for a wreath? In the other direction, that is west, you can include the scenery of the Coalseam National Park (*Australian Plants*, September 2011). It is best early in the spring, when in good years, the everlastings are incredible.

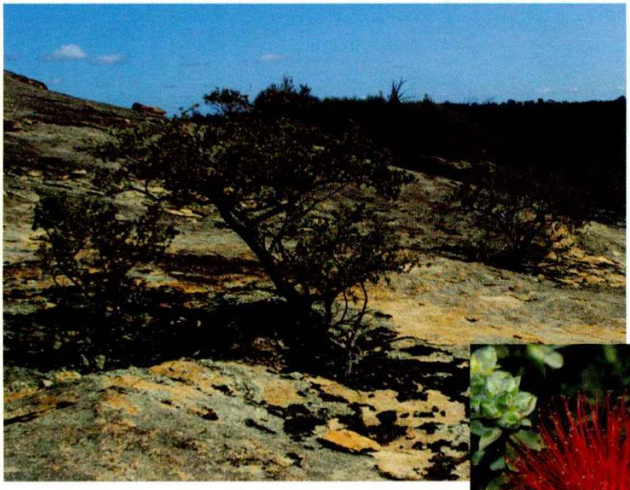
The stretch of road between Perenjori and Wubin is known as the "Wildflower Way". Here the railway runs parallel to the road and the two reserves overlap. This gives many opportunities to stop and look.



Pink Pokers (*Grevillea petrophiloides),* one of the many attractive plants to be seen on the Wildflower Way.

South of Dalwallinu the roadsides are rather narrow and there is little to see until just north of Wongan Hills. Immediately past the agricultural research station, there is a large and attractive patch of bush. There is easy parking on the left-hand side of the road and ready access by walking down the cleared area beneath the power lines. The small trees near the entrance point are *Eucalyptus pyriformis*. Like many plants in this environment, they only flower about one year in three.

Drive further down the hill, and just before the town, there is a patch of Salmon Gums with a track leading up to Christmas Rock. The rock, like many similar rocks, was used as a water catchment in the early days. This is a good place to see *Kunzea pulchella.*



Kunzea pulchella grows in cracks in granite rocks. One plant can extend many tens of metres along a crack. Plants are natural bonsais. They look, and probably are, very old.



It is only when you see them flower that you understand the reason for the specific name: "pulchella" means very beautiful. The bright red flower stands out against the grey leaves and also against the grey rock. Further east, the flowers are white.

By the way, the name Wongan Hills is a variant of Kwongan, the Noongar word meaning the low heath-like vegetation. It is here that you need to make another decision. You could return to Perth using the road that goes through Calingiri. There are some attractive stops on this road, the first of which is the Rica Erickson Reserve. You will find this where the "Old Plains Road" crosses the road. Here you are bound to find several different orchids under the Wandoo trees. Continue to Great Northern Highway and turn south. Another good stopping point is immediately after Hay Flat Road at Udamung Brook Reserve. There is a good parking spot from where you can walk down well-made tracks and see several bright Dryandras.

Much of the remainder of Great Northern Highway used to be a joy for the wildflower enthusiast, but alas, a requirement for rapid access to the mines in the north has meant that large amounts of vegetation have been cleared in order to make dual carriageways.

If you are not yet ready to return to Perth from Wongan Hills, turn inland and head for Merredin. Best route for the wildflower enthusiast is through Wyalkatchem because from there to Merredin the road again runs parallel with a railway line and the overlapping reserves give plenty of scope for wildflower foraging. More on Merredin later.



Grevilleas to be seen on the Wyalkatchem-Merredin Road include the orange flame *G. excelsior*, a species name that seems rather apt.





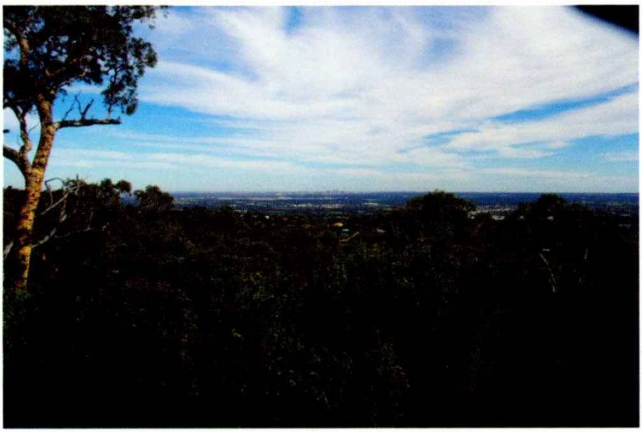
The related but distinct *G. eriostachya*.

The red route — the east

This route explores the region to the east of Perth. It is less well known to wildflower enthusiasts than the regions north and south of Perth and this is a pity because there is much to be seen.

Leave Perth on the Great Eastern Highway (West Australians are very keen on their "Great" highways). The first part of the route traverses the coastal plain but you will be scarcely aware of this until you reach the Midland Bypass. There you will pass through some banksia woodland. Soon afterwards, you will cross the riverine plain, which here is very narrow and then climb Greenmount, one of the few steep hills in Western Australia. Close to the top, turn left into John Forrest National Park.

This park is sited mostly along the edge of the scarp and the main trees are Jarrah and Marri. You can spend many hours here admiring the views over the plain and exploring the flowers, but note that the flowers of the Jarrah Forest are not as diverse as in the kwongan. Follow the tourist drive, stopping frequently to admire the views and to look closely at the flowers.



The view past a Wandoo tree (left) and over Parrot bushes (*Dryandra sessilis*) shows the flat coastal plain with Perth city in the distance.

Below left *Grevillea bipinnatifida* is of interest to gardeners because it is one of the parents of G. "Robin Gordon" and related hybrids.

Below right *Grevillea wilsonii* is however more spectacular.





The first part of the drive passes through lateritic country. This is a good place to try to get that elusive perfect picture of *Lechenaultia biloba*.



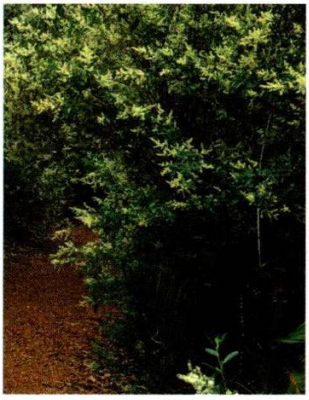
"Floor of the sky", *Lechenaultia biloba*.

Here, close to the edge of the scarp, the streams have cut through the laterite capping and exposed granite boulders, especially towards the bottom of the valleys. This is very apparent in the picnic area at the lowest part of the drive. If you have time, park here and walk down to the small stream. A highly recommended walk follows the stream down to a pleasant waterfall. Because you are in a sheltered valley, and because the soil is somewhat better here, part of the walk is through a dense stand of sweetly-scented *Trymalium ledifolium*. This is also a good place to see the spectacular granite Petrophile (*P. biloba*).

If you continue along the tourist drive, it will return you to Great Eastern Highway, and the continuing journey eastwards (or return to Perth if you want this to be a day trip).



Petrophile biloba.



Path through *Trymalium ledifolium*.

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Urgent Appeal

The Macquarie Cushion, *Azorella macquariensis* is endemic to Macquarie Island. The Cushion is a keystone species and dominates the high plateau covering approximately 45% of the Island.

Recently *Azorella macquariensis* has undergone a catastrophic decline due to factors currently under investigation. Cushion dieback first noted in December 2008 is now evident across the entire range of the species. At the current rate of spread it is anticipated that this species could become extinct in the wild within a few short years.

A challenge to grow horticulturally due to it's exacting environmental requirements, the Royal Tasmanian Botanical Gardens (RTBG) is implementing a program to develop a protected conservation collection and seed orchard on Macquarie Island, as a way of ensuring the survival of this unique species. Further information about this program can be found at—www.rtbg.tas.gov.au/conservation and clicking on the Azorella macquariensis link.

The RTBG has been awarded a partial grant from the Mohammed bin Zayed Species Conservation Fund but we still require a further $10,000 to fund this program .



Progression of Azorella Dieback. Image: Alecks Terauds

Your support will be gratefully received and enable the development of the conservation collection on Macquarie Island and assist our research in resolving the germination requirements for this species.

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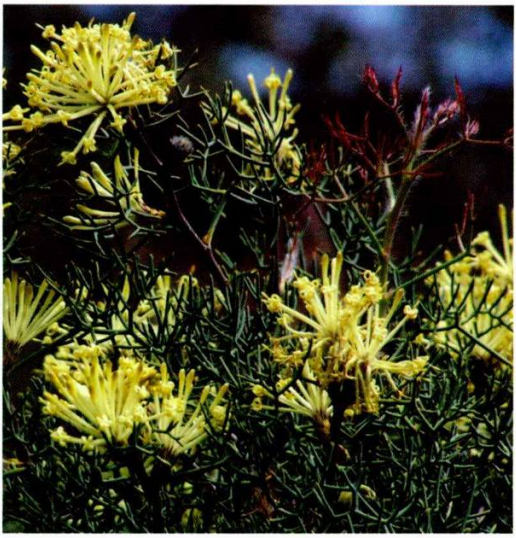


RTBG botanist Natalie Tapson sampling *A. macquariensis*. Image : N. Tapson

Even though the Darling Scarp is only 300 m high, this is sufficient to push the winter clouds up higher and increase the rainfall. The highest rainfall in this transverse occurs at about Mundaring. As you go further east, the rainfall decreases, quickly at first and then more slowly. The trees in the Jarrah Forest are smaller and slightly further apart and are eventually replaced by wandoo.

The highway will get you "there" quickly, but you don't want to get there quickly. You want to travel slowly and see things. Therefore diverge left at The Lakes on to the Great (!) Southern Highway. Soon you will find the roadside lined with yellow-flowering Dryandra shrubs, mostly "Pingle" (*D. squarrosa*). However, this road is too "Great" for us. We therefore recommend diverging to the right along Talbot Road West. You will need your navigation skills and a good map, but it is worth it for the pleasant drive through the Wandoo woodland. Much of it is fairly open woodland dominated by *Eucalyptus wandoo* but with occasional sandy patches carrying Banksia woodland. Make sure that you stop and walk down to any moist valley you pass because there you are likely to see damp-land plants such Droseras and Utricularias.

The best flowers are found in gravel patches, fairly high up in the slope. A particularly good one can be reached in Mercer Road, which branches to the left of Talbot Road. Many members of the Proteaceae occur here. A quick survey located 7 Dryandras, 2 Hakeas, 1 Isopogon, 5 Petrophiles and 1 Synaphea. This is also a good spot to see the local wedding bush (*Ricinocarpos glaucus*).



Many of the Proteaceae occurring at Mercer Road have cream or yellow flowers and rather prickly leaves. They are therefore difficult to confidently name. However, *Petrophile divaricata* can be readily identified from its soft reddish new growth.

As you move further towards York, another eucalypt becomes dominant. It is called, appropriately, York gum (*Eucalyptus loxophleba*). Here it is a "half bark"; that means that on the upper half of the tree the bark is smooth while on the lower half it is fibrous. Further east, the fibrous bark is less prominent and may be little more than a sock at the base of the trunk. "York gum and jam" is a vegetation type that was early recognised as indicating better soil and it was enthusiastically cleared.

By WA standards, York is an historic town. The Swan River colony was established in 1829 and it was only a few years later that exploring parties pushed through to here and found a broad valley with (again by WA standards) fertile soils. Fertile because the streams had cut through the laterite capping and also because there are some more-basic rocks. (Fertile meant that if you planted wheat you just might get more than your seed back, which, before the use of phosphates, was not so for most WA soils.) Note that along the river the main eucalypt is not *E. camaldulensis* as in the rest of Australia but the closely related *E. rudis*. It has rougher bark (rudis) and is also more widely attacked by insects, especially a leaf miner.

The rainfall in York has already decreased to about 450 mm. From here, as we go eastwards, it decreases slowly to about 300 mm at Merredin.

If you have dawdled, as well you should, you might choose to overnight in York, but eventually you must move on towards Quairading. You have now moved out of the region in which the "true" wandoo occurs. It is replaced by the related inland or wheat belt wandoo (*Eucalyptus capillaris*). This is superficially similar to salmon gum (*Eucalyptus salmonophloia*) but they can be easily distinguished even at 110 km/h. The leaves in the canopy of salmon gum are shiny, those of the wandoo are dull.

Near Quairading you will cross the Meckering line (see *Australian Plants* September 2011). This means you have passed from the zone of rejuvenated drainage; from here on, everything is very flat. There is a large reserve on the west side of Quairading township, but we prefer a small yet quite diverse reserve on the east side. It is readily accessible from a road that leads to the cemetery, which has plenty of parking.

Start by walking up the hill from the car park where there is a thick stand of *Banksia prionotes*. If you look very carefully, you may find the single plant of the rare and very pretty *B. cuneata*. Don't worry if you don't find it; there is a large stand beside the road to be seen later.

The matchstick Banksia (*B. cuneata)* is recognised by many Banksia authorities as a member of a small sub-genus containing three species. Superficially, they resemble Dryandras but the inflorescence is not surrounded by bracts, the diagnostic feature used to separate the two genera. They are thought to not be closely related to Dryandras. We know of only one plant in the Quairading reserve. There are many plants growing along the side of the Quairading to Kwolyin road again together with *B. prionotes*. The site is 12.5 km from the centre of Quairading.



Banksia cuneata

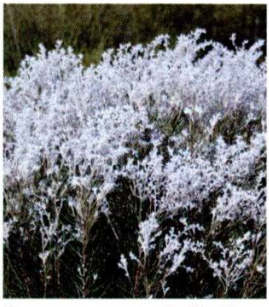
The area below the car park is also worth visiting. The extra run-off from the car park means that, even in a dry year, there is plenty to see here. On a power pole near here, you will see a rare plant marker. This indicates the presence nearby of a plant appropriately called *Jacksonia quairading.* It is a low straggling shrub with orange pea flowers and is confined to here. Plants with potentially confusing names are the common smoke bush *Conospermum stoechadis* and two members of the same genus that are not "smokey" but have blue flowers (*Conospermum croniniae* and *Conospermum eatoniae).* Also present is the blue flowered broom milkwort *Comesperma scoparium.*



Comesperma scoparium. Photo B Keighery



Conospermum eatoniae. Photo Hazel Dempster



Conospermum stoechadis. Photo Hazel Dempster

Walk back towards the main road. You should see several plants of *Lechenaultia tubiflora*. It was recognised as a leschenaultia by Robert Brown, one of the four species he recognised when he named the genus. It was subsequently (and embarrassingly) thought to be a member of the Erica family by the government botanist, Charles Gardner. At this site the plants have red flowers; they can also be cream or cream with red tips.



Lechenaultia tubiflora. Photo Hazel Dempster

Continue towards the main road until you come to a patch of Verticordias. The pink flowers of *Verticordia picta*, the painted verticordia, will soon catch your attention. Also present are two yellow verticordias. *Verticordia chrysantha* usually has a single stem and the leaves are not crowded. *Verticordia acerosa* is similar but the staminodes are toothed. The spectacular plant with six purple/blue "petals", and orange/yellow anthers is *Calectasia grandiflora,* a member of the *Dasypogon* family and therefore related to *Kingia*. Easily confused, because of the similar name, is the completely unrelated *Calytrix leschenaultii.*



Calytrix leschenaultii.



Calectasia grandiflora. Photo Hazel Dempster

North of here, and about 15 km south of Tammin is the Charles Gardner Reserve. If you have plenty of time, it is well worth a visit. However, many of the plants are common to the Quairading site, and we suggest that you move on to Merredin. Continue eastwards from Cemetery Road, stopping of course to see the *Banksia cuneata,* then turn left at Yoting and continue north to rejoin Great Eastern Highway and thence to Merredin.

Merredin which means place of the "Merrit" (*Eucalyptus flocktoniae*), a smooth-barked Mallee, is about half-way between Perth and Kalgoorlie and has a fairly good supply of accommodation. You could easily spend three nights here. Spend some time admiring the amenity plantings within the town area. Trees that are well adapted to this environment include *Eucalyptus torquata* (pink flowered) and *E. woodwardii* (weeping tree with bright yellow flowers). Then take the Nungarin Road, but turn to the right at Knungajin Road. Wonderful place names! After about 23 km you will come to a "5-way" at the corner of Talgomine and Chandler Roads. This was a thicket community but has been disturbed to give visibility at the corner and this has permitted the appearance of species that are otherwise hard to find. This includes the yellow *Dampiera luteiflora*, an unusual colour for Dampieras in WA.



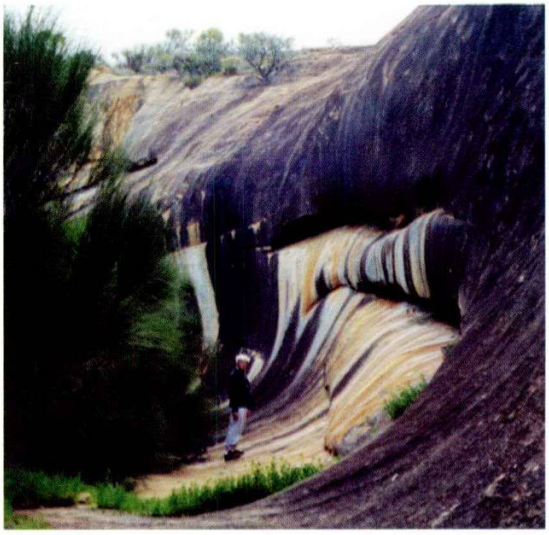


Dampiera luteiflora (left Photo B Keighery) and *Dampiera juncea* (right).

Next, drive down the Talgomine Reserve Road for about 5 km until you come to an open area. This is one of the very few places where the original vegetation of the jam community can be seen. Provided that there has been reasonable winter rainfall, the display of everlastings will continue into late September. You can see a picture on Page 118 of *Australian Plants* September 2011.

Return to the main road and navigate your way to Mukinbudin. From there, find your way north-west to Elachbutting Road. Just off this road there are interesting reserves around Yannymooning Rock and Elachbutting Rock. The latter rock is one of the 18 rocks on which *Eucalyptus*

caesia occurs. The WA herbarium no longer recognises the larger leaf form as a sub-species (*magna* Silver Princess) so there is now only one taxon. Elachbutting has a "wave" every bit as impressive as *the* "Wave Rock" near Hyden.



The wave of Elachbutting Rock. The line of bushes at the top of the rock are *Kunzea pulchella*. It grows in cracks in such rocks. This rock is at the boundary between the western red-flowering form and the eastern white-flowering form. Red, white and pink forms occur.

The green broom-like bush in the left of the picture is *Calycopeplus paucifolius* (Family *Euphorbiaceae*). It is commonly found in the run-off zone around such rocks. Photo Lin Barrow.

Slightly further north, good flowers are to be found along Masefield Road. "Red Velvet" (*Australian Plants* September 2011) occurs north of Masefied Road on Rabbit Proof Fence Road.

Return to Merredin for the evening and prepare for your next day at Scott Road. Take the Merredin - Narrembeen Road, diverge into Bulls Head Road, turn right into Scott Road and continue to the Koonadgin wheat bin. Then turn round and move northwards exploring as you go.

This is a designated "Flora Road" and deservedly so. Merredin Shire has over 80 species of *Acacia* and at least seven may be seen here within a few hundred metres. The most iconic is probably "zigzag" wattle (*Acacia anfractuosa*). This has a similar growth habit to the more widely known *A. merinthophora* but they are not closely related. The most obvious difference is that *A. anfractuosa* has spherical inflorescences whereas *A. merinthophora* has cylindrical ones.



Acacia anfractuosa. Photo B Keighery

There are many attractive and interesting plants to be seen on this road. Here are a few of them.

The brightly coloured flowers of wild pomegranate (*Balaustion pulcherrimum*) appear on a plant that trails across the ground. The name is very appropriate; Balaustion is the name used by Dioscorides for the wild pomegranate and it is indeed very beautiful, as the species name indicates. Balaustion used to be a genus with just two species but closer study indicated that convergent evolution had produced two similar but unrelated plants. The other species has been transferred to a new genus called Cheyniana.

Hakea erecta, like many other plants in this environment, does not flower every year, but when it does it is very impressive. *Goodenia affinis* copes with an extremely harsh environment, and *Conospermum brownii* is a fairly rare yet very pretty plant. And I rather like making a pun with its name it's "bluey-eye" not "brownii".



Balaustion pulcherrimum.



Hakea erecta.



Goodenia affinis.



Conospermum brownii.



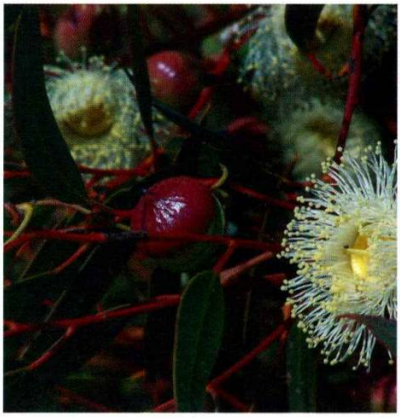
Grevillea paradoxa.

Finally *Grevillea paradoxa* (strange, marvellous) is used as the logo for the small yet active Merredin branch of the Wildflower Society.

Once you have passed Bulls Head Road, the road name changes to Springwell Road. There is also much to see beside this road, but eventually you will come to Great Western Highway at Burracoppin, a truly tiny town, but with a sheltered spot for lunch. Continue eastwards to Carrabin and turn left to Westonia. Near here you will find some excellent stands of gimlet (*Eucalyptus salubris*). The name "gimlet" refers to the twisted fluted stem of the tree which reminded the early settlers of a small hand tool used for drilling holes. No one is sure of the origin of the name "salubris" but folk etymology says it comes from the smooth silky feeling of the stem, just like healthy skin.



Checking out the smooth bark of *Eucalyptus salubris.*



Eucalyptus burracoppinensis, an easy name to remember considering its location, flowers only every third or fourth year.

Continue through Westonia following the well marked signs to Sandford Rock. For pictures, see page 115 of the September 2010 *Australian Plants*.

Next day, head for Corrigin. It is not famous as a wildflower centre - and this is a pity as there is much to see. There is a large patch of uncleared land to the east of Corrigin on the Brookton Road. If your time is limited, the best way to capture the essence is to enter the "Lookout Drive" about 2 km from the centre of Corrigin. This is a one-way drive that moves up the back slope of a breakaway. Stop several times to observe the way the vegetation changes as you climb. The top of the breakaway is, however, the most spectacular with several species of Isopogons and Dryandras.





Left. The very prickly *Isopogon gardneri* occurs here. It is fairly uncommon and was not named until 1995. Perhaps the name was chosen because Charles Gardner had a reputation for being rather prickly? *Right.* The superficially similar *Hakea gilbertii* also occurs here.

For a more thorough exploration of this area, travel about 2 km further westward. There is an entry to a much longer drive almost opposite Jose Road. This drive is almost 3 km long. It passes through a range of communities eventually entering the scenic drive.

At the eastern end of the uncleared area, there is an entrance to a rifle range. That sounds a bit scary, but this is also a good place to view wildflowers as the vegetation has been cut back in several places and so you can see differing stages of regrowth.

Next stop, Kulin. The road passes through the Gorge Rock Reserve about 18 km from Corrigin. This contains some pristine communities but much has been destroyed by road works. Never mind, you will have a nice sweeping road so you can pass through it quite quickly.

About 2 km from Kulin the "Macrocarpa Walk" on the left side of the road is maintained by the Kulin Branch of the Wildflower Society. This provides a walking trail through an uncleared area. Many of the plants have name tags. You could walk the circuit in well under an hour, but if you are to look at things, as you will, better allow at least two hours.





Left *Guichenotia angustifolia,* a very attractive little plant growing under fairly harsh conditions on the Macrocarpa walk.
Right Boomerang trigger plant (*Stylidium eriopodium*). The yellow form occurs here. A white form is also fairly common. (Previously known as *S. breviscapum,* which is now regarded as confined to the South Coast – information from Greg Keighery)

At Kulin, you must make another decision. You could switch to the purple route, eastwards to Hyden (and Wave Rock) then south to Ravensthorpe giving you access to Fitzgerald River National Park. But then you would miss out on Harrismith, Narrogin and Dryandra Woodland.

Harrismith is well known to wildflower enthusiasts ironically because of its "airport". This refers to two runways, neither of which is particularly flat but which could nevertheless take a fairly large aeroplane. These runways are surrounded by a substantial area of uncleared land. The town itself is little more than an hotel, a public hall and a couple of houses. Park behind the hotel, near a signboard showing the extensive walk trails through the "airport" area. You should be able to obtain from the hotel a pamphlet giving the plant names that correspond to numbered pegs in the first part of the walk. The first 100 m or so of the walk passes through a sheoak thicket and this is the best area for orchids. You are permitted to drive on to the runways via tracks near the water tower just keep off the centre lines.





Left.
Cyanicula amplexans.

Right.
Caladenia falcata.

Narrogin is a fairly large centre and has a large reserve called Foxes Lair within easy walking distance of the motels. It is well worth a visit and has a variety of vegetation types.

Dryandra Woodland may be reached from Narrogin via the Wandering-Narrogin Rd. The entry is about 22 km from Narrogin. It is not a single area but comprises several blocks only some of which are contiguous. In the early days, it was left uncleared mainly because of the large number of poison plants. These are legumes containing monofluoroacetate, otherwise known as 1080. Native animals have evolved a high level of tolerance to the poison but it is deadly to introduced animals such as the red fox. This was important in the survival of mammals such as the Woylie and the Numbat. This protection is now augmented by regular baiting with 1080 poison. You may be lucky enough to see a Numbat, a squirrel-like animal that eats termites and is active in the daytime.

In the early 1900s it was found that the bark of Brown Mallet trees (*Eucalyptus astringens*) contains more than 40% of high quality, water-soluble tannins suitable for the production of quality leather. By 1929, stands of the naturally grown mallet had almost disappeared because of enthusiastic bark collection. Therefore, between 1925 and 1962 a total of 4,000 hectares of the Dryandra Woodland were planted with mallet. During the Depression, this provided employment for sustenance workers. Production collapsed in the early 1960s, mainly because of competition from synthetic tannins. The area is now managed for wildlife conservation.

You could spend much time here. For a brief visit, drive towards the village and look at the recycled forest-workers' dwellings. They are available for hire. From here, go to the Old Mill Dam and park. Wander over the trails in this area looking for orchids and other small plants. The many roads in the area are equipped with tourist radios to tell you about the history of the area. The return road to Williams Rd is one way and just past the village there is a large patch of kwongan which is "must see". Among the many plants here there are six species of Dryandra within a stone's throw: *columnaris, erythrocephala, nivea, nobilis, squarrosa,* and *stuposa.* Well, they do call it Dryandra woodland.

From here, you could return to Perth rejoining Albany Highway at North Bannister and thereafter following the green route northwards. Alternately you could elect to continue your trip by navigating to Williams and joining the green route southwards.

The purple route — Hyden & the south coast

Wave Rock at Hyden is a perfect example of how to exploit a natural feature for tourist purposes. A rock, you see, is always there month in and month out, unlike wildflowers which are of course seasonal. Wave Rock therefore supports a steady tourist industry. This includes a substantial motel that mainly relies on coach parties and there are regular day trips from Perth. Tired businessmen board the coach early in the morning, promptly go to sleep, and wake up when they arrive at the Rock. They repeat this for the return journey and feel they have seen WA.

Nevertheless, since you are there, you had better have a look at the wave. You can see pictures of it in many tourist brochures, so I shan't include a picture here! The flat area around the base of the rock used to be a good place to hunt for orchids but this has now been fenced off to protect it from the tramping of tourists' feet. More interesting, I think, is to climb the rock and look at the wetland vegetation growing in tiny depressions in the rock. Or to admire the view.



View from the top of Wave Rock, looking east. Flat isn't it? Photo Lin Barrow

When you leave Hyden, take the road to Norseman. It is almost parallel to the road to Lake King and offers several opportunities to stop in bushland. Continue at least to the "Vermin Proof Fence". This was originally the rabbit proof fence, a huge undertaking in the 1930s built to keep the rabbits on the other side. But well before it was finished, they had already crossed it. Here you can see the Swordfish Banksia (*B. elderiana*) one of two Banksias adapted to low rainfall. The fence is now used to keep emus from moving from the arid zone into crop areas. This is a good place to contrast the vegetation on the two sides of the fence.

If you so choose, you could continue on this road to Norseman and then turn south to Esperance, The road to Norseman is a high quality gravel highway and would only be closed when there had been heavy rain in

the area. It is 297 km from Hyden to Norseman and there is no fuel or water on the way. The road passes through floristically rich heathlands, past magnificent eucalypt woodlands, salt lakes and granite rocks. The vegetation in this area has only recently begun to be appreciated and it is now designated as the Great Western Woodlands.



At the "crossroads": the intersection of the Hyden-Norseman Road with the Marvel Loch-Forrestiana Road about 30 km east of the Vermin Proof Fence. Despite the very low rainfall, magnificent salmon gums grow in this area. Photo Lin Barrow

To take the shorter route from the fence to the south coast, backtrack a little and turn south on Bushfire Rock Road. Use your maps to navigate to the Lake King Road and thence to Ravensthorpe.

The town of Ravensthorpe has had rather a checkered recent history. There was frenzied activity accompanying the opening of a nickel mine and processing plant in the vicinity, followed by desperation when the mine was closed. Then followed a rebirth of optimism when the mine was reopened. Use Ravensthorpe or Hopetoun as a base for visits to Esperance in the east and to the eastern part of the Fitzgerald River National Park. The drive to Esperance is good with many good verges especially at the Ravensthorpe end.

Fitzgerald River National Park occupies a large area along the south coast. Most of it is designated as wilderness, You can only sample the edges. The northern edge of the park has "granite" as its base rock. South of the granite, the rocks are a lot younger — a mere 1000-1800 million years old. They are a folded and faulted sequence of metamorphosed sediments - the Mount Barren ranges. They were formed when Australia bumped into what is now Antarctica about a billion years ago. The pressures squeezed sandstone beds turning them into quartzite and folding them two or three times. Much of the park is underlain by sediments laid down in warm waters about 40-50 million years ago (Eocene). These rocks are exposed along the major rivers of the park. A curious rock called spongolite which was formed from sponge spicules

is an upper member of this series and can be seen at Twertup (see your maps). There is, as usual, laterite formation as well.

The vegetation present is strongly affected by the landform and underlying rock type. It is mostly very open mallee and shrubland with woodlands along rivers and swamps. It is one of the richest flora regions in WA (and therefore in the world!) with about 1800 identified plant species.

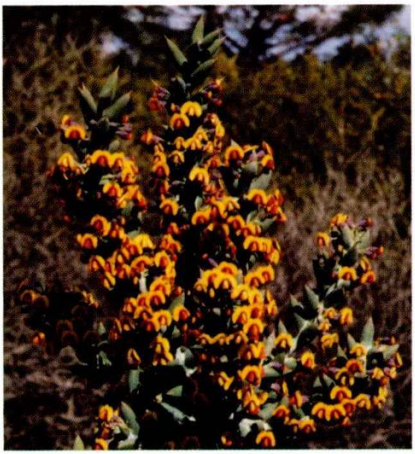
You can sample the eastern edge of the park on a circular drive starting at Hopetoun. This road was closed for upgrading for most of 2012, but should reopen by the end of the year. Cross the mouth of the Culham Inlet and drive up the steep road to East Mt Barren. A mere 40 million years or so, the Barrens formed a series of offshore islands and the waves cut platforms. This platform makes a sort of shelf from which there is a pleasant mountain climb to the top. It starts at a long board walk constructed to protect the vegetation from the feet of nature lovers and from dieback. Perhaps the most impressive plants here are the Qualup bells (*Pimelea physodes*) (best in early spring). The flowers mimic the Darwinias (*Australian Plants,* September 2011). From just about anywhere there are magnificent views over the ocean and over the nearby countryside. Do cast an occasional glance at the soil and wonder that anything can grow in nearly pure silica.

Continue eastwards from Mount Barren, past the *Eucalyptus sepulcralis* trees following Hammersly Drive. This will eventually take you back to the South Coast Highway. Allow most of a day for this trip.



Eucalyptus sepulcralis was so named by Von Mueller because he thought it would be a suitable tree to plant in cemeteries. Under cultivation, they grow into quite large weeping trees and may be seen in Kings Park garden. Looking eastward towards Central Mt Barren. Photo Lin Barrow

When you continue your journey westwards, you can sample the northern edge of the park by choosing the Old Ongerup Road rather than the South Coast Highway. Make one of your stops a granite area accessible from this road.



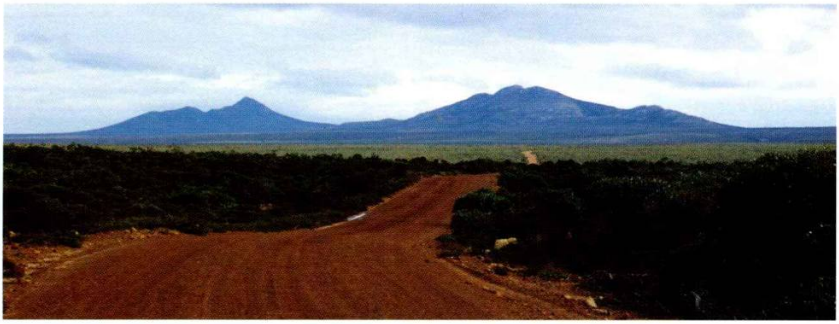


Contrasting plants found in the northern part of Fitzgerald River National Park.
Left: Ouch bush, *Daviesia pachyphylla*, one of several bizarre Daviesias found in the park. Photo Lin Barrow
Right: *Pelargonium havlasae*, a tiny plant found growing in cracks in granite. It is very well adapted to cultivation in hanging baskets, where this picture was taken.

Later, enter the western part of the park at Quiss Road. A side track leads you to Twertup (4WD recommended) and a continuation of Quiss Road brings you to the marvellous Point Anne (whale watching in season).



Point Anne. Note the bright white sand both on the beach and showing through water - an indication of the soil (in)fertility. Some buildings are tucked behind the dunes providing facilities for picnics and limited facilities for camping. The wooden structure is part of the platform built for whale watching.



A typical view in the eastern part of Fitzgerald River National Park.





Two of the iconic plants of the western side of the park, both photographed on the marked flora walk of the Quaalup Wilderness Retreat.
Left: Possum Banksia (*B. baueri*). The inflorescence dominates the low-growing shrub.
Right: *Calothamnus gracilis.* This is one of the three *Calothamnus* species named by Robert Brown. The name seems curiously inappropriate because it is a robust small shrub not a gracile one. (Latin gracilis meaning thin and graceful.)

From the western part of Fitzgerald River National Park, you will need your map to navigate your way to Bremer Bay. This is a pleasant seaside town with a (limited) range of accommodation, and with a range of native plants growing in undeveloped spots. From there, you could drive straight to Albany, and subsequently visit Stirling Range National Park, or you could navigate your way directly to the Stirlings using the Borden Bremer Bay Road.

The Stirling Range, together with Fitzgerald River and Mount Lesueur, form the triple crown on southern national parks. Yet I have chosen not to deal with it here. One reason is that *Australian Plants*, March 2010 recently carried articles by Doug Rickard and by Margaret Bradhurst about it. The other reason is that there is an excellent book called *Mountains of Mystery*, which provides far more information than I can. It is available from the Wildflower Society.

The green route — Albany and the south-west

This route takes you to Albany, which is a good base from which to explore the locality. From there you continue westwards through the big tree country to the south-west corner, then northwards through Margaret River and return to Perth.

The Albany Highway branches from the South West Highway at Armadale. It cuts diagonally through the Jarrah Forest and in many places the road shoulder is wide enough for you to park and explore the bush. A particularly good place to stop is at Sullivans Rock which is about 35 km south of Armadale. There is a parking and picnic spot on the west side of the highway immediately after the Bibbulmun track crosses the road. From here you can explore the Jarrah Forest, then walk across the highway along the Bibbulmun track to Sullivans Rock.





Left A coralline lichen (*Cladia ferdinandii*) grows amongst the moss beds on the rock.
Right *Hakea petiolaris* grows near the edge of the rock and flowers in mid-winter.

As you continue further south, you soon pass out of the forested country. It is a pleasant farming landscape but the roadsides provide little reward for wildflower enthusiasts. One exception is about 34 km south of Arthur River at Crapella Road. Here there is a sharp turn to the left and a gravel road that loops around a picnic area. You will find many plants of interest here.

The next recommended stop is at Kojonup (the place of the stone axe). Drive through the township to Kodja Place Visitor Centre and ask for directions to the Myrtle Benn Reserve. It is a fine reserve on the edge of the town and well worth a visit.

South of Kojonup, and within sight of the Stirling Range, consider branching off to visit Cranbrook. It is a deviation of only a few kilometres

and provides an opportunity to visit a well cared for reserve on the southern side of the town.

Return to the Albany highway and continue southwards to Mount Barker. Few wildflower enthusiasts pass through this town without visiting the Banksia Farm where all the Banksias and most of the Dryandras are cultivated.

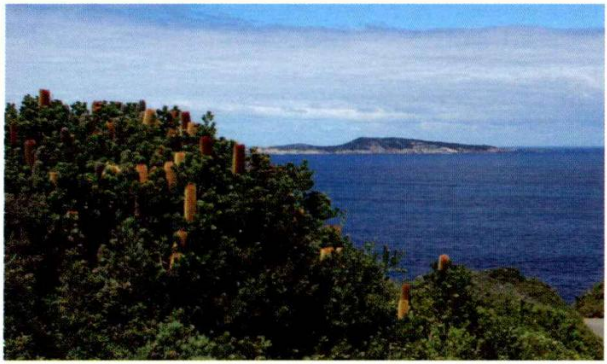




Two Banksias cultivated at the Banksia Farm. Left: *B. meisneri* and right *B. nutans*.

Albany forms a natural base for several excursions. Torndirrup National Park occupies most of the peninsula that hooks around the western side of Albany harbour. It is the most visited national park in Western Australia. Most people come to see natural rock formations such as Natural Bridge, The Gap, and the Blowholes. You will of course be interested in the vegetation growing on this very exposed coastline. Make sure you also explore the heathland along Quaranup Road on the way to the old Quarantine Station. Coastal vegetation can also be seen at the Albany wind farm. It is at the end of Sand Patch Road.

Make sure you also visit the eastern side of the Albany harbour. Visit Gull



Banksia praemorsa is unusual for western Banksias in that it grows very close to the coast and is subjected to on-shore winds. Picture taken near the Blow-hole, Torndirrup NP.

Rock Reserve and Mount Martin Regional Botanic Park. Take Ledge *Beach* Road. You can continue on the Ledge *Point* Road and park at Ledge Point Beach car park. From there, walking tracks wind and climb through the Mount Martin Park. This was designated in 1993 as being representative of the endemic flora of Albany.

You should also continue to Two Peoples Bay National Park. If you have not already visited Stirling Range National Park as part of the purple route, it makes a sensible full-day excursion to go there from Albany.

More conventional tourist activities include a visit to the Mount Clarence War Memorial, which overlooks the harbour from which troop convoys departed in the first world war. Nearby is the Ataturk Memorial. Both of these sites also provide good opportunities to view wildflowers.

When you leave Albany, drive along the South Coast Highway. In Denmark, see if you can fit in a drive along Ocean Beach Road along the west side of Wilson Inlet. Ocean Beach itself and the surrounding coastal dunes with their abundance of coastal heath flora justify the side trip. Consider driving along Scotsdale Road which runs parallel to South Coast Highway but to the north of it. It takes you through magnificent stands of Karri (*Eucalyptus diversicolor)* and gives views across some of the attractive farming country. A shorter option is to take Mt Shadforth Road which is also parallel to South Coast Highway but not as far north. You will enjoy the Karri lining the road and the views out over the coast and inland to Mt Lindesay.

Fourteen km west of Denmark take the short diversion to lovely William Bay to visit WA's oldest National Park, where coastal heath vegetation





It is debatable which is the more scary, the suspended treetop walk (left), or the creatures on the floor of the forest (right), actually the base of a yellow tingle tree, *Eucalyptus guilfoylei.* Photos Lin Barrow

may be found as well as a good swimming spot at Green's Pool. (But put your toe in first - the water is cold on the south coast!)

The side trip that everyone makes is to the Valley of the Giants about 12 km east of Walpole. There, many specimens of two rare but very large eucalypts are preserved. These are the red tingle and the yellow tingle. Both are tall but their special characteristic is the width at the base. Some of the older ones are hollow and one was big enough to drive a car into the base. (It has since fallen.) The famous attraction is the treetop walk. It is a metal structure that enables you to walk within the canopy of the trees. However, it is somewhat scary and the canopy of the eucalypt trees is fairly sparse. We find it much more interesting to walk along the paths at the base of the forest – called the Ancient Empire. There you will see some of the flora also characteristic of the Karri forest such as the tree hovea (*H. elliptica*) with its dark blue flowers and the white flowered *Crowea angustifolia*.

After Walpole, move inland through forest, which is very much determined by the soil type, to Pemberton in the heart of the Karri forest and a good spot to overnight. Make sure you visit the Gloucester tree. This was one of the "king karris" - trees which dominated the local forest. A look-out was built in the top of the tree and used for fire spotting. Other look-out trees enabled the use of triangulation to locate the fire. Air patrols are now used instead.





Left: the special charm of the Karri forest is in the undergrowth. A tangle of *Kennedia coccinea* (orange), *Clematis pubescens* (white) and *Hardenbergia comptoniana* (blue-mauve) photographed near the Gloucester tree. Right: a tourist, complete with camera descends the Gloucester tree via the spikes driven into the tree. Photos Lin Barrow

You may choose to go next to the Leeuwin lighthouse, the south west corner of Australia. A good stop on the way is just on the east side of Alexandra Bridge. In the area between the new and the old bridges there is an attractive area of Jarrah forest with a good ground flora. A few km inland from the lighthouse there is an area of vegetation severely

limited in height by the strong winds. There you will see plants that are normally substantial trees, but here little more than waist height. This is also a good spot to hunt for orchids. A side track to the north takes you to Quarry Bay with an interesting cliff with plants such as *Lobelia alata* growing in damp areas.



Banksia grandis flowering at a little more than waist height in the area just inland from the Leeuwin lighthouse. Normally this is a substantial tree, hence the specific name. One wonders which specific name would have been given if this population had been discovered first.

You may choose to go north via Caves Road which will take you through the Boranup Karri forest and with possible side trips to some of the beaches. On the west side of this area, aeolean limestone overlies the country rock and it is in this limestone that caves are formed. Some are open to visitors. The northern end of this road brings you to Dunsborough. From there you can visit Meelup Beach and Eagle Bay. These



Calothamnus graniticus, with its very attractive bright red flowers, is confined to a small area of Meelup Beach. It is increasingly cultivated and indeed there are probably now more plants in cultivation than exist in nature.

are unusual in the south west in that they are not exposed to the force of western and southern gales because they are on the sheltered side of the coastal ridge. The plants differ from those, for example, at Sugarloaf Rock which is nearby. From the Meelup Beach picnic area a walking path crosses a small stream and leads towards Castle Rock, one of the best wildflower walks in the state. To reach it, take the Meelup Beach road (off Cape Naturaliste Road) then the right fork (Castle Rock Road).

Ambergate Reserve is well worth a visit. It is one of the few reserves in which you can see the plants of the coastal plain. It is just south of Busselton on Queen Elizabeth Drive between Doyle Rd and Payne Rd.

The Whicher Range is a little-known gem with many unusual plants. A good area is between Sues Rd and Vasse Hwy just south of where they cross. Sabina Rd provides access, but last time I was there we needed a high clearance 4WD to traverse it. However, you can explore the eastern end from Vasse Hwy and the western end from Sues Rd.





Two plants from the Whicher Range. Left *Grevillea bronwenae* named by Greg Keighery for his wife and fellow botanist, Bronwen. Right *Dasypogon bromeliifolius* (Pineapple bush). The taller *D. hookeri* also occurs in this region. This genus is the type for the family that includes *Kingia, Lomandra* and *Calectasia.*

On your way back to Perth, drive through the Tuart Forest National Park north and east of Busselton. Tuart (*Eucalyptus gomphocephala*) is a large tree well adapted to calcareous soils and is widely planted on them overseas. In Bunbury, pay homage to the southern-most mangroves on the west coast at Koombana Bay. Finally, visit Yalgorup National Park, south of Mandurah, a narrow coastal strip of land that includes Lake Clifton and Lake Preston and seven other minor lakes. Living thrombolites, fed by calcium carbonate from the fresh-water aquifer, are found on the eastern shore of Lake Clifton. There is only one other place in the world where thrombolites exist in water less salty than the ocean. You can see them readily from an elevated board walk.

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