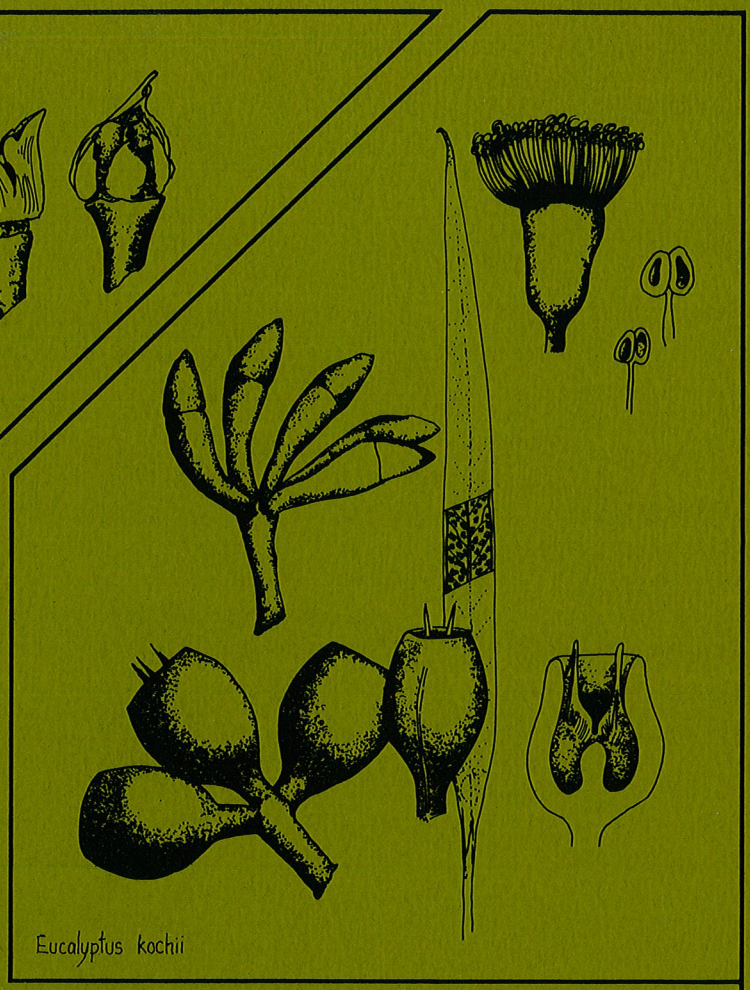
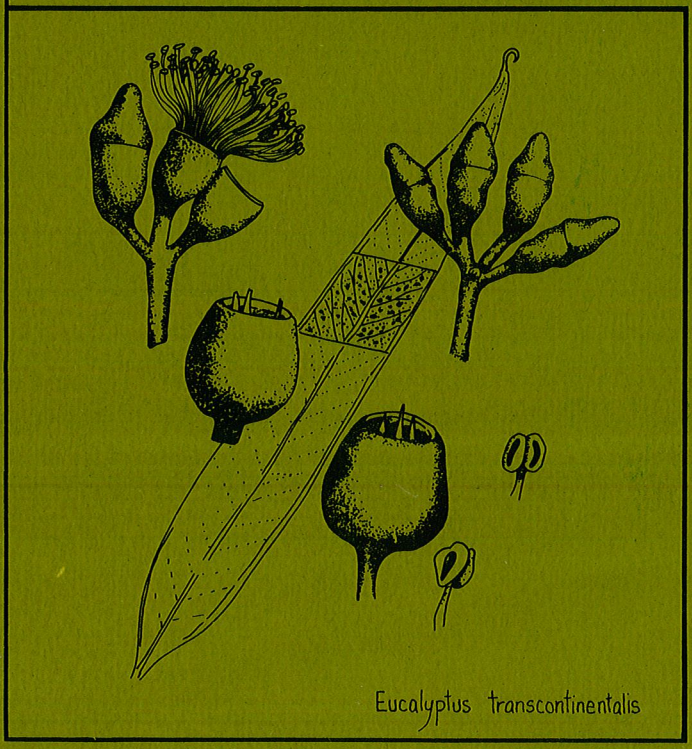
Eucalyptus plenissima

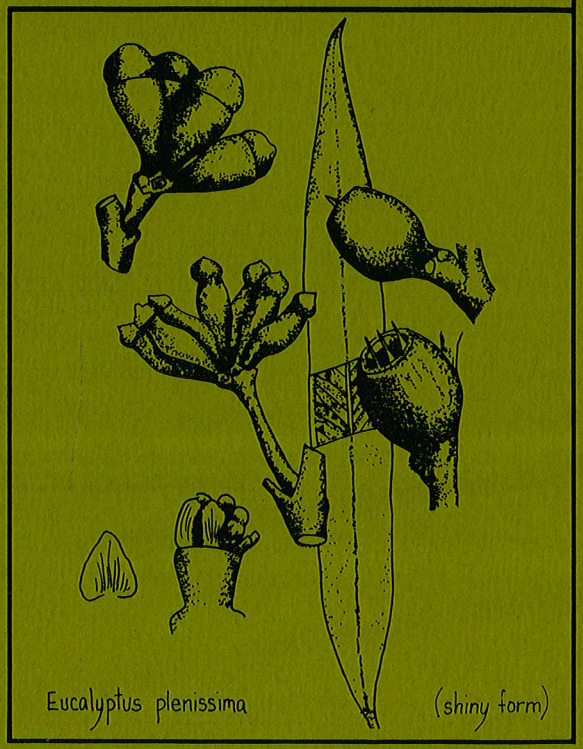


Eucalyptus kochii

GARDEN GUIDE



Eucalyptus transcontinentalis



Eucalyptus plenissima (shiny form)

Western Australian Herbarium

TABLE OF CONTENTS

Revised Edition

November 1986

WELCOME

Welcome to the native plant garden of the Western Australian Herbarium. The majority of plants in the garden are native to Western Australia, with a few species from other States. We now have well over 1,000 different native plant species, spread throughout 2.4 hectares. These plants originate from many parts of the State and show a great diversity in form, colour and growth requirements.

Man, like all animals, is dependent on green plants for his very existence. Plants are primary producers, converting the sun's energy into food through a process known as photosynthesis.

Like other green plants, flowering plants also provide oxygen (a by-product of photosynthesis) so that all living organisms can respire. Flowering plants are thus essential in the web of life and are the dominant plant group on earth today.

Flowering plants provide us with medicines, drugs, herbs, fruit, vegetables and other food. A knowledge of flowering plants is essential if we are to provide enough food for the people of the world, prevent native plants and animals from becoming extinct, develop new drugs for medical science, control air pollution and make our environment an attractive place in which to live.

THE HERBARIUM

The Western Australian Herbarium maintains a major reference collection of over 300,000 named plant specimens and an associated library of over 6,500 titles; these facilities are used to carry out research and provide information services.

The work of the Herbarium is concentrated mainly on the taxonomy of the native and naturalised flora of Western Australia. This involves establishing the correct names of plants and classifying them so as to reveal their natural relationships. Botanical information is disseminated by means of technical articles in scientific journals, flora manuals, checklists, distribution maps and leaflets. The Herbarium also provides plant identification and advisory services to government, other scientists and the general public. Loans of specimens are exchanged with institutions in other States or countries engaged in studies of the taxonomy of Western Australian plants.

The Herbarium also carries out taxonomic and floristic surveys and collaborates in ecological surveys. Seed and vegetative material acquired on these surveys is propagated in the garden so that flowering material may be obtained for identification.

Plant collections and literature are acquired in the course of the above activities, as well as by gift and exchange. Voucher specimens, allowing verification of the names of Western Australian plants used in a variety of scientific studies, are preserved and appropriately annotated.

HISTORY OF THE GARDEN

Prior to 1978 the garden surrounding the Herbarium consisted of pine trees, lawns and flower beds. Considering this to be an inappropriate setting for a department involved in research into the State's flora, several staff members, in conjunction with Mrs. Marion Blackwell, a landscape architect, drew up a plan for a native garden. The three main objectives were to:

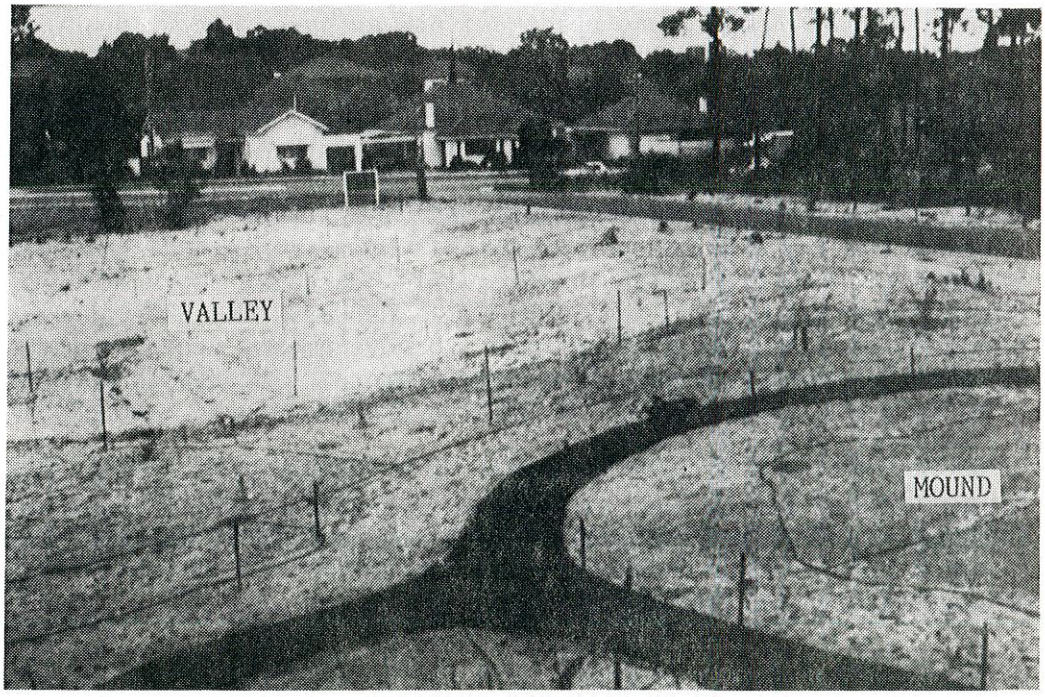
1) exhibit living native plants for public education and enjoyment;

2) provide living specimens for taxonomic and other botanical research; and

3) form an appropriate and pleasant setting for the W.A. Herbarium where work is primarily on the native flora.

Following the removal of pine trees, sub-contractors proceeded with the initial earthworks, creating a pleasantly undulating landscape. Paths consisting of Jarrah rounds, or gravel mixed with coloured cement were then laid. The Jarrah rounds were removed in 1985 and replaced by slab paths.

During early 1979 the first plantings were made in the Banksia bed, and since then the garden has grown dramatically.



A view of the garden looking from the northern end of the Herbarium towards the George Street entrance taken in April 1979.

HOW TO USE THE GARDEN GUIDE

A detailed map and index to plant species descriptions can be found on the following pages. The trail begins at the northern end of the Herbarium building (indicated by a star on the map). This is a suggested route but individuals may like to vary their starting and finishing points depending on the time they wish to spend in the garden.

There are 110 plant descriptions arranged alphabetically in the guide. As you follow the trail check the plant species on the name tags against the index. Not all plants in the garden are included in the guide.

INDEX

The map shows a number of named garden features (i.e. pond, swamp, granite outcrop, sunken lawn, conifer (pine) mound). Brief descriptions of these features and their associated plant species can be found in the guide on pages 7-9.

Please stay on the paths and do not pick or damage the plants, some of which are used for scientific research. Exercise caution when crossing access roads or carparks.

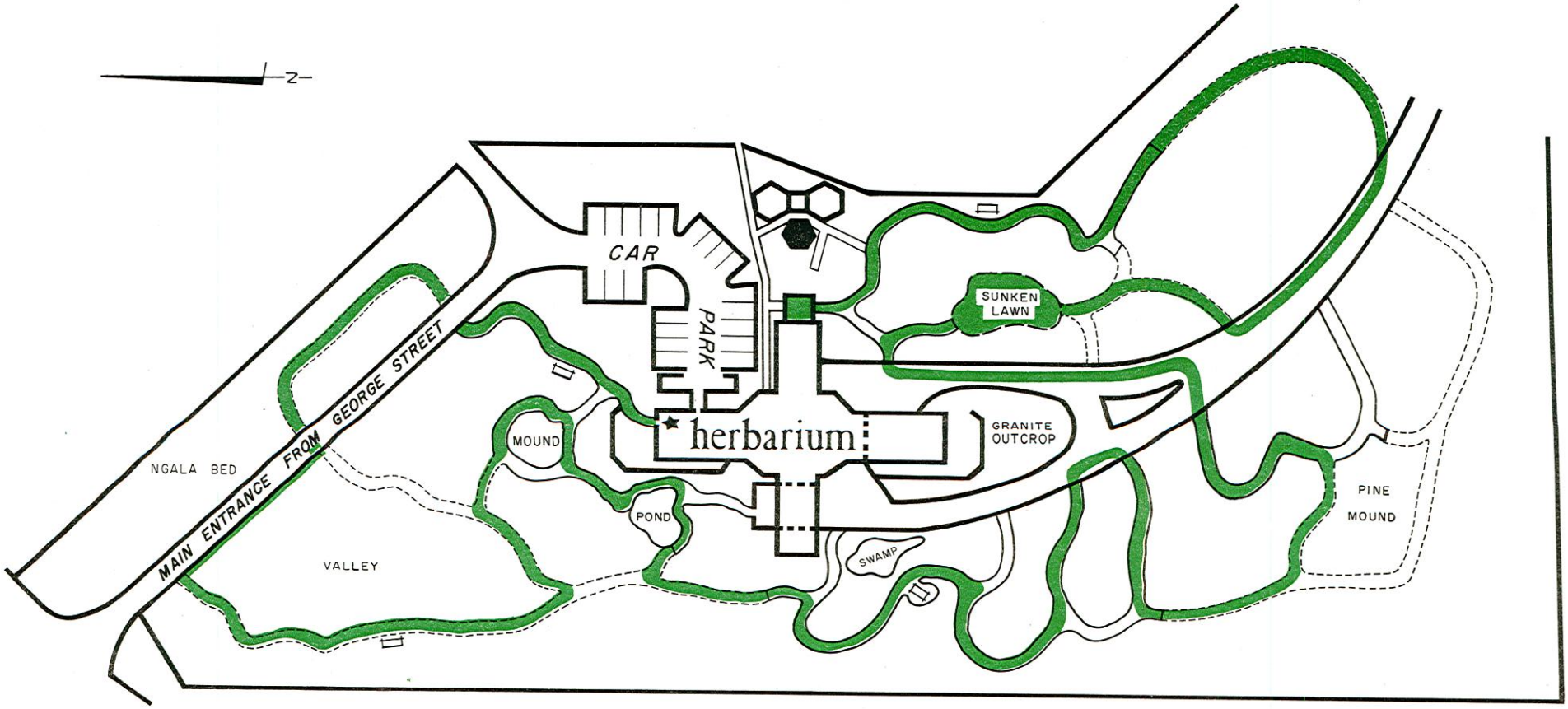
The native plant garden provides food and shelter for many animals. Guides to the common insects, reptiles, amphibians and birds seen in the garden can be found on pages 61-67.

Included in the back of the guide is a list of references on the vegetation and flora of Western Australia and descriptions of the floral emblems of Australia.

FLOWERING CALENDAR

A monthly flowering calendar is displayed inside the main entrance to the Herbarium.

GARDEN GUIDE TRAIL



Trail starts here

Seating

Solid path

Stepped path

HERBARIUM GARDEN

FEATURE AREAS IN THE GARDEN

POND:

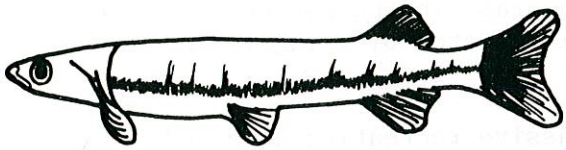
The pond is designed to exhibit some of the freshwater aquatic and semi-aquatic plant species found in Western Australia. Aquatic species are considered to be those adapted to growing in or on permanent water, either completely submerged or emergent. They are entirely dependent on the presence of permanent water for the survival of the individual plants, and can never be found far from it. Examples of 'semi-aquatic' or 'wetland species', i.e. those which only require periodic temporary inundation for survival, can be found in the swamp.

Examples of submerged aquatics in the pond include Aponogeton spp. (Aponogetonaceae), Potamogeton pectinatus (Potamogetonaceae) and the Swamp Lily (Ottelia ovalifolia) (Hydrocharitaceae). The Swamp Lily is a widespread aquatic in the south-west of the State and also extends into all mainland States.

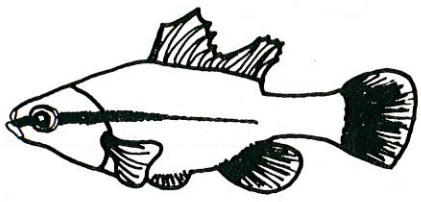
Ottelia ovalifolia

Other species in the pond include the floating aquatic Fern (Azolla filiculoides) and Duckweed (Lemna spp.).

In the pond we have two types of native fish, Galaxiella occidentalis (Western Minnow) and Edelia vittata (Western Pygmy Perch). The Western Minnow is perhaps the most common freshwater fish in the south-west. It is known only from W.A. in coastal streams, swamps and ponds between Two People Bay (just east of Albany) and Moora, north of Perth. The Western Pygmy Perch is found in coastal streams, lakes and ponds between Hopetoun and Moora. These fish feed on the small crustaceans and insect larvae which are plentiful in the pond.



Western Minnow



Pygmy Perch

SWAMP:

There are basically two types of swamps occurring in Western Australia. These are:-

1) Seasonal wet/dry swamps - containing no water for large portions of the year;

2) Permanent wet swamps - often associated with drying lake edges.

The Herbarium's swamp is of the seasonal wet/dry type and contains wetland species.

All swamps are important areas because of their ability to support diverse plant and animal communities. In seasonal swamps paperbarks (Melaleuca species), orchids, Boronia species and many small trigger plants (Stylidium species) can be found, along with a wide variety of other plants.

The flowering season usually corresponds to the wet period, resulting in large insect populations which encourage frogs, birds and many reptiles to these areas.

GRANITE OUTCROP:

Granite outcrops are very special areas which occur widely in Western Australia and create specialised places for many plants and animals.

Many of Western Australia's rare plants can be found only on granite outcrops, indicating the specialised growth requirements of these plants. The outcrops are usually domed or massive sheets of exposed rock, occasionally with a thin layer of soil, forming deeper pockets in depressions of the rock surface. Granite outcrops can vary in size and height and act as water collectors and solar heaters, soaking up the sun's radiation.

During summer months this solar radiation is very high and for several hours after sunset the heat is radiated from the rock. Although this is a very harsh environment, many plants exist and flourish in this situation. The plants have developed various ways of protecting themselves against such hot, dry conditions.

Such plants as Eucalyptus caesia, Eucalyptus synandra, Acacia denticulosa and several Kunzea species grow on the edges of this type of outcrop. Many smaller plants, such as mosses and lichens grow either on the exposed areas or in crevices on these outcrops.

SUNKEN LAWN:

This is the only area of cultivated grass in the garden. In other areas of the garden a lawn effect is created by using the native Snakebush (Hemiandra pungens).

The sunken lawn is designed as a passive recreation area and is screened by a wall of native shrubs and trees. The centre of the lawn is dominated by a specimen of Bullich (Eucalyptus megacarpa).

CONIFER (PINE) MOUND:

Although Eucalyptus and Acacia species dominate Australian vegetation there are no less than four families of conifers naturally represented in Australia, with eleven genera and approximately 35 species.

Many introduced species of conifers and some native species are commonly cultivated; the exotic genus Pinus is widely used for tree planting and Pinus radiata is widely used as a quick maturing timber tree for the purpose of reafforestation in Australia. The remnants of a former pine plantation of Pinus pinaster surround the herbarium.

The pines or conifers (Coniferales) belong to a group of plants known as Gymnosperms which are "naked seeded", that is, the seed is not enclosed in an ovary as in flowering plants which belong to the group known as Angiosperms.

The Coniferales is the largest order of the Gymnosperms. In these plants there are cones instead of flowers and the male and female cones are often on separate plants. Most of the conifers have woody cones and the seed is situated between woody scales formed from the seed bearing megasporophylls; however, in the genus Podocarpus, the cones are not woody and the receptacle of the "fruit" is often fleshy and edible.

Two families of conifers occur in Western Australia. They are represented by the genera Actinostrobus, Callitris and Podocarpus. The species recorded for Western Australia are as follows:-

CUPRESSACEAE:

Actinostrobus acuminatus Actinostrobus arenarius Actinostrobus pyramidalis	Actinostrobus:	3 species endemic to W.A.
Callitris canescens Callitris columellaris Callitris drummondii Callitris intratropica Callitris preissii Callitris roei	Callitris:	Approximately 16 endemic Australian species widespread on the mainland and also in Tasmania.

PODOCARPACEAE:

Podocarpus drouynianus	Podocarpus:	1 endemic to S.W. Western Australia.

Examples of Actinostrobus arenarius, Actinostrobus pyramidalis, Callitris columellaris, Callitris preissii and Callitris roei can be seen on the mound which has been allocated for conifers.

Some of the species mentioned above can also be seen growing alongside the main trail adjacent to the swamp.

SPECIES INDEX

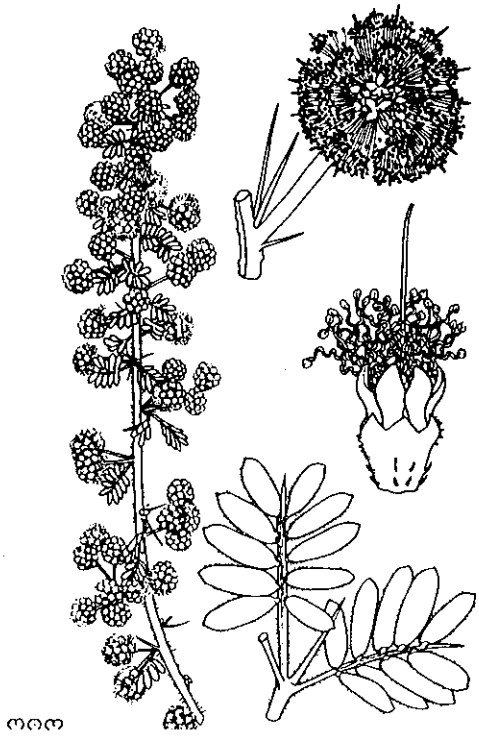
(TP) - See Toxic Plants

SPECIES INDEX Continued ...

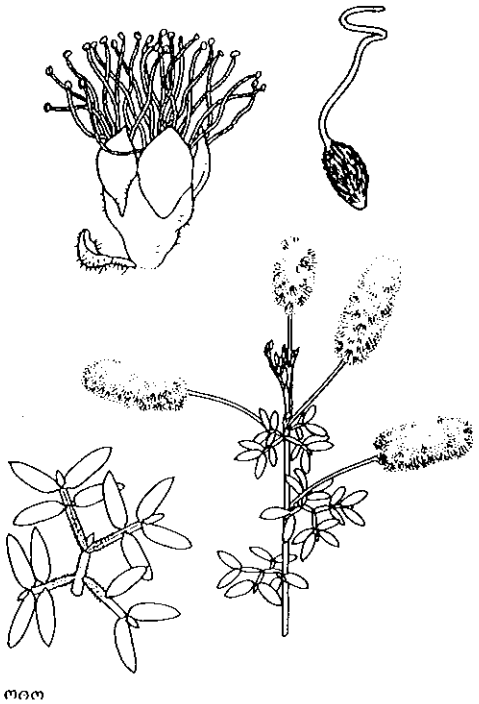
SPECIES DESCRIPTIONS

(alphabetically arranged)

Acacia alata



Acacia pulchella
var. pulchella



Acacia drummondii

Species cultivated in garden
- description not included in guide.

ACACIA SPECIES

In Australia, Acacia is a very large genus of over 700 species. The plants are mainly shrubs and small trees which range from the coastal rainforests to the arid interior.

During the late winter and spring-time, many parts of Australia are ablaze with the gold of wattle blossoms, while some species are in flower during various other times of the year. Wattles vary in height from a few centimetres to very large trees; they grow alongside streams, near the seashore, on the mountains and in the arid inland. As well as being divided into those which have flattened leaf-stalks or petioles known as phyllodes, they can be divided into those with flowers in the form of spherical heads and those with spikes or rods of flowers. All Acacia species have feathery leaves in the juvenile stage, but as the plant grows, these become smaller and the stalks longer, until the true leaves finally disappear, leaving only the petioles to carry on the work of leaves.

Although the word Acacia means plants with thorns, only a minority of species has these undesirable extras.

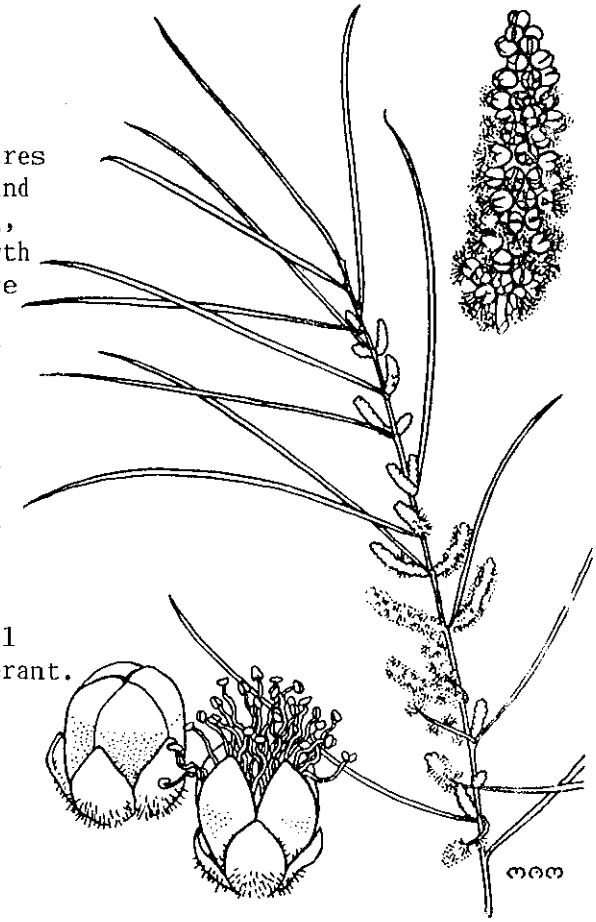
Some Acacia species grow very quickly and have short lives, but even these are useful to give quick results while other plants are establishing themselves, after which they can be removed. Most Acacia species have a reasonably long life span. Some species of Acacia are very useful because they will grow under the shade of trees where not many other plants will survive.

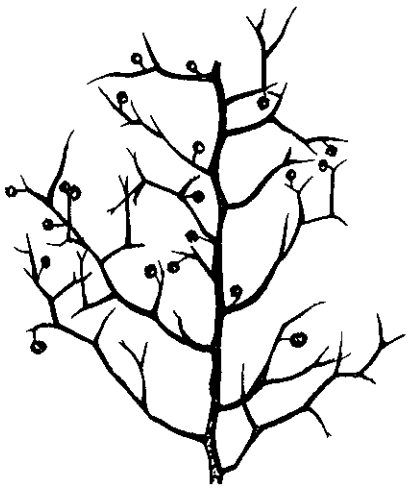
Acacia acuminata: Raspberry Jam Tree

An upright, fast growing, small tree to 10 metres high and 5 metres across. The trunk is grey and smooth to slightly rough. The leaves are long, narrow, pointed and bright green; the new growth is covered with golden hairs. Flower-heads are rod-like, produced near the ends of branches. These are bright yellow and appear late winter to spring (July-October).

The timber is extremely hard and at one time was even used for machinery bearings. Perhaps the timber's most distinctive feature is the strong scent of raspberry jam given off by the freshly cut wood.

This species is adaptable to most relatively well-drained soils. It prefers partial or full sun, and grows best in warm areas. Frost tolerant. It is ornamental and provides light shade.





Acacia aphylla: Leafless Wattle

An upright, much branched medium shrub, growing up to 3 metres high and 2 metres across. The branches are smooth, spiny and greyish-green. The leaves are reduced to deciduous scales. The flower-heads are yellow and appear from August-October.

This intricately branched, ornamental wattle, is a recently described species. It is very limited in nature, occurring just east of Perth, on hills amongst granite outcrops, in very well-drained soils. It will tolerate partial or full sun.

Acacia citrinoviridis:

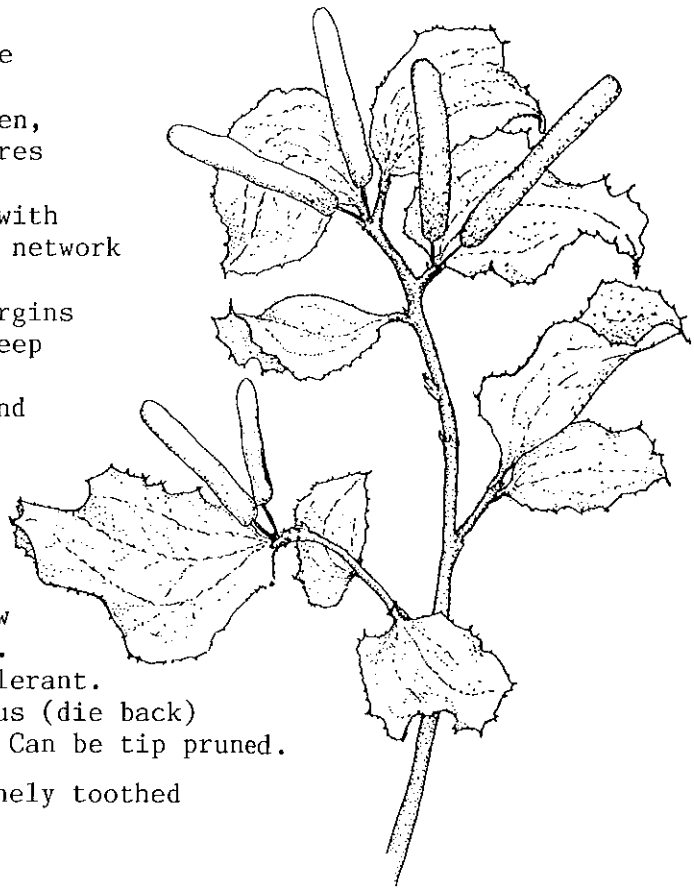
A small tree growing up to 8 metres high and 6 metres across with rough, grey bark and pendulous branches. The branchlets are shiny, red brown, with longitudinal ribs. The silvery greyish-green phyllodes with prominent midrib, are covered in short hairs; young shoots are clothed with iridescent citron-green hairs. It has yellow rod-like flower-heads 2-3 centimetres long.

This recently named species has potential in cultivation, with its pendulous silvery greyish-green foliage. In nature it occurs north-east of Shark Bay, where it grows in the sandy, rocky beds of creeks and also in dry stony soils. It is likely to need very well-drained soils in a full sun situation.

This species has some superficial characteristics of Acacia acuminata. Aborigines ate uncooked seeds, after grinding them.

Acacia denticulosa: Sandpaper Wattle

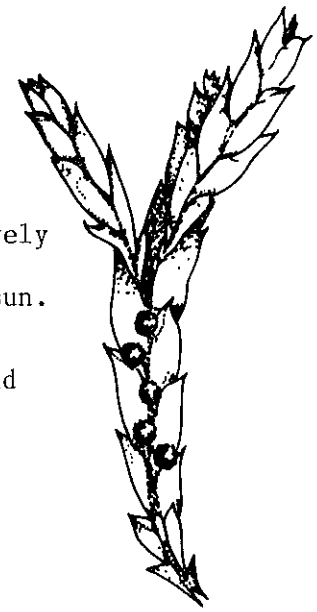
A single-stemmed, upright, rather open, spreading shrub, growing up to 4 metres high and 4 metres across, with warty branchlets. It has large phyllodes with 3-4 main veins, inter-connected by a network of veins. Coarse small prickles are scattered along surface of veins; margins are wavy and lightly toothed. The deep yellow flower-heads are amongst the largest of any wattle in Australia and can be seen from September-November.



A very rare and unusual ornamental species, it is restricted to the Wongan Hills area. It requires very well-drained, light to medium soils, in a dry situation. Will grow in partial sun, but prefers full sun. It is drought resistant and frost tolerant. Sensitive to attack by cinnamon fungus (die back) and is also attacked by white ants. Can be tip pruned.

The scientific name refers to the finely toothed margins of the phyllodes.

Acacia glaucoptera: Clay Wattle

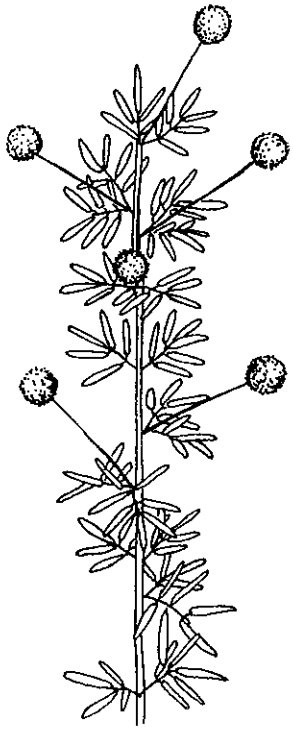


A well-branched, rounded, spreading dwarf to small shrub, growing up to 1.5 metres high and 3 metres across. The phyllodes are flat, continuous along the stems, wing-like and blue-green in colour; new growth can be purple-red. Flower-heads are deep yellow and appear from August-November.

This species has very ornamental foliage, and requires relatively well-drained soils. Tolerates slightly alkaline soils. It prefers partial sun, but will grow in dappled shade and full sun. Pruning lightly will promote new growth.

Clay Wattle occurs in the southern section of the wheatbelt and the south-west of Western Australia.

The scientific name means blue-green wings and refers to the phyllodes.



Acacia guinetii: Guinet's Wattle

Acacia guinetii was named after the contemporary French botanist Phillipe Guinet.

A small to medium shrub growing up to 5 metres high and 3 metres across, with densely hairy branches and pendulous branchlets. The leaves are bipinnate, and its yellow, globular flower-heads can be seen from June-October.

A most ornamental species, restricted naturally to north of Geraldton, where it grows in rocky loam or lateritic gravel. Adapts to a wide range of relatively well-drained soils, and grows well in dappled shade, partial or full sun. Tolerates light frosts and light pruning. Can develop into an excellent ground cover.

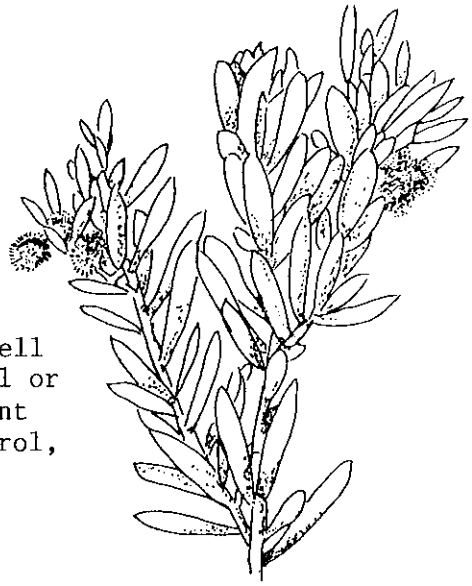
Acacia holosericea:

A medium to tall shrub, growing up to 5 metres high and 3 metres across. The branches are acutely angular, smooth to hairy. Leaves are covered with white, silky hairs, with 3 or 4 prominent veins. The flower-heads are rod-like, bright golden yellow and appear from May-July.

A handsome wattle well suited to tropical and inland areas. It has proved to be very adaptable in cultivation and is gaining popularity in subtropical areas. It is very fast growing and prefers sunny positions in well-drained soils. Plants usually have a sparse habit and benefit from regular tip pruning. They may be relatively short-lived (4-6 years) but are a spectacular feature plant when growing well. The leaves may be disfigured by leaf fungi during very humid weather and the plants are best planted in a situation open to ample air movement and full sun.

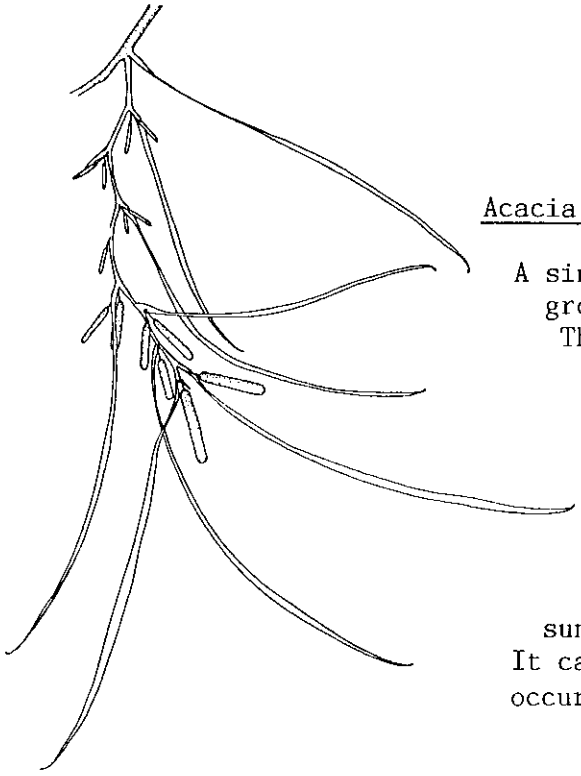
Acacia holosericea is commonly found across Northern Australia.

Acacia lanuginosa:



A compact, spreading small shrub, growing to 2 metres high and 3 metres across. The leaves are covered in dense, grey woolly hairs. Flower-heads are small and yellow, appearing during September-October.

This species needs well-drained soils, and is well suited to gravels. A position receiving partial or full sun is preferred. It is a drought resistant ornamental, suitable also for soil erosion control, and is common in the goldfields.

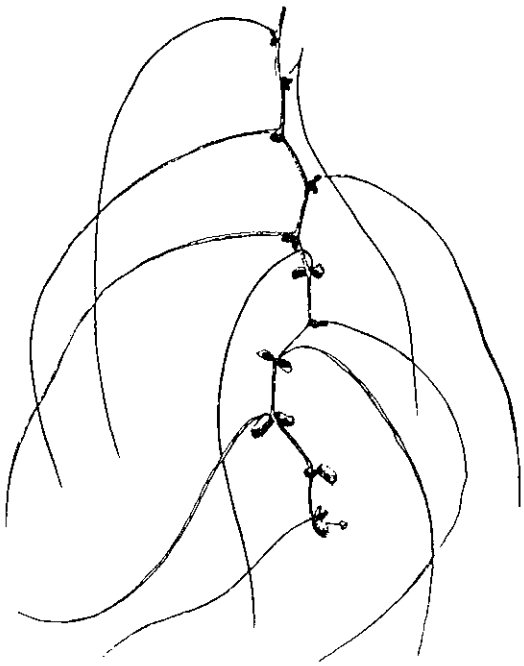


Acacia lasiocalyx: A Wheatbelt Wattle

A single trunked, spreading medium to tall shrub, growing up to 5 metres high and 6 metres across. The branches and stems are smooth and can have a silvery bloom. The leaves are dark green, slightly curved, ending in a soft recurved point. Flower-heads are bright yellow, and appear during August-November.

This ornamental species is best suited for relatively well-drained, light to heavy soils, but will withstand waterlogging for short periods. It grows in partial or full sun. The greyish branchlets are most decorative. It can also be used in windbreaks. Acacia lasiocalyx occurs throughout the wheatbelt and the goldfields.

Acacia merinthophora:



A medium, open branched, spreading shrub, growing up to 4 metres high and 4 metres across. The branches are pendulous and slightly warty. The leaves are narrow, ending in curved points, many-nerved. Flower-heads are rod-like, short, bright yellow; heads nearest branch tips are first to open. Flowering time is from April-September.

A most ornamental species, with a graceful habit of growth, it requires well-drained, light to medium soils, and prefers full sun, but will grow in partial sun. It withstands light to medium frosts and extended dry periods.

Acacia merinthophora occurs throughout the wheatbelt.

Acacia rossei:

An open branched, sticky, medium to tall shrub, growing up to 5 metres high and 3 metres across. The leaves are narrow, flat, sticky, and are arranged densely along the branches. Flower-heads are large, deep yellow, near the ends of the branches, and appear from July-December.

A most ornamental species that is not widely cultivated. It requires well-drained, light to medium soils, and will grow in partial sun, although preferring full sun and is recommended for semi-arid regions. It is drought and frost tolerant, and will withstand a limited amount of coastal exposure.

Acacia rossei is common in the goldfields and the wheatbelt.

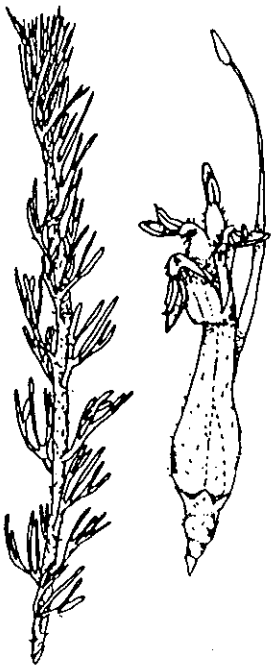
Acacia truncata:

A small to medium shrub, growing up to 3 metres high and 3 metres across. The bark is smooth, light grey; branches ascending. The branchlets are prominently ribbed and can be either smooth or hairy. The leaves are more or less wedge shaped, spreading to ascending, medium to dark green and barely pungent. Flower-heads are bright pale yellow and appear from June-September.

This species occurs in coastal situations with shallow sand over limestone. It is very useful for coastal planting and alkaline soils, and adapts to other soil types, but needs good drainage. It tolerates dappled shade, partial or full sun, and responds well to pruning.

It is thought that this species was one of the first to be collected by Europeans in Australia. It was originally described as a fern.

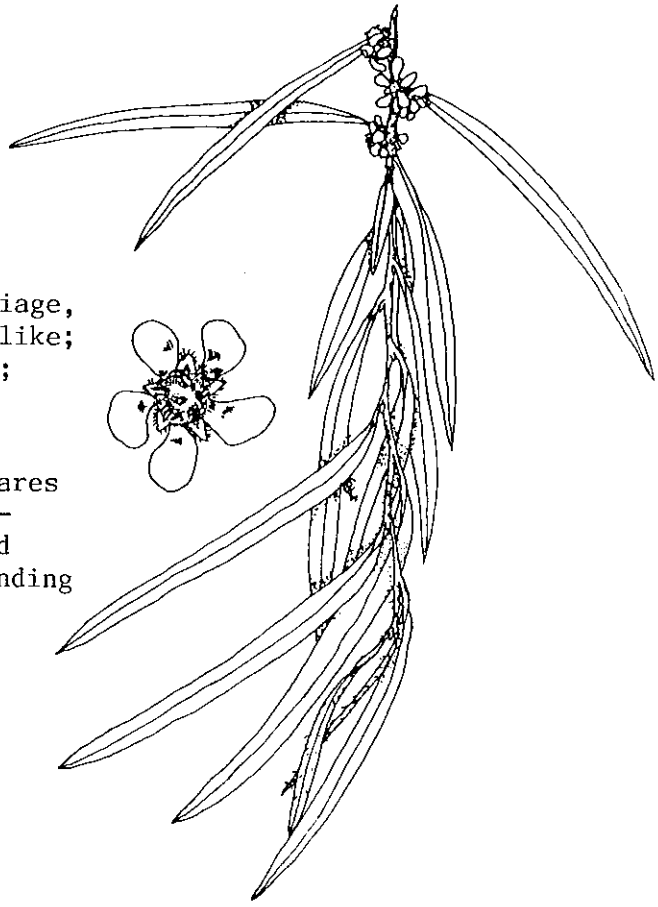
Acacia truncata occurs along the west coast from Leeman to north of Bunbury.



Adenanthos cygnorum subsp. chamaephyton: Mat Plant

This soft silky ground hugging shrub acts as an excellent fill-in plant in the garden. The new growing tips are bright red during early summer, with greenish yellow, shy, solitary flowers appearing during mid-summer.

Although the Mat Plant is prostrate, Adenanthos cygnorum subsp. cygnorum (Woolly Bush) is upright and has soft silvery leaves. It can also be seen in the garden.



Agonis flexuosa: Willow Peppermint

A spreading, compact tree with pendulous foliage, growing up to 6 metres high. Leaves willow-like; flowers small and white, in clusters of 8-10; fruit woody, fused into a globular cluster. The flowering time is September-December.

It is slightly frost-tender when young, so fares best in mild to warmer areas, and is drought-resistant when established. It can be pruned lightly and grows well on limestone, withstanding moderate coastal exposure. It will grow on heavy and wet soils and is widely cultivated, especially in streets and parks.

Agonis flexuosa occurs in coastal woodlands on the south-west coast and the south coast of Western Australia.

Allocasuarina huegeliana:

A tree 10 metres high with dark, longitudinally fissured bark and drooping or widely spreading branches. The cones are round and chocolate-brown in colour. When the male plants are in flower the spikes hang downwards and the trees take on a rusty colour. The flowering time is February-June.

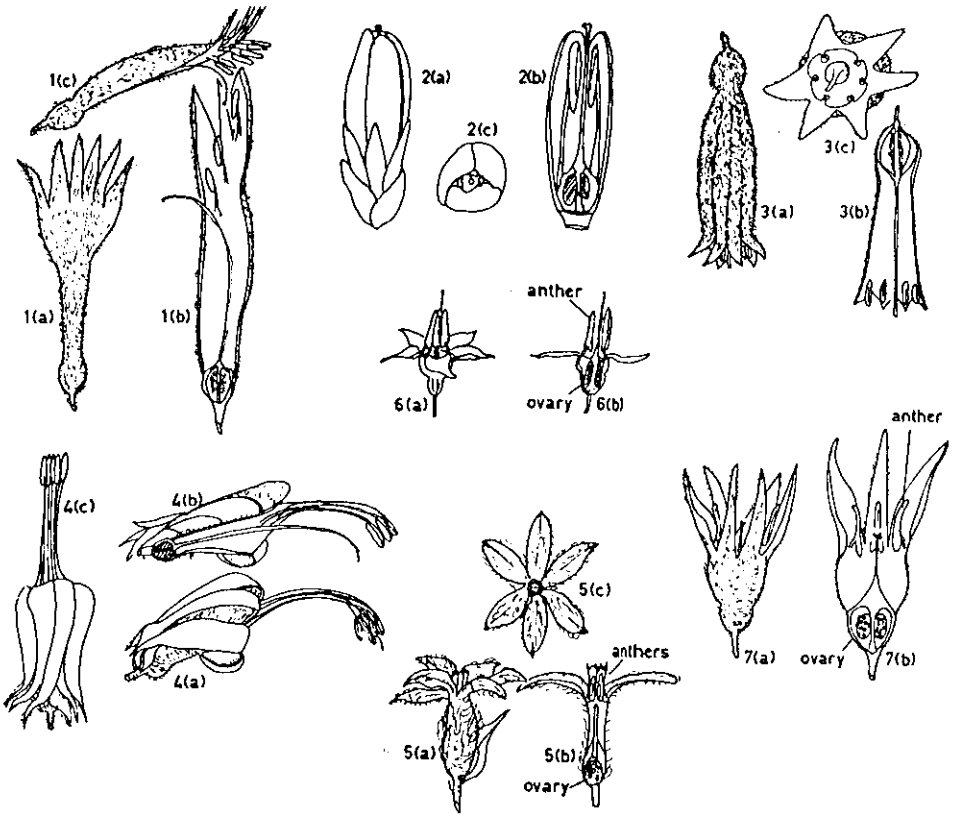
It occurs in poor, shallow soil near granite outcrops and grows well on most well-drained soils in partial or full sun.

Allocasuarina huegeliana is native to the wheatbelt and the south coast of Western Australia.

ANIGOZANTHOS SPECIES

(Kangaroo Paws)

The Kangaroo Paws and their relatives belong in the Haemodoraceae, a family of approximately 13 genera and 90 species of perennial herbs occurring in Australia, Malaysia, South Africa and the Americas. The family is best developed in Australia, where seven genera and approximately 70 species are known, most being confined to the South West Botanical Province of Western Australia. The flowers for each genus are as follows:

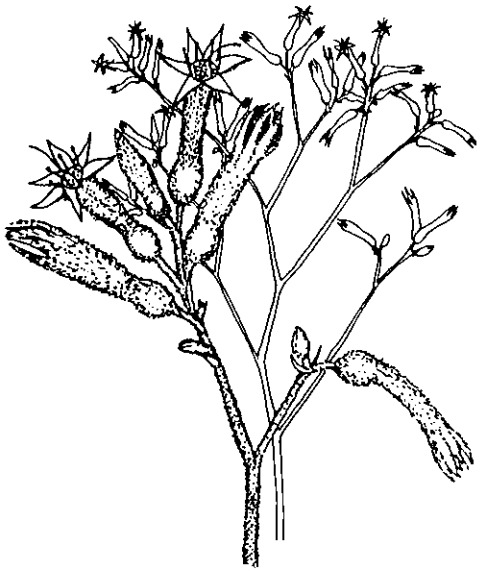


THE PLANT FAMILY HAEMODORACEAE - Flower Details.
Sketch by Greg Keighery.

Fig. 1. Anigozanthos humilis flower from top (a), side (c), and bisected (b) to show style on ovary with anthers.
Fig. 2. Haemodorum brevisepalum flower from side (a), top (c), and bisected (b) to show anthers beside style.
Fig. 3. Blancoa conostylis flower from side (a), top (c), and (b) bisected to show anthers at end of floral tube.
Fig. 4. Macropidia fuliginosa flower from side (a), top (c), and bisected (b) to show style from ovary and anthers.
Fig. 5. Tribonanthes australis flower from side (a), top (c), and bisected (b) to show style and anthers.
Fig. 6. Phlebocarya ciliata flower from side (a), and bisected (b) to show style on ovary and anthers.
Fig. 7. Conostylis aculeata flower from side (a), and bisected (b) to show style on ovary and anthers.

KANGAROO PAWS

Western Australian wildflowers are famous for their unique beauty which has been recognised since the early days of European exploration and settlement. Kangaroo Paws are amongst the strangest and most beautiful of all Western Australian wildflowers. Their common name comes from the shape and furry texture of the flowers.



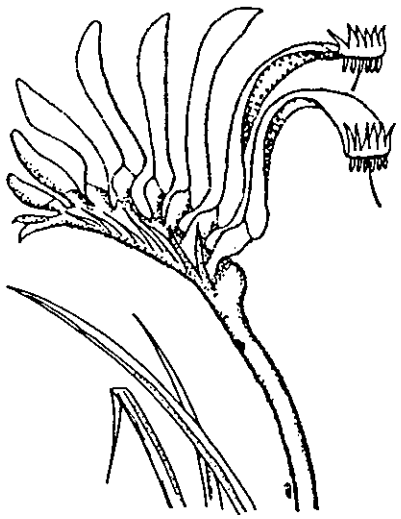
Anigozanthos flavidus: Evergreen Kangaroo Paw

This plant is called the Evergreen Kangaroo Paw because unlike other Kangaroo Paws which, after flowering die down to rhizomatous stems (underground stems), the grass-like clumps of leaves remain green throughout the whole year. The flowers, although small, come in a variety of colours, ranging from pale greenish-yellow to pink, red and orange. This colour range has made it a favourite with many Perth gardeners. A lush mature flowering plant can reach a height of two metres.

Normally found growing in damp swampy areas between Pinjarra and Bremer Bay.

Anigozanthos manglesii: Mangles' Kangaroo Paw

Mangles' Kangaroo Paw was introduced to England in 1833 and described botanically from a specimen grown to flowering stage in an English garden.



It has leathery sword-shaped leaves arranged in a tussock. The flower stems grow up to 1 metre in height and may be undivided or forked. Mangles' Kangaroo Paw is best known in its deep red and brilliant green form in which the flowers are red at the base and green for most of their length. The smooth, pale green interior is revealed when the flower opens. Other less common forms include orange, green and orange, yellow and red, and even all white. The flowers produce nectar. This attracts nectar-feeding birds which act as pollinators.

Mangles' Kangaroo Paw occurs only in Western Australia in heathland on sandy or gravelly soil.

The State coat of arms includes two upright clusters of this species which is the State floral emblem.

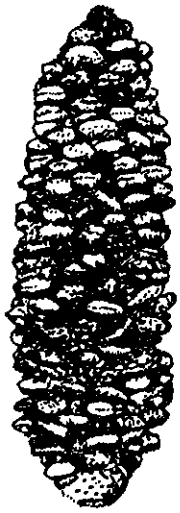
Asclepias fruticosa (See Toxic Plants)

BANKSIA SPECIES

Banksia species have figured prominently in Australian botany. Their rugged habit, dense flower spikes and attractive fruits make them a distinctive feature of the bushland. There are 73 species of which 58 occur only in south-western Australia. Some are prostrate, some shrubs and some trees. The flower spikes may be large or small, colourful or dull, conspicuous or hidden; they are various shades of yellow, orange, red, brown, mauve and green. Many have fruit in forms and colours that are fascinating in their own right. Unlike most southern Australian wildflowers, the main flush of flowers comes not in spring but in summer, autumn and winter.

Described in the following pages are some of the species growing in the herbarium garden.

Banksia ashbyi: Ashby's Banksia



The most brilliant of the orange flowered species, this Banksia is common as a tall shrub or small tree 2-6 metres high and 4-7 metres across, in deep red sands found throughout the northern wheatbelt and in coastal areas to the north of Carnarvon, where it grows in the form of a low shrub. Flowering is mainly from June-January. The flower-heads are conspicuous, growing at the tops of branches, maturing from a creamy colour when young to a deep rich glowing orange when mature. The name honours Edwin Ashby, a keen horticulturist who developed a fine garden of Australian plants at Blackwood in South Australia.

It is a fast-growing shrub, drought-and frost-tolerant when established, requiring full sun and well-drained sandy soils. It can be lightly pruned.

Banksia attenuata: Slender Banksia

This is another common Banksia of the coastal plain near Perth, extending to the south coast. It is a small tree or shrub 4-15 metres high and 3-8 metres across. Its flowers are a brilliant yellow and make this Banksia most attractive when in flower (October-February). After flowering the styles persist and curl tightly about the spike.

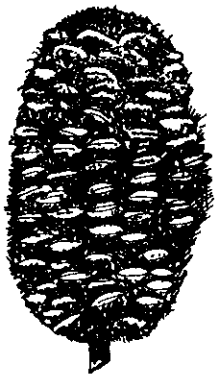
This species grows easily from seed but can take up to ten years to flower. The shrub form is well worth a place in the garden. It requires a sunny position in well-drained deep sands.

Banksia baueri: Woolly Banksia

This intriguing Banksia has the broadest flower spikes of them all, pale cream or ferruginous with grey or grey-brown limbs and mauve or ferruginous awns, 10-12 centimetres across, which are usually hidden within the bush. It is a much-branched shrub 1-2 metres tall. The flowers take 5-6 months to develop and open in June and July. The follicles are hidden by the old flowers and open when burnt. (Fire kills the plants and regeneration occurs from seed).

Banksia baueri is found near the south coast, mostly on the upper slopes and summits of low mountains of the Stirling Range and the Barrens. It was named after the brothers Ferdinand and Francis Bauer, outstanding European botanical artists of the 19th century. It requires well-drained, deep white or grey sand in full sun or partial shade. When established it will withstand extended dry periods and frost.

Banksia benthamiana: Bentham's Banksia



This Banksia was named after a prominent English botanist and author, George Bentham (1800-1884).

A rigid upright and prickly shrub reaching large proportions, 3-5 metres high and 3-5 metres across, with many erect branches and long stiff sprawling leaves which have sharp, pointed teeth-like edges, narrow at the base gradually becoming wider. The flowers are golden-orange to orange-brown; the flowering period is November-January. The shrub grows fast and flowers at a very early age. Its natural habitat is in brownish-yellow sandy loam or clay-loam, sometimes over laterite, on plains in shrubland. It is commonly found between Mullewa and Kulja and is suitable for semi-arid areas.

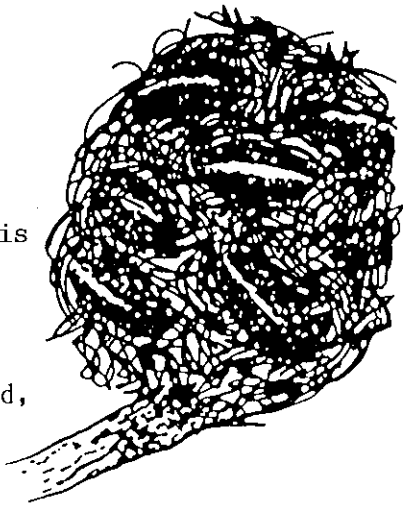
Banksia elderiana: Swordfish Banksia

A dense shrub with many stems, 1-3 metres high with similar spread; distinctive because of its very long, narrow, sharp, pointed leaves. Its specific name is in honour of the Elder family who sponsored botanical expeditions in Australia.

It bears bright yellow pendulous flowers 10-12 centimetres long which appear in March. It is a slow growing, untidy shrub, often with tangled foliage. Its dark green leaves are rigid and prickly, but the new growth is soft and covered in fine hairs and looks attractive. The fruits are inconspicuous.

Banksia elderiana is commonly found in the goldfields of Western Australia and can be grown successfully in the metropolitan area in well-drained soils in full sun. It is frost and drought resistant and is recommended for arid areas.

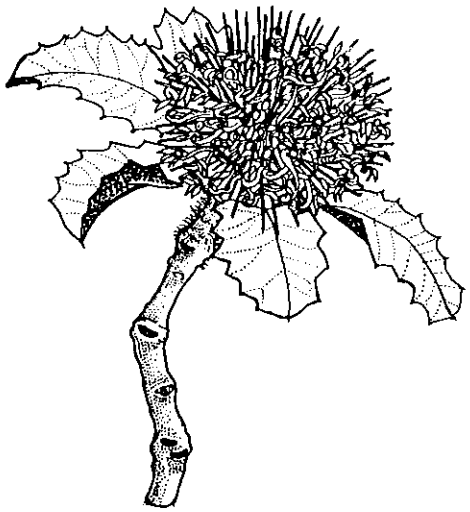
Banksia grossa:



The specific name is from the latin "grossus" meaning "coarse", in reference to the appearance of the thick leaves, flowers and follicles.

Banksia grossa is rarely cultivated. A slow growing shrub, 1-1.5 metres high and 1.5-2 metres across, it is rather open and takes five years to flower from seed. The foliage is dark green. The flowers are partly hidden or sometimes conspicuous, produced over several months, usually March-September, peaking in winter. The flowers are golden brown-rust coloured, with styles of dark purple.

It occurs between Eneabba and Reagans Ford in shallow sand over laterite, usually amongst small shrubs. It tolerates hard pruning once established.



Banksia ilicifolia: Holly-leaved Banksia

Banksia ilicifolia was discovered by Robert Brown near King George Sound in December 1801. This species is widespread through the south-west to Jurien Bay. Though common on coastal plains it also occurs scattered inland, mainly in sandy areas.

It is a tree to 10 metres with a stout, rough-barked trunk and shining, deep green leaves. Flowering can be intermittent but is mainly in winter and spring. The flower colour is cream changing to deep red with age. The species has rarely been cultivated but is not difficult. It requires light, well-drained soils, full sun and can take heavy pruning.

Banksia lanata:

The mature plant is a shrub rapidly growing to 1 metre tall. This shrub is reluctant to flower in cultivation; the flower spike is 7-10 centimetres in diameter with pale cream flowers and contrasting purple styles. The flowering time is October-January. The leaves are long and narrow and the new growth is deep pink turning green.

It occurs naturally in the Arrowsmith Lake - Jurien Bay area and grows in deep white sand sometimes over laterite, in heaths. It requires full sun and well-drained soil.

Banksia lemanniana: Lemann's Banksia

A few Banksia species have upside-down flower spikes which tend to be hidden within the prickly-leaved shrubs, only in this species, being relatively open, the spikes are usually visible. It is a shrub growing to 5 metres tall and like many species, it has soft, colourful, rusty-brown new leaves. The bright lemon-yellow flowers are quite smooth (when they open the segments separate without curving). The large warty grey fruits are also attractive. Flowering time is July-December.

It is commonly found growing between Ravensthorpe and Hopetoun.

Named after the English botanist Charles Morgan Lemann (1806-1852).

Banksia littoralis: Swamp Banksia

The specific name is from the Latin "littoralis" meaning "of the seashore". Robert Brown discovered the species near the shores of King George Sound.

It is a slow growing tree to 12 metres, rarely a low shrub and is fire tolerant. The bark is rough and friable. It takes some years to reach flowering. The flowers are yellow and appear between March and July. It has attractive foliage which is soft, dark green above and white below, giving a silvery aspect in wind. Fruit sometimes many but not conspicuous.

Banksia littoralis is commonly found in south-west Western Australia and grows best in sunny or lightly shaded areas in well or poorly-drained soil.

Banksia lullfitzii: Lullfitz's Banksia

Named after Fred Lullfitz (1914-1983) Western Australian nurseryman and keen promoter of cultivation of native plants.

This small shrubby Banksia 1 metre high and 2 metres across, has a number of erect, prickly, rigid branches covered in toothed leaves. The flower spikes nestle at the base of the bush among the foliage.

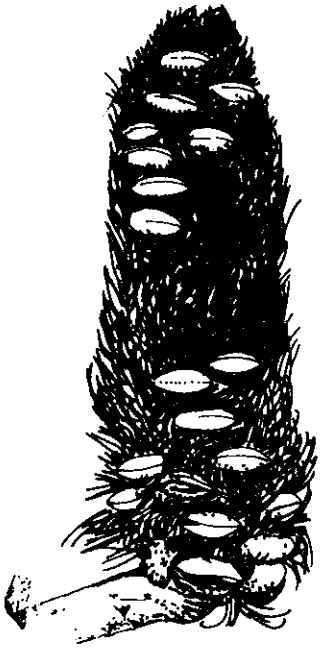
This species is relatively new in cultivation. It is slow growing and can take 10 years from seed to flower. The flower colour is golden-orange to orange-brown and the flowering time is March-May. The fruiting cones are roughly the same size and shape as the flower spikes, with the dead floral parts persisting, giving an attractive look to the fruiting cones.

Banksia lullfitzii is very rare and is restricted to a few populations in the goldfields area between Southern Cross, Coolgardie and Ravensthorpe.

Banksia petiolaris:

A fast growing prostrate plant with stems on the surface. It flowers 3-5 years after seeding. The leaves are arranged vertically along the branches. These are deep green above and white felted below, giving a pleasing contrast. The new growth is red and softly hairy. The flowers are moderately conspicuous, numerous, dull yellow to brownish-pink in colour and occur between October-December.

Banksia petiolaris grows between Munglinup and Israelite Bay and is not recorded more than 50 km inland. This species can be easily cultivated in sandy soils and makes a good ground cover as well as being an excellent rock garden plant. It needs partial to full sun and can withstand extended dry periods and some long wet periods.



Banksia praemorsa: Cut-leaf Banksia

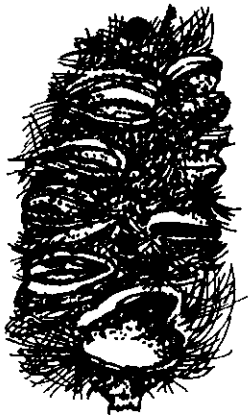
This Banksia is named from the Latin "praemorsus" meaning "bitten off", in reference to the leaf tips which appear so.

It is a rather fast growing shrub, erect and bushy, growing up to 2-4 metres high. The foliage is deep green while soft, golden-brown young leaves enhance the appearance of the shrub when it is developing new growth. The flowers are red-maroon with golden tips and appear in August-November.

It occurs naturally on coastal dunes overlaying limestone so should do well in coastal situations. There are rare yellow-flowered plants of this species occurring in coastal areas around Albany.

Banksia repens: Creeping Banksia

The specific name is from the Latin "repens" meaning "creeping" in reference to the habit of growth.



It is a prostrate species 0.5 metres high and 2-4 metres across, with horizontal branches growing at ground level or just below. The leaves are deep green, of unusual form, while the new leaves are very attractive (bronze-red and velvety to touch). The branches may spread to about 2-3 metres, making an attractive ground cover for areas of the garden. It flowers during October-November. Their colour varies from yellowish-brown to a dusky rose-red.

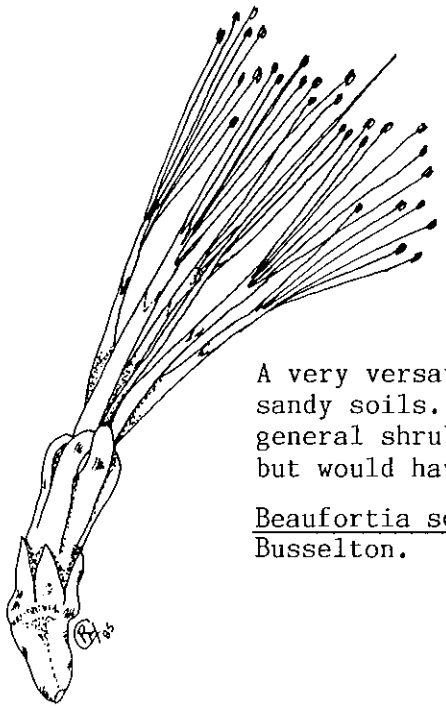
Creeping Banksia is a plant worth growing for its foliage alone. It grows along the south coast of Western Australia and it has proved to be an adaptable species in the herbarium garden.

Banksia victoriae: Woolly Orange Banksia

Banksia victoriae was discovered by James Drummond and named after Queen Victoria.

It is a rather fast growing, small tree reaching 2-5 metres high and 2-5 metres across, which flowers in 3-4 years from seed. The flowers are conspicuous and attractive being a brilliant orange in colour with pale pink to grey hairs. Flowering time is January-February. The leaves are a deep green and the young ones very woolly and soft. A very appealing Banksia.

It occurs between Northampton and Murchison River.



Beaufortia squarrosa: Sand Bottlebrush

A small shrub with a variety of forms which range from 0.5 metres high and 1 metre across to 2 metres high and 1 metre across; usually flowering from January-April. The flower colours vary from light orange-yellow to deep red.

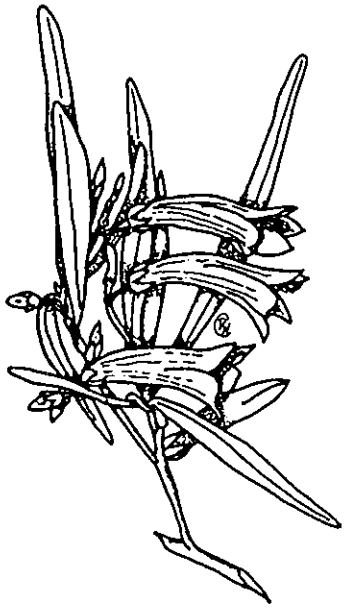
A very versatile plant, it will grow in clay, gravel or sandy soils. It is suitable for a front position for a general shrubbery, or it can be used in paths or driveways, but would have to be trimmed annually to which it responds.

Beaufortia squarrosa occurs from the Murchison River to Busselton.

Billardiera erubescens:

A shrubby or slender climber with reddish, smooth stems; up to 5 metres tall. The leaves are smooth, dark green and often shiny. The flowers are deep red and occur from August-February.

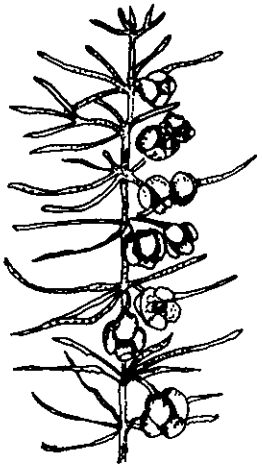
It is confined to sandy heathlands of south-western Western Australia, and is very popular in cultivation as it is hardy, showy and never rampant. It can be induced to become shrubby if planted in an open situation and prefers a sunny aspect in well-drained, light to heavy soils. It is attractive to slugs and snails and should be protected with baits until well established.



Boronia heterophylla: Kalgan Boronia

Boronia heterophylla is a large, 2 metres tall, bushy shrub which grows in lower parts of the south-west. Its unusual deep pink, nodding flowers are produced in abundance from August-October and produce a strongly perfumed scent.

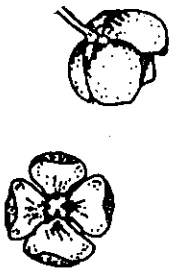
Boronia plants are short-lived in their natural habitat but regenerate quickly after a bushfire. Germination occurs in the spring after surface water has drained away.



Boronia megastigma:

This is one of Australia's well known native flowers due to its wide cultivation and popularity as a cut flower. Its enchanting perfume and clusters of attractively shaped flowers make it popular to buy in bunches.

Boronia belongs to the family Rutaceae, and is thus related to the orange, grapefruit and lemon. Its scent is often likened to its citrus relatives. The flowers hang from slender stems and are coloured brown on the outside and yellow inside. The four-petalled flowers appear from August-September and their distinctive scent fills the air on humid days.



Boronia megastigma occurs naturally in swampy land throughout the south-west.

Brachysema celsianum: Swan River Pea

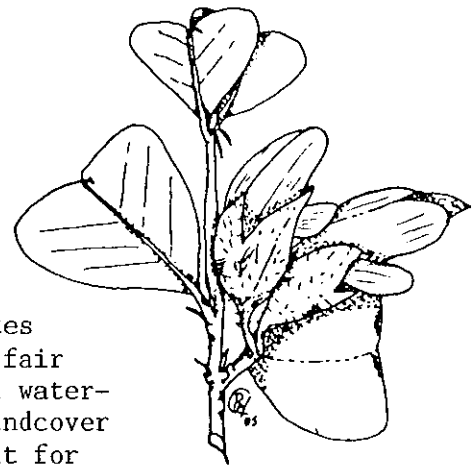
A dwarf to small shrub or semi-scrambler up to 2 metres high and 3 metres across. The branches are covered with silver to white hairs. The leaves are usually smooth on the upper surface, grey-green to dark green with dense silver hairs beneath. The flowers are red, pea-shaped, solitary or clustered, on short stalks. Flowering occurs from June-October, also sporadically throughout the year.

This widely cultivated ornamental species will grow in a very wide range of soil and climatic conditions, but does best in a fairly well-drained situation, with partial or full sun. It can withstand some waterlogging and light to medium frosts. It provides an excellent supply of nectar for nectar feeding birds.

Brachysema celsianum is suitable for gardens, or parks, and can be used as a low informal hedge, or for screening. It is very hardy and is successfully grown under large established trees such as eucalypts. It can be induced to climb a netting or paling fence and is common in the wheatbelt.

Brachysema praemorsum:

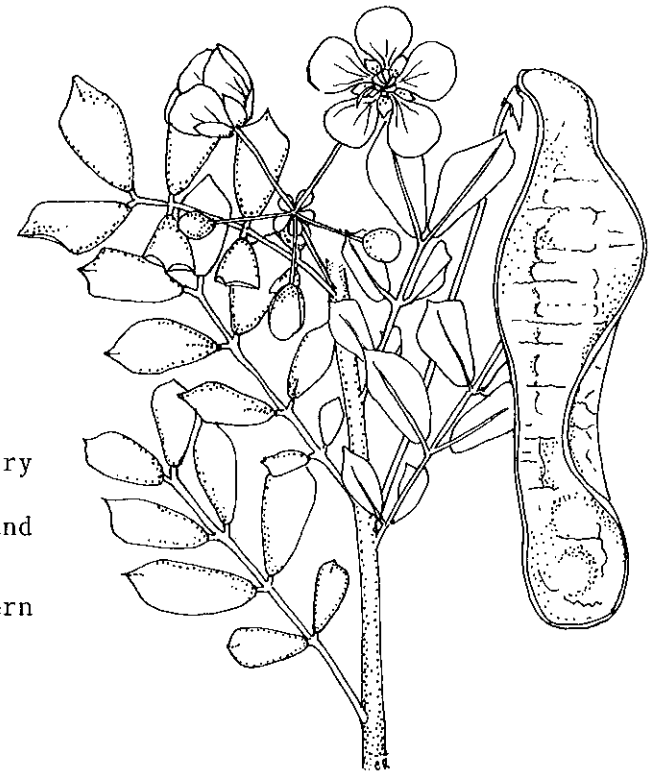
A prostrate creeper or small shrub up to 1 metre high and 1.3 metres across. The branches are numerous and hairy when young; leaves are smooth. The flowers are pea-shaped, borne in opposite pairs on small stalks, initially cream then deepening to red. Flowering is May-February, also sporadically throughout the year.



It is an extremely adaptable species that will grow in most relatively well-drained soils. It likes dappled shade or partial sun, but also tolerates a fair degree of shade or full sun, and withstands limited waterlogging and light frosts. It is a very useful groundcover for gardens, roadsides, embankments and is excellent for bird attraction.

Carissa acokanthera (See Toxic Plants)

Cassia helmsii: Crinkled Cassia



A spreading shrub up to 1 metre high and 1 metre across. The young parts are covered with dense woolly hairs; leaves silvery green. The flowers are deep golden-yellow and occur throughout the year.

It is widespread through arid parts of inland Australia and is a very hardy, decorative little shrub for planting in inland areas, especially those with a hot dry summer climate. It requires a well-drained sunny position, but resents high humidity and will not grow well in cool, moist regions.

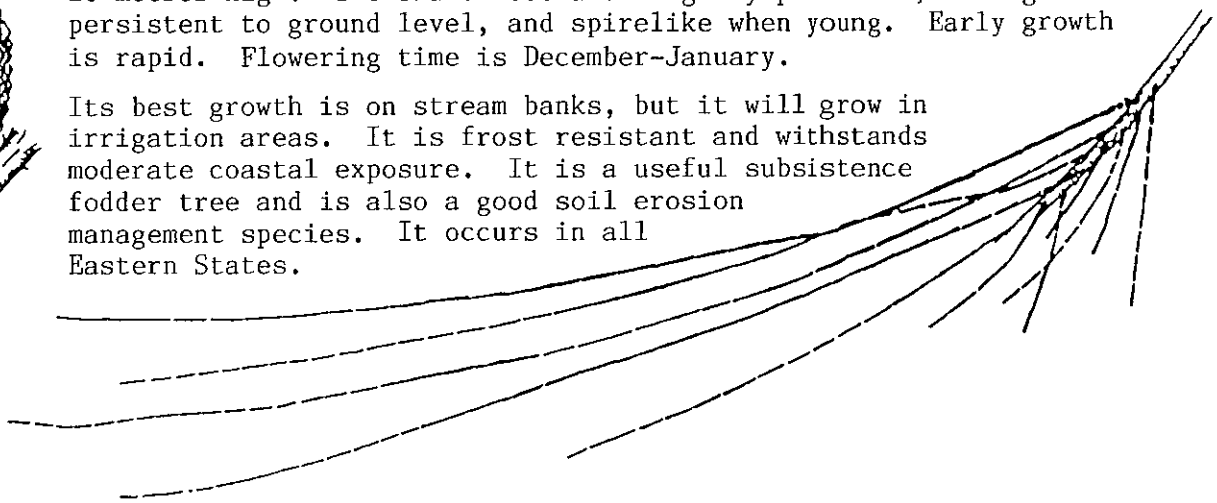
Cassia helmsii occurs in the north of Western Australia in inland areas around Carnegie.

Castanospermum australe (See Toxic Plants)

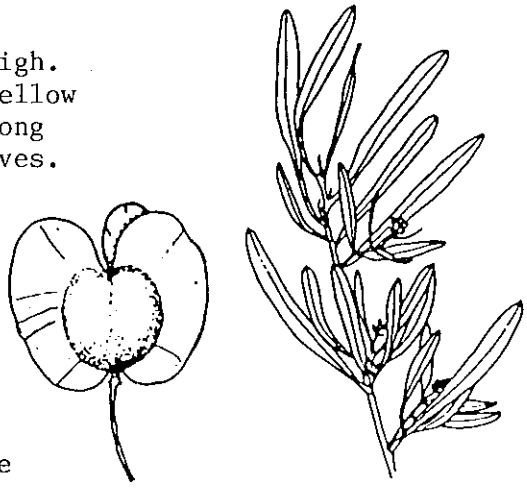
Casuarina cunninghamii: River Sheoak

A dense, fast growing, medium sized to tall tree which grows up to 20 metres high. The branchlets are slightly pendulous; foliage is persistent to ground level, and spirelike when young. Early growth is rapid. Flowering time is December-January.

Its best growth is on stream banks, but it will grow in irrigation areas. It is frost resistant and withstands moderate coastal exposure. It is a useful subsistence fodder tree and is also a good soil erosion management species. It occurs in all Eastern States.



Dodonaea hackettiana: Perth Hop Bush



A spreading shrub up to 4 or more metres high. The flowers are tiny, dangling, greenish-yellow or with red tints; few or many arranged along stalks which are much shorter than the leaves. Flowering time is July-November, including fruiting time. It has large wings on its pink fruit and is readily identified by the lines of white or brown hairs on its branches.

This hop bush grows near the edges of rivers and lakes around Perth and southward towards Kwinana-Medina. It grows in sand, overlaying limestone. This is a rare and endangered species and is not usually cultivated.

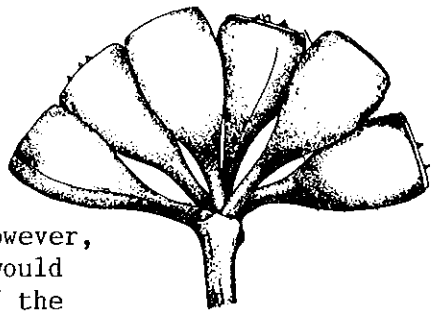
Eremophila maculata (See Toxic Plants)

EUCALYPTUS SPECIES

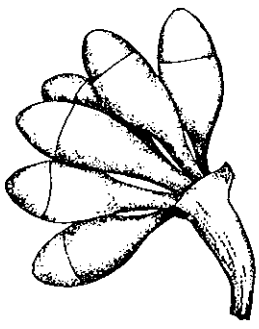
Eucalyptus is a genus of woody plants, that is trees or shrubs belonging to the Myrtaceae (Myrtle) family. The name, given to the genus by Charles Louis L'Héritier in 1788, means 'well covered' and refers to the characteristic operculum or bud-cap, which drops off as the flower opens.

Many species of Eucalyptus are capable of a rough classification into groups according to bark. Although this character varies to a certain extent, it does serve as the basis of a very useful classification. Thus the terms ironbark, box, blackbutt, bloodwood, stringybark, gums, and many others are used to designate groups of Eucalyptus species which have similar bark characteristics. Amongst the Eucalyptus species of the south-west, Eucalyptus calophylla (Marri) represents a form of bloodwood. Eucalyptus marginata (Jarrah) on the other hand is a typical stringybark.

Eucalyptus accedens: Powderbark



Powderbark was originally named by W.V. Fitzgerald from specimens which he obtained near Pingelly in November, 1909. The specific name is from the latin accedo, to approach or come near, and is here used in reference to the supposed similarity of the species to Eucalyptus wandoo, the common Wandoo. The two trees are, however, very dissimilar botanically, so any resemblance would refer to the habit of growth and the character of the bark.

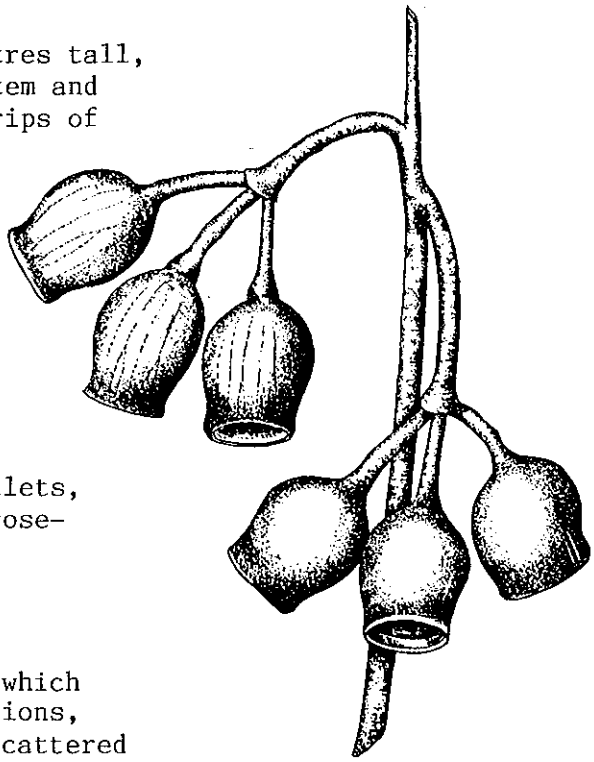


In Powderbark the bark has a talc-like powder always in evidence, at least on the protected or eastern side of the trunk; it is yellow in fracture and the timber is more pink whereas the Wandoo is never powdery and the timber is a pale yellow ochre in colour.

Almost all of our gum trees, those species of Eucalyptus with a smooth bark, shed the outer layers of their bark annually, usually between February and the early part of April. The newly exposed bark is as a rule much deeper in colour than it appears later in the year when it pales considerably. Powderbark, however, retains something of its orange-red tint throughout the year. The flowers are white and can be seen from December-April.

Powderbark occurs from near Three Springs southward to Pingelly in Western Australia. It grows in lateritic soils often on high or hilly ground such as in the Darling Range, where it is frequently found growing in massive laterite.

Eucalyptus caesia: Caesia



Caesia is a shrub or mallee, up to 8 metres tall, rarely a small tree. The bark of the stem and branches is rough, with longitudinal strips of cinnamon-brown bark with crisped margins revealing a pale green, smooth, inner bark. The timber is pale brown. The branchlets are smooth, covered with a white or blue-white powder.

The specific name is from the Latin caesius, blue of the eyes, and refers to the blue-grey or pale grey powdery appearance of the leaves, and more particularly the branchlets, buds and fruits. The flowers are pale rose-pink and can be seen from June-December.

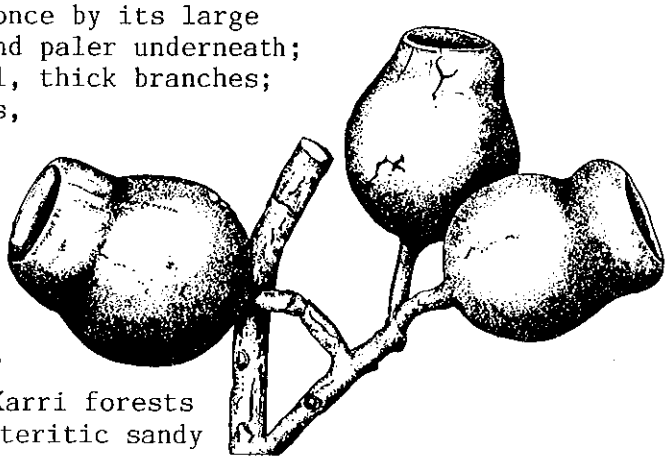
The plant was first collected by James Drummond in 1849.

It is one of the few Eucalyptus species which confine themselves, under natural conditions, to the vicinity of granite outcrops in scattered localities, mainly in the southern wheatbelt area of Western Australia.

Eucalyptus calophylla: Marri

Marri is one of the commonest and best-known of the large trees of south-western Australia. Although one of the largest trees of the Jarrah forest, it occurs as a small tree or a shrub in its eastern limits on the south coast, while to the north of the Hill River it suffers considerable reduction in stature. In the forest areas however, it attains a height of well over 35 metres.

Marri belongs to the group of Eucalyptus which is called Bloodwoods. The bloodwood group consists very largely of species which are northern in distribution.

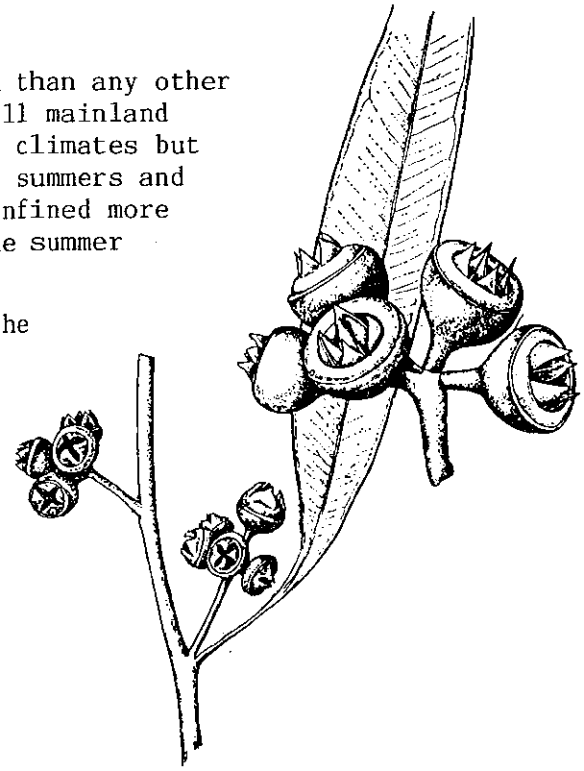


Marri can usually be recognised at once by its large leaves which are dark green above and paler underneath; its wide spreading, often horizontal, thick branches; its large white or pale pink flowers, and its urn-shaped fruits of large size. The flowers can be seen from February-March.

The name calophylla, given to this species by Robert Brown who was the botanist accompanying Flinders in 1801-1802, signifies beautiful leaf.

It occurs freely in the Jarrah and Karri forests and favours the lighter, somewhat lateritic sandy soils.

Eucalyptus camaldulensis: River Red Gum



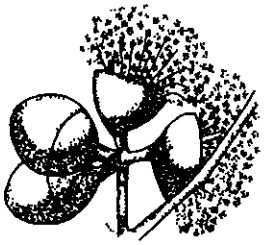
River Red Gum has a wider natural distribution than any other eucalypt in Australia as it is indigenous to all mainland States. It grows in a wide range of soils and climates but prefers deep alluvial soils and areas with hot summers and frosty winters. In Western Australia it is confined more or less to the banks of watercourses within the summer rainfall zone.

The bark is mainly smooth and at the base of the trunk long irregular sections may flake off to produce a mottled effect with grey and red patches. The foliage varies from green to a blue-green and the leaves are frequently very long and narrow. Flowers are small and white and the main flowering period is from September-November.

This species is subject to branch loss during strong winds. It is of major importance as a source of nectar and pollen.

Eucalyptus crucis: Silver Mallee

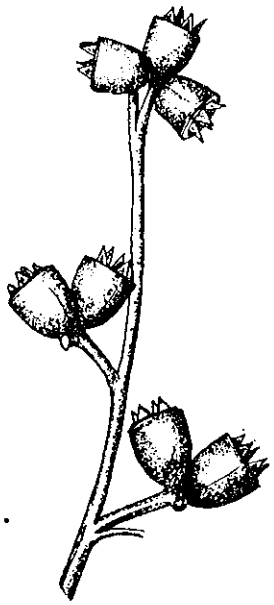
Eucalyptus crucis is a straggly or twisted small tree or mallee up to 6 metres high. The bark on the trunk is smooth, red or red-brown and is deciduous by curling longitudinally into short rolls. The younger branches and branchlets are smooth and markedly powdery grey. The flowers are creamy yellow, up to eleven per cluster, and usually occur in summer. It grows in shallow, granitic soils associated with granite outcrops in the area from Kununoppin and Kellerberrin to the north-east of Southern Cross.



It is resistant to frost and drought and adaptable to most soils, including heavy soil. It makes a suitable ornamental and may be planted in most of southern Australia.

The name crucis means a cross, referring to the town of Southern Cross, near which the species was first found. Sometimes it is called Southern Cross Silver Mallee.

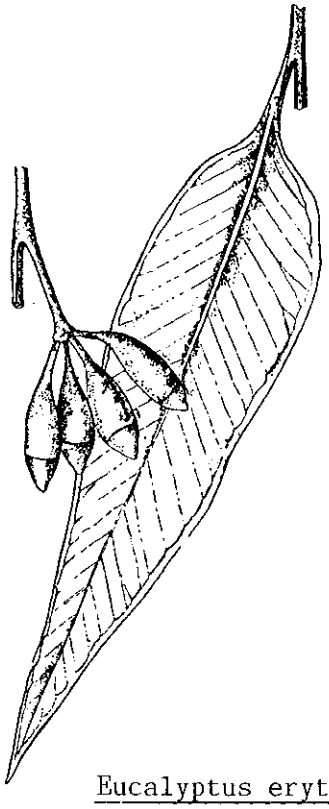
Eucalyptus cupularis: Halls Creek White Gum



Eucalyptus cupularis is a small tree up to 11 metres high with smooth white powdery bark and narrow leaves. It has white flowers which occur from December-January. There are up to seven buds in each cluster, with no individual stalks but long common stalks. The cup-shaped fruits have sharply projecting valves.

This species has been found only in two small areas, so far. The first of these was near Halls Creek settlement in Western Australia. It has also been found near Tanami in the Northern Territory. It is a rare species and grows in sandy soil near seasonal watercourses between sandstone hills. The botanical name means 'small cup', referring to the fruit shape.

This tree is usually shapely, making it suitable for cultivation.



Eucalyptus diversicolor: Karri

Karri is the tallest tree of Western Australia, attaining a height of 80 metres. It is a true gum tree having a smooth bark, the outer layer of which sheds annually in rather large thick plates.

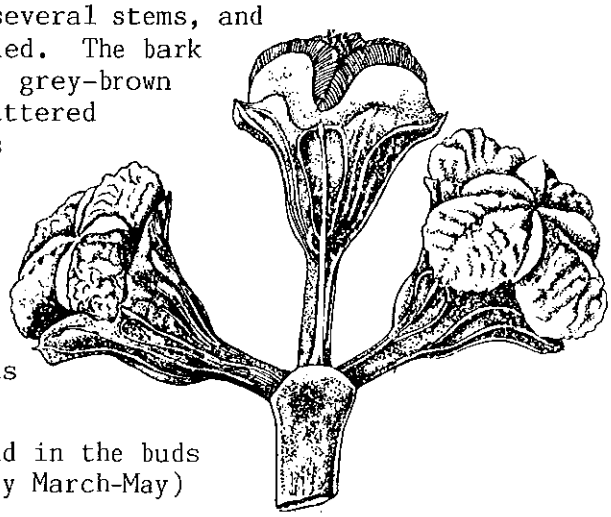
The bark is smooth, grey to blue-grey and orange-yellow in blotches, and the leaves are distinctly paler on the under side, a feature which is indicated by the name diversicolor which means separate colours.

During May through December it has a display of nectar-producing white flowers which have made Karri widely recognised as the best honey producer in this State.

It occurs in mainly deep loamy soils and is confined to south-western Australia, from Manjimup to Porongurup Ranges.

Eucalyptus erythrocorys: Illyarrie

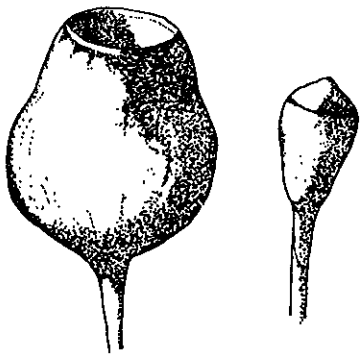
Illyarrie is a small tree or mallee usually with an open crown, up to 8 metres high, sometimes straggly with several stems, and the ultimate branches appearing somewhat tangled. The bark is smooth, grey to white, and is shed in thin, grey-brown flakes some of which often persist loosely scattered on the trunk before being finally shed. It is rather restricted in occurrence, from Shark Bay southward to Dandaragan, but is commonly grown locally in gardens. It usually occurs as scattered trees on soils associated with coastal limestone on flats and on hills. It is also found in many parks and gardens both in the city and in the country, and it has been successfully cultivated abroad.



The contrast of scarlet, yellow and green found in the buds and flowers when the tree is in blossom (mainly March-May) makes it a desirable specimen for any garden.

Eucalyptus ficifolia: Red Flowering Gum

This heavy crowned, rough-barked tree 8-14 metres high is probably the best known ornamental eucalypt, because of its spectacular flowers which are normally produced in December-February. The colour varies from vermilion, through various shades of red to white. In good specimens these flowers can almost hide the foliage when fully out, in a magnificent floral display.



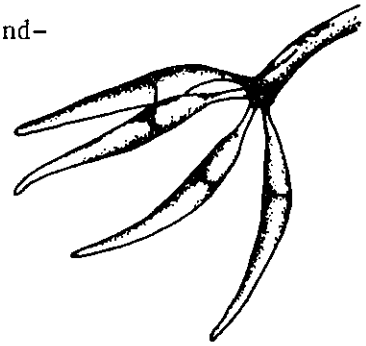
The leaves are thick, dull, dark green, parallel-veined, and the bark is thickly fibrous, brown or grey. Fruits are large, woody and urn-shaped.

A tree of very restricted occurrence, found only near Albany in Western Australia, on sandy soils. It is cultivated throughout the world however, and has adapted to a wide range of conditions, including situations near the sea, but is not generally suited to tropical or sub-tropical areas.

Eucalyptus gardneri: Blue Mallet

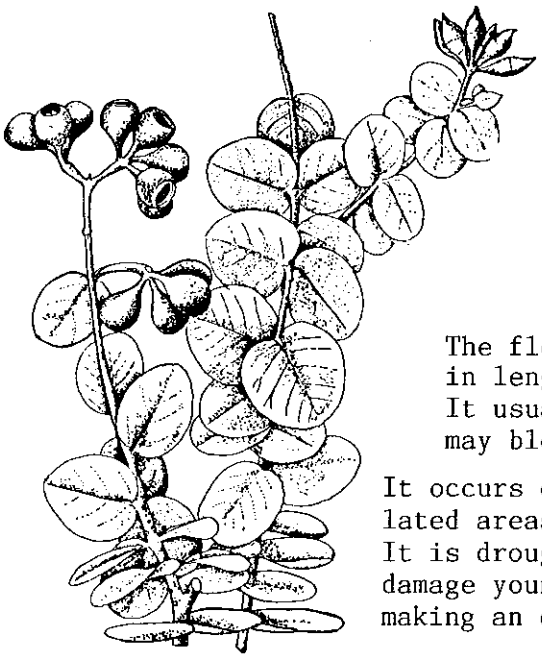
Blue Mallet is a slender tree up to 10.5 metres high with grey to grey-brown smooth bark and blue-green leaves forming a dense crown.

While occurring in the south-eastern wheatbelt of Western Australia, in lateritic soil, often on slopes, the Blue Mallet will also grow in sandy or loamy soils.



It is drought and frost resistant, and suitable for shade, windbreak or ornamental planting. As a farm planting species, it can provide strong timber for poles and rails, for it usually has a long, straight trunk. Flowering time is during May-June and the flowers are yellow.

Eucalyptus gardneri is named after C.A. Gardner (1896-1970), Government botanist, W.A. 1929-60.



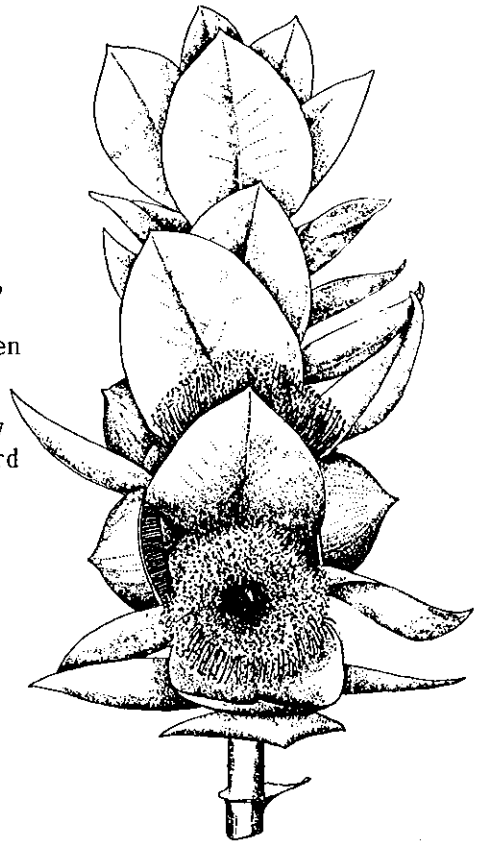
Eucalyptus kruseana: Bookleaf Mallee

A small straggly mallee up to 3 metres tall, but under cultivation it attains a height of up to 5 metres, usually with a single stem and spreading branches, densely foliaged with circular grey-green stalkless leaves.

The flowers are yellow, in umbels which exceed the leaves in length, and are quite attractive although not very large. It usually flowers from April-June, but in cultivation it may bloom up to November.

It occurs only in the vicinity of granite rocks in several isolated areas, including the Fraser Range, in Western Australia. It is drought and frost resistant, though repeated frosts may damage young plants. It will grow in sandy or loamy soil, making an excellent ornamental or useful small street tree.

Eucalyptus macrocarpa: Mottlecah



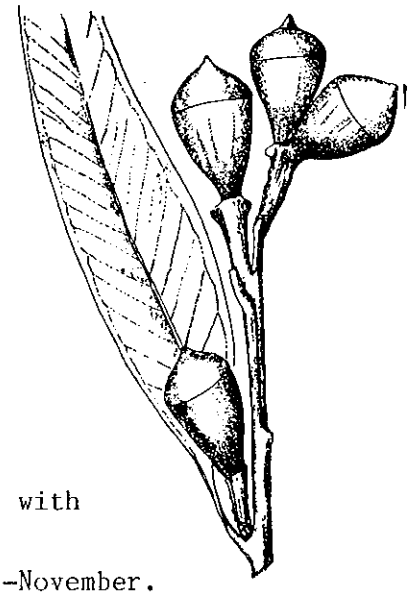
Mottlecah is a mallee to 5 metres tall which is noticeable because of its silvery grey foliage. Its large, grey, conical budcap is most distinctive, and it has the largest fruit of any species of Eucalyptus, a feature noted by the specific name which means 'large-fruited'. The bark is grey and smooth, and when the old bark sheds, the fresh stems are salmon-red.

The main distribution of this species is from Mingenew to Piawanning, with some scattered occurrences eastward as far as Bruce Rock, in Western Australia. It is always in grey sand heath areas.

In cultivation Mottlecah retains its sprawling form, but becomes more robust.

The crimson flowers can occur at any time during the year, although the main flowering time is from September-December. Though frost-tender when young, it is quite drought resistant. The young leaves suffer from insect attack.

Eucalyptus megacarpa: Bullich

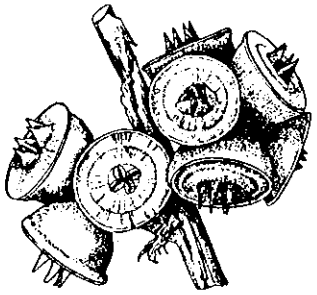


This species takes on two distinct forms. A tree form is found mostly in wet soils in the Karri and southern Jarrah forests. Although this form is not widely cultivated it must be considered one of the finest of our Eucalyptus species of the gum tree type, with trunks of an alabaster whiteness with large patches of unshed violet-grey outer bark, and a very dense crown of dark green leaves. It is not suitable for general planting, but in places where its roots can reach the water-table it makes a most attractive shade tree. The timber is very straight-grained, and pale.

The mallee form, found on the Stirling Range and adjacent quartzite hills, grows up to 3 metres tall and is a shrub with dark green leaves.

The flowers are white, and the species flowers in October-November. The leaves yield 0.5 per cent of oil.

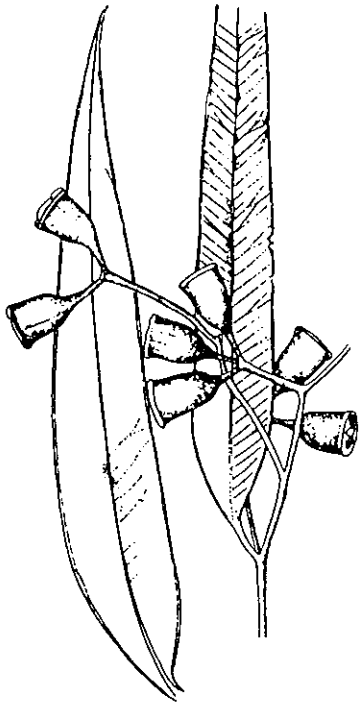
Eucalyptus orbifolia: Round Leaved Mallee



Eucalyptus orbifolia is mostly a mallee, but occasionally a tree, up to 6 metres high with smooth, red or red-brown bark which sheds, leaving a pale green bark between the persistent strips. The youngest branchlets are red and covered with a powdery-white bloom. The mature leaves are almost round, usually slightly wider than long and indented at the top. Oil glands are noticeable on the leaf surface and the veins are usually clearly seen and are pink or red-purple. The flowers are yellow and pale yellow. Flowering time is mainly May-August.

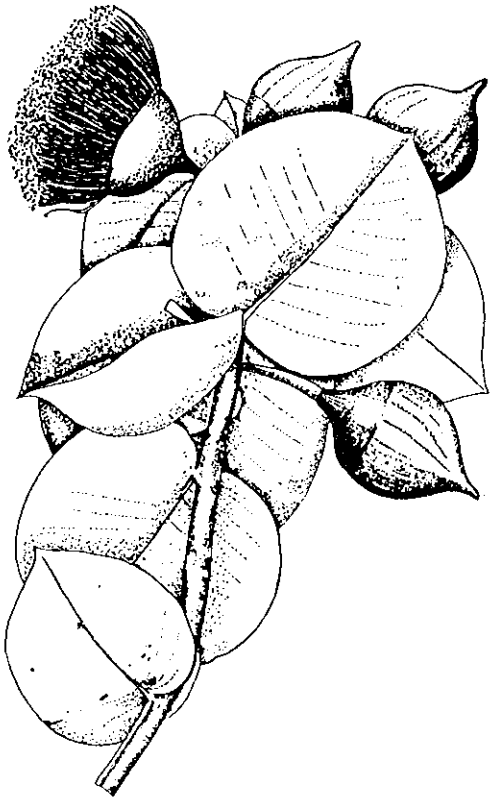
As far as we know this species is restricted to granite outcrops, but this should not prevent it from being cultivated in many types of soil in gardens. It occurs mainly in the area north of Southern Cross and west of Menzies but there are several occurrences just outside this area in Western Australia.

Eucalyptus patellaris: Weeping Box



Weeping Box is a rough-barked box tree up to 20 metres tall, with the grey fibrous bark extending to the ultimate twigs. The foliage is grey-green and the timber brown. The fruits are of woody texture with the valves usually shortly protruding.

It grows near streams on flats or on low slopes, often in sandy loam, and has been collected from near North West Cape, on Barrow Island, in the Pilbara region and in the upper reaches of the Ord River in the Kimberley region, from where its range extends into the Northern Territory.

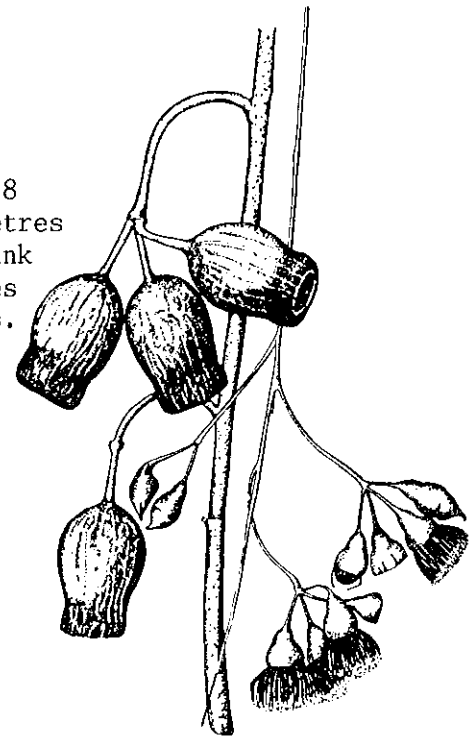


Eucalyptus rhodantha: Rose Mallee

This is a low, straggly mallee to 3 metres high, distinguished by its large, rounded or heart-shaped, silvery-grey stem-clasping leaves. The bark is smooth, grey-brown to pale grey. The large flowers are usually bright red with yellow anthers and these appear at any time. Fruits are woody, hemispherical or top-shaped.

This species is closely related to Eucalyptus macrocarpa which differs in its flowers, which are without stalks, and the normally ovate leaves. Intermediate forms between the two species are known.

It occurs in mainly sandy soils, extending about 80 kilometres to the north and south of Watheroo in Western Australia. Best suited to an open sunny situation in most soils but it resents those which are very limy. It has been successfully grown in Sydney where the climate differs greatly from its natural habitat.



Eucalyptus sepulcralis: Weeping Gum or Mallee

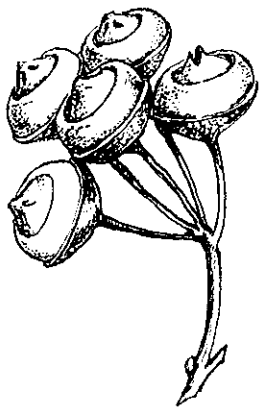
This is a most unusual tree, commonly growing up to 8 metres high with a slender trunk only 5 or 6 centimetres in diameter. The slender, drooping branches and trunk are clothed by a smooth, white, powdery bark. Leaves are narrow, olive green or sometimes partly glaucous. The flowers are yellow and occur in November-February. The fruits are large and urn-shaped, powdery grey-green at first, but ageing to grey with a net-like pattern on the surface.

This tree is found in a small area between Hopetoun and Ravensthorpe, in hills near East Mount Barren and the Eyre Range, although it was originally recorded from east of Esperance. Soils are stony or sandy.

Eucalyptus sepulcralis has no value for shade or screening, but is sometimes grown for its unusual habit. It is adaptable, but prefers well-drained non-limy soils.

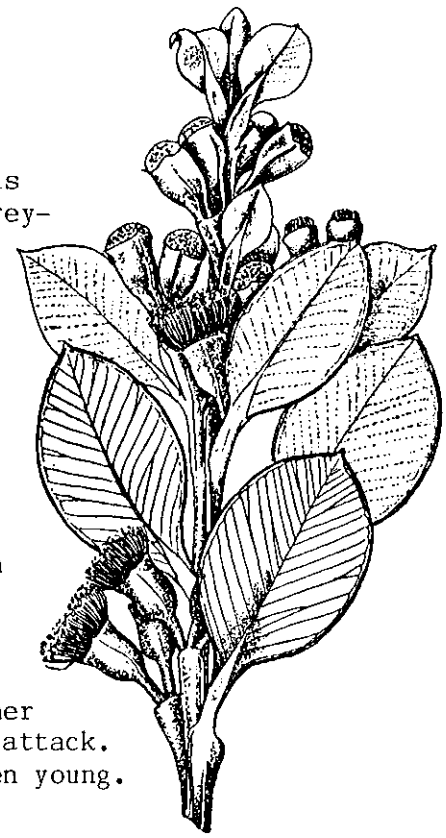
Eucalyptus synandra:

This species is a mallee up to 6 metres tall, with erect or pendulous branchlets; bark smooth, white to grey. The flowers are creamy-white when young, becoming pink to red with age, occurring in November-January.



It usually grows on laterite or on ironstone ridges, but one collection is from sand. It typically occurs in small stands. It is known at present from six scattered areas, from south of the Great Victoria Desert to near Morawa.

Eucalyptus synandra was recently separated from Tammin Mallee (Eucalyptus leptopoda) when it was described as having its stamens united into a tube. The specific name means 'joined anthers'. There is only one other eucalypt with this feature.



Eucalyptus tetragona: Tallerack, Silver Marlock

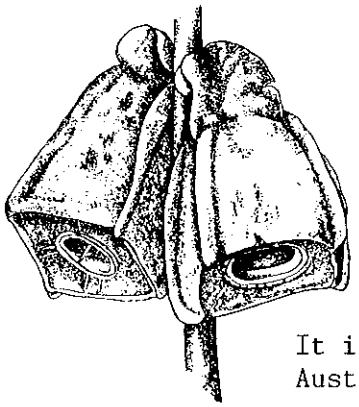
One of the shrubby mallees, 2 to 3 metres high, which is usually a straggly bush noted for its lovely silvery grey-blue foliage and mealy white buds, stems and bark. The older bark becomes grey to brownish, shedding in strips.

The large, thick leaves are oval, opposite, with white, squaresided stems. The flowers are borne in clusters of three on flat stalks. They are white or cream and appear mainly from November-January.

This is a common shrub of the south coastal regions of Western Australia from well east of Esperance to the Stirling Range near Albany, favouring sandy soil in heathland. There is an outlier along the north coast near Badgingarra.

If trained to a bushy shrub, this is a very ornamental foliage plant, which is suited to most soils. Like other blue-leaved species, it often suffers from caterpillar attack. It is moderately drought resistant and frost tender when young.

Eucalyptus tetraptera: Square-fruited Mallee, Four-wing Mallee

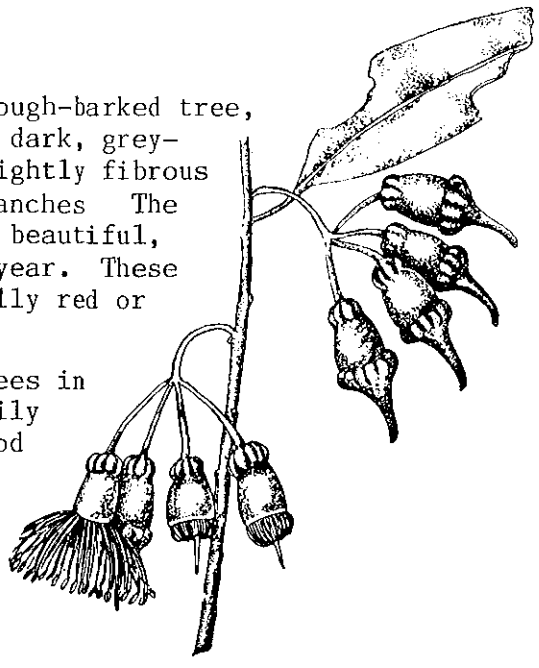


This is a small straggly tree or mallee rarely above 3 metres high, with very large, thick, leathery, glossy leaves, being the largest leaves of all the eucalypts. The name tetraptera means four-winged, and this refers to the large, square fruit with four marked angles or wings; this is a unique feature, and the red-capped bud is also outstandingly different from most other buds. Flowers are pinkish-red, appearing mostly in September-December, but also at any time of the year.

It is found in the heathlands of the south coast of Western Australia, extending from the Stirling Range to Israelite Bay.

This species is more unusual than ornamental, although the flowers and buds are quite showy. It is best grown as a shrub and is suited to most soils in dry to moderate rainfall. It is moderately drought and frost resistant.

Eucalyptus torquata: Coral Gum, Coolgardie Gum



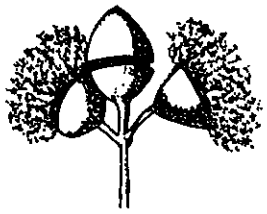
Usually a small but sometimes a medium-sized, rough-barked tree, 6-11 metres high, with a dense rounded crown of dark, grey-brown foliage. The rough, dark grey bark is slightly fibrous and becomes smooth grey-brown on the smaller branches The red, pink, or cream flowers are distinctive and beautiful, appearing over long periods at any time of the year. These hang down in thick clusters. The buds are usually red or orange.

One of the most extensively cultivated small trees in Australia as an ornamental or street tree. Easily grown in most conditions, it is particularly good for dry, inland areas where the flowers are usually more intensely coloured. It is a tree of the goldfields, common in the Coolgardie district.

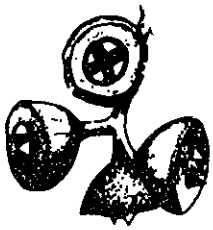
Eucalyptus websteriana: Webster's Mallee

A compact, densely-foliaged mallee to 6 metres high, with small, rounded, grey-blue to grey-green leaves. The bark is smooth, yellow-green when fresh but ages to a coppery-red, curling off in thin strips. The new growth is often pinkish.

The pale lemon flowers occur in up to seven-flowered clusters. Flowering occurs in July-September. Fruits are like tops and smaller than those of the very similar Round-leaved Mallee (Eucalyptus orbifolia).



This species occurs within the goldfields in granite soils associated with rocky outcrops, and in a few places in the north-west of South Australia near Mount Woodroffe, as well as the MacDonnell Ranges in the Northern Territory.



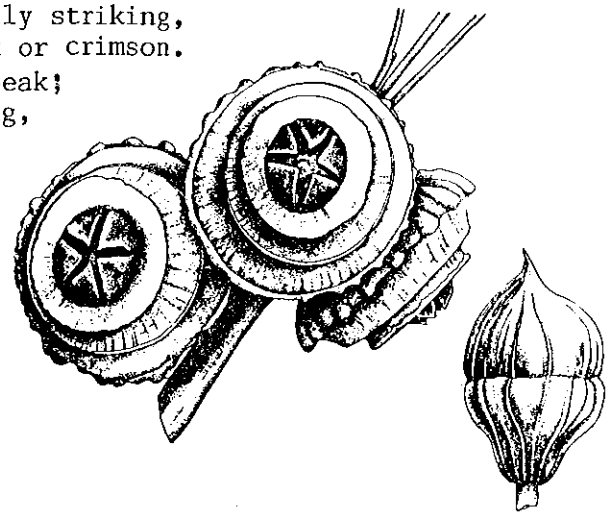
This is an ornamental mallee which is suited to planting in small gardens. It grows well in most soils in areas of dry moderate rainfall.

Eucalyptus youngiana: Large-fruited Mallee

This is a straggly, shrubby mallee, or sometimes a small branching tree up to 10 metres high, with smooth, grey deciduous bark and a little rough, persistent bark at the base. The leaves are thick and rather stiff, and greyish-green in colour.

The tree is most easily distinguished by its very large buds, flowers and fruits on short, thick stalks. The flowers which normally appear from August-November are especially striking, in colours of either cream, yellow, pink or crimson. The budcaps are ribbed with a distinct beak; the fruits are broader than they are long, and prominently ribbed.

A species from dry inland areas of western South Australia and similar country in eastern Western Australia, favouring red sands.



Euphorbia tirucalli (See Toxic Plants)

Gastrolobium bilobum (See Toxic Plants)

GREVILLEA SPECIES

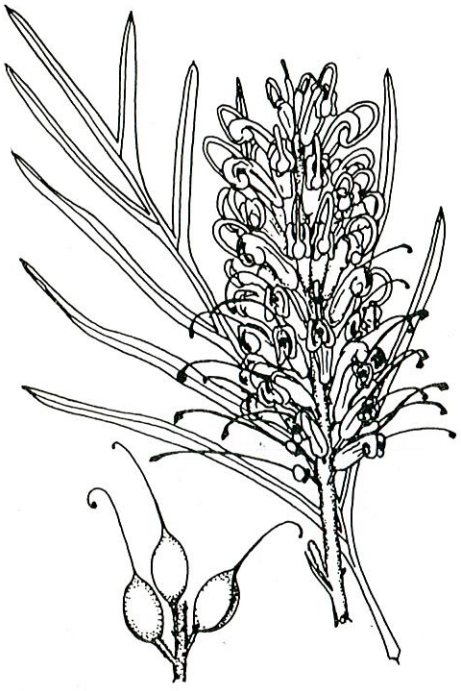
The genus Grevillea honours Charles Greville (1749-1809), one of the founders of the Royal Horticultural Society.

The spider flowers as they are commonly known, are amongst Australia's most attractive group of plants. With a wide diversity of form, shape and size, they vary from prostrate, through to large upright trees. The foliage is fascinating in its diversity of shape, from small and simple to large and deeply divided. The many different colours and forms of flowers are rich in nectar and have an irresistible attraction to many nectar feeding birds.

They are rapid growing, hardy plants and flower over a long period. Most Grevillea species are difficult to grow from seed.

Grevillea banksii: Red Silky Oak

The specific name honours the famous British botanist, Sir Joseph Banks.



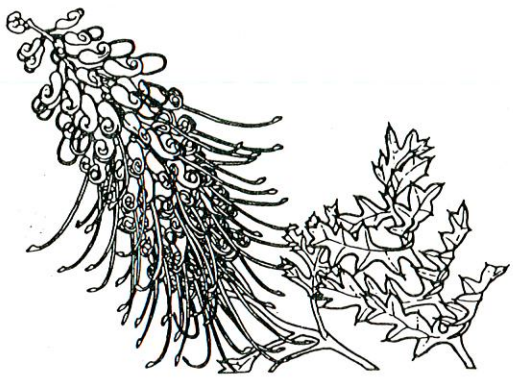
An acutely noticeable plant in any setting, with strong contrast between foliage and flower. It is mainly a medium to tall shrub, sometimes a small tree, 2-5 metres high, upright or spreading; the branches are rigid while the large, handsome feather-like leaves up to 25 centimetres long, are dark green above and silky on the underside. The flowers are a bright glowing red or cream and it blooms most of the year, but particularly in the warmer months. The densely furry brown seed pods contain two flat papery seeds which remain on the bush for some time after maturing. The seeds germinate freely.

Grevillea banksii is a popular garden shrub with several hybrid forms now in cultivation. It is widely distributed throughout Queensland and has adapted to a range of soils. It grows best in a sunny position and is bird-attractive.

Grevillea bipinnatifida: Fuchsia Grevillea

A handsome spreading shrub to 1.5 metres, with rich, light-green, deeply divided, slightly prickly leaves. It has velvety, dark red flowers, with long protruding styles. It flowers continually throughout the year and is a favourite of nectar feeding birds.

It grows naturally in hard gravel and granite soils of the south-west, and has adapted well to cultivation.



Grevillea dielsiana: Diels' Grevillea

This species was named by Charles Gardner in honour of Dr. Ludwig Diels, a German botanist who travelled widely in Western Australia with E. Pritzel and collected some 5,700 species.

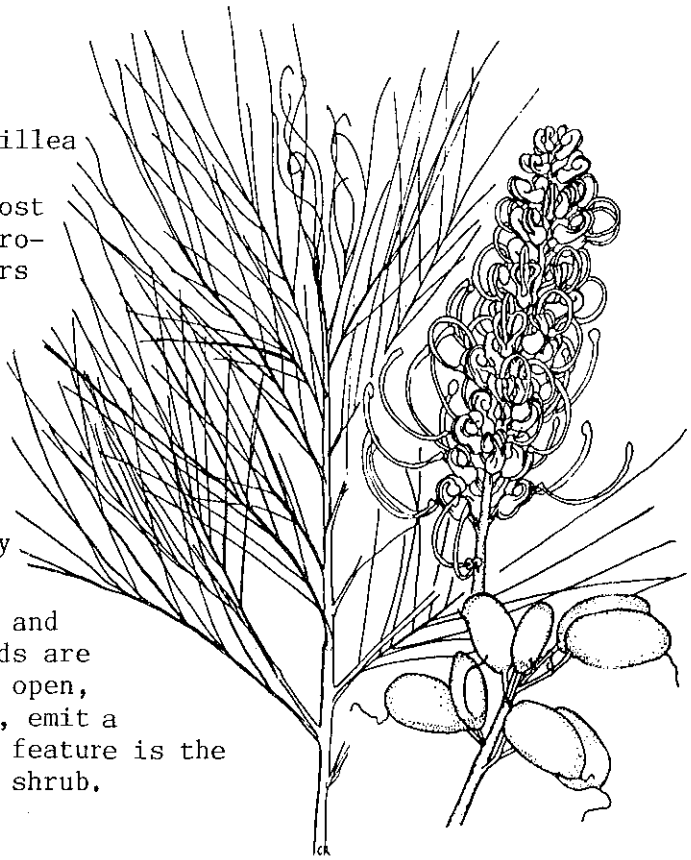
Diels' Grevillea, though very prickly, is an attractive bluish-green, and for many weeks in winter-spring, it produces pendent sprays of brilliant orange-red flowers. It grows 1-2 metres tall and regenerates from seed after a fire. The leaves are repeatedly divided into very sharp pointed segments.

It prefers deep sand and is common in the heaths of the lower Murchison River. In cultivation it has done well on the coastal plain around Perth.

Grevillea hookeriana: Hooker's Grevillea

A large full shrub 2-4 metres tall which is seldom without flowers. It was named after Sir Joseph Hooker, an eminent botanist.

Grevillea hookeriana usually likes space to spread, making an excellent lawn plant for parks and gardens. The leaves are a dark glossy green, deeply divided into a herringbone formation. They are stiff and an attractive feature of the plant. It flowers most profusely in spring through to summer.



Grevillea leucopteris: White Plumed Grevillea

The White Plumed Grevillea rates as the most spectacular of the genus because of its profuse and large leafless clusters of flowers borne high above the foliage in August-October. It is found growing in deep sands of Western Australia, from the Murchison River to Coorow.

It is a large, bushy shrub to 3 metres, with foliage to ground level; the leaves are large and have soft segments, 10-20 centimetres long; the new tips are a furry red.

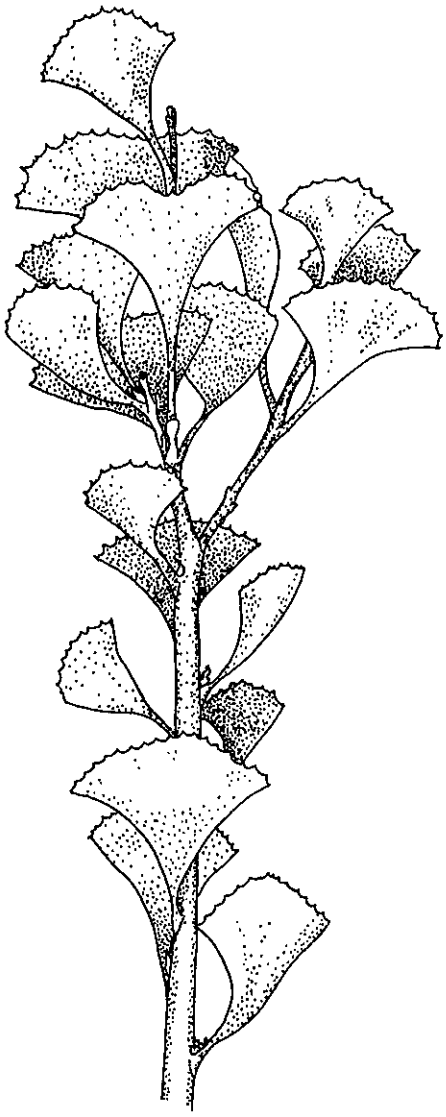
The flowers appear on long leafless canes and are creamy-white in colour. The young buds are covered by a sticky substance before they open, and the flowers, which are rich in nectar, emit a rather sickly and unpleasant odour. This feature is the plant's only disadvantage as a cultivated shrub.

Grevillea robusta (See Toxic Plants)

HAKEA SPECIES

Hakea was named in 1797 by the German botanists Schrader and Wendland. The name commemorates a German patron of botany, Baron von Hake (1745-1818). The first species were collected from New South Wales but botanical exploration soon showed that the largest concentration of species is in south-western Australia. Here there are about 70 species out of a total for the genus of about 100. The genus is characterised by the fruit which is a woody, often massive, follicle containing two seeds.

The plants range from small shrubs to medium-sized trees. In the latter the bark is often corky and deeply fissured. Many species are attractive in form and foliage, while some tend to become straggly and untidy. The flowers are often conspicuous, of various shades of cream, yellow, green, pink, red or even mauve. The various species grow in habitats ranging from swamps and forests to tropical hills and desert plains, and accordingly can be selected for many locations and conditions.



Hakea baxteri

Hakea baxteri: Fan Hakea

An erect shrub to 2.5 metres tall, with broadly fan-shaped, wavy, slightly prickly, thick leaves. The buds are rusty-brown, turning into white flowers during October-November, on old wood along the stems; the flowers are attractive to birds.

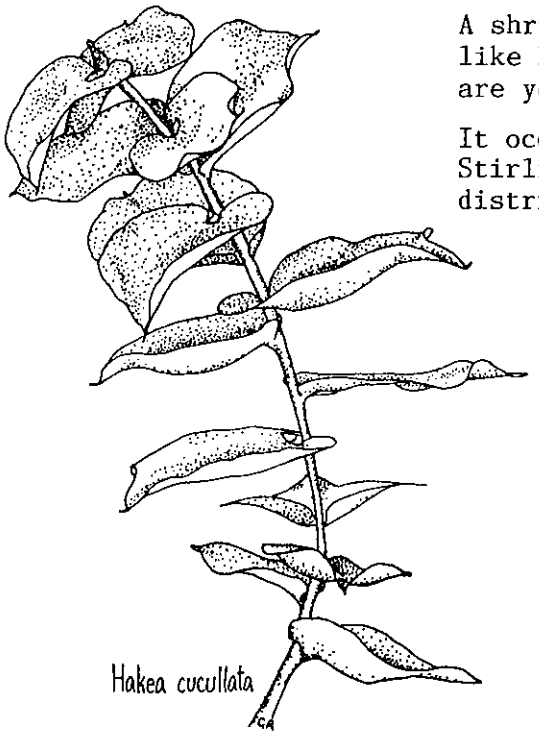
Fan Hakea occurs in the southern wheatbelt and Stirling Range, and grows naturally in gravel. It can be grown in light to medium soil in an open situation.

Hakea bucculenta: Red Pokers

A shrub to 7 metres tall, sometimes compact but at other times tall and slender. The flowers are red and appear in July-October. They are in dense elongated spikes which are very abundant and attractive to birds.

Its distribution extends near the west coast from Shark Bay to Mingenew. It grows in light to heavy, well-drained soil, in an open, sunny situation and withstands periods of dryness.

Hakea corymbosa: Cauliflower Hakea



A shrub to 2 metres tall and broad, with a cauliflower-like habit. The leaves are very pungent and the flowers are yellow, appearing from June-September.

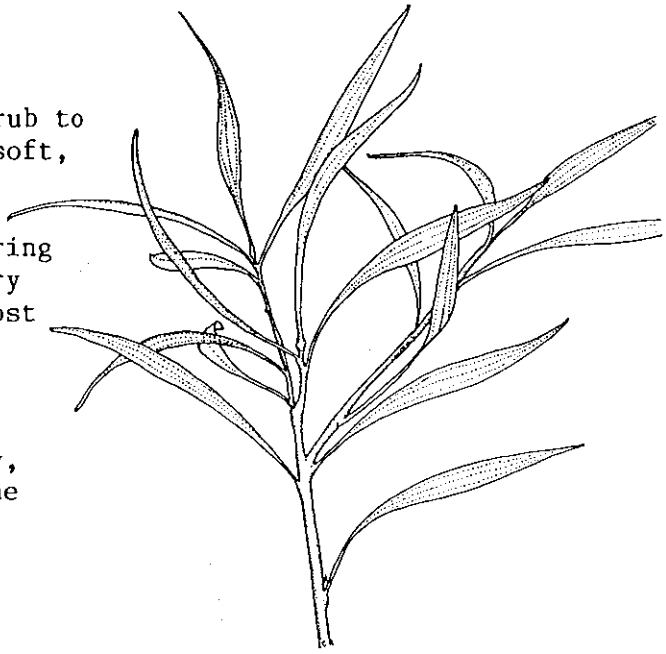
It occurs in the heaths of the south coast, from the Stirling Range to Israelite Bay, and in the Hill River district north of Perth. The species should be cultivated but would probably not take much pruning and might become untidy after 10-15 years.

Hakea cucullata: Scallops Hakea

Closely related to Royal Hakea, this species is a rather more branched shrub or small tree to 5 metres tall with all green non-prickly leaves. The flowers are bright pink and occur at the base of the leaves from September-October.

Common in shrublands of the Stirling Range and areas to the south; it also occurs in a few places east to the Fitzgerald River National Park. It usually grows in deep sand but is sometimes seen in clay, gravel or rocky soil.

Hakea laurina: Pincushion Hakea



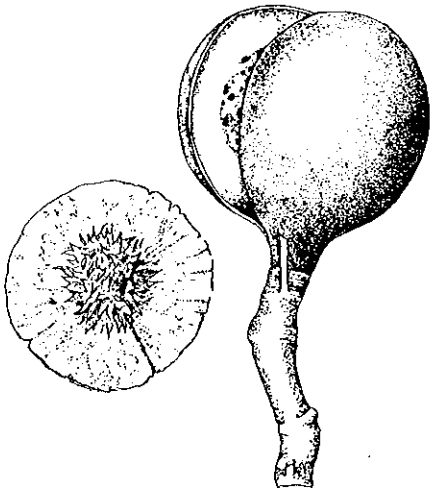
A tall, smooth-barked, rather slender shrub to 4 metres tall. The young foliage has a soft, fine golden covering of hairs; the dying leaves are often rich red. The flowers appear in dense pincushion-like heads during May-June. The opening buds are first very pale, developing into a rich pink or almost red colour and are very abundant over a long period. The flowers are attractive to birds.

It grows in medium to heavy soil in sunny, protected situations, and occurs along the south coast.

Hakea petiolaris: Sea Urchin Hakea

A shrub or tree to 5 metres tall, with an erect bushy crown. The flowers of this Hakea are very similar to those of the Pincushion Hakea (Hakea laurina). The buds are a combination of pink and green, turning cream as they open and later maroon or dull pink. They are often borne on the older stems. The flowering time is June-September. The leaves are silvery-grey and almost round, but come to a blunt point at the end and have a prominent pattern of veins.

It grows in granitic soil on hills between Wongan Hills, Perth and Hyden. Near Perth it is usually a spreading shrub.



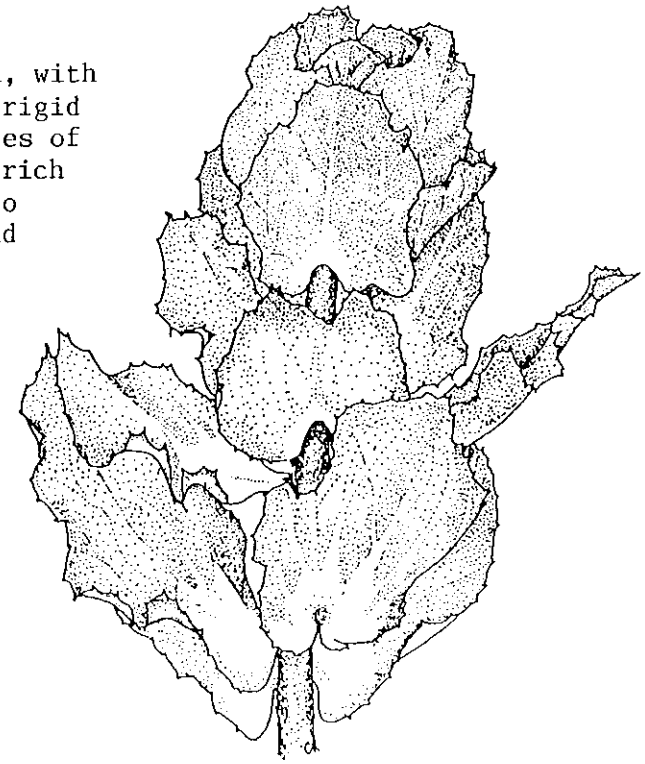
Hakea platysperma: Cricket Ball Hakea

A rounded shrub to 4 metres high with thick, needle-like leaves and sweetly-scented white flowers which occur in spring. The fruits of this species, 4-6 centimetres across, resemble a cricket ball in shape and size and are the largest fruit of any Hakea species; thus the common name Cricket Ball Hakea.

It grows naturally on sandy-gravelly heaths between Coorow and Hyden.

Hakea victoria: Royal Hakea

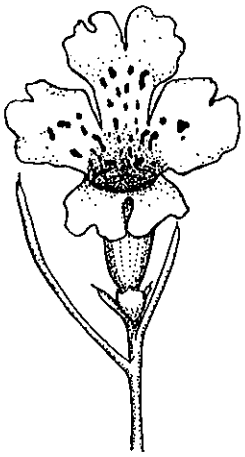
An erect, column-like shrub to 4 metres high, with a 3 metre spread. The leaves are broad and rigid and during maturation they go through a series of colour changes, ranging from apple-green to rich red and purple. Each leaf may live for up to five years. The flowers are creamy-white and appear in clusters at the base of the leaves during winter.



It will grow in medium to well-drained soil or sands, but will not tolerate lime. It is slightly salt tolerant and withstands periods of dryness. It grows best in an open, sunny, well-drained position.

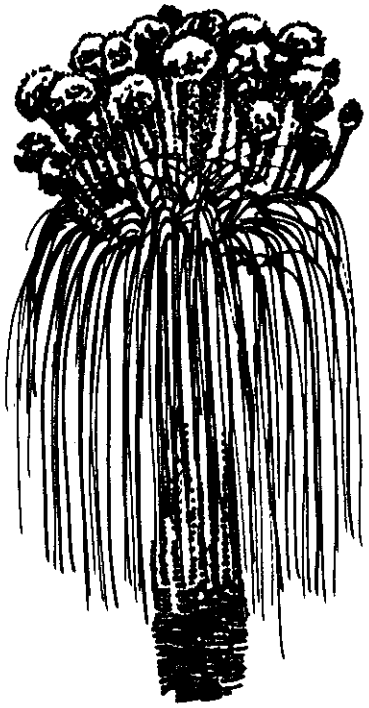
In cultivation the species grows easily but becomes very bushy and does not develop the rich colours of wild plants.

The Royal Hakea occurs in sand and quartzite along the south coast.



Hemiandra pungens: Snakebush

Snakebush is a member of the mint family with pungent leaves. It is normally a shrub 1.5 metres, the more common prostrate form with mauve/pink flowers is excellent as a ground cover. The numerous, attractive, bell-shaped flowers come in a wide range of colours; white, blue, pink and red. The flowers appear in spring and carry through the summer months. Over a large area Snakebush is breathtaking in its display of flowers. It is endemic to Western Australia, growing around Perth.



Kingia australis:

This is a grass tree growing up to 3 metres high with a rough trunk and a dense head of long, stiff, narrow leaves. The small flowers grow in a dense globular head at the end of a short flower stalk; a number of these flower heads arise from the top of the plant. The flowers are cream and appear during spring.

Superficially Kingia australis looks much like Xanthorrhoea preissii and it is even more restricted in habitat. There is only one species in the world and it is confined to the south-west corner of Western Australia.

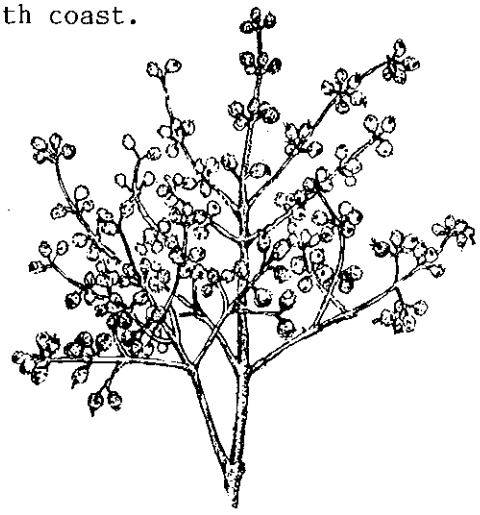
Kingia australis grows very slowly from seed and many years are needed before it makes a sizeable plant. Smaller plants can be successfully transplanted in autumn.

Kunzea pulchella: Silky Kunzea

A plant of open, bushy habit and light texture, growing up to 2 metres high and 2 metres across. The leaves are soft silvery grey and 1-2 centimetres long.

It grows naturally on rocky soils. In cultivation the striking effect of the brilliant red flowers against the grey foliage is ample reward for the special effort required. It prefers medium, well-drained soils and an open sunny situation. The flowering time is September-December.

Silky Kunzea is common in the wheatbelt and the south coast.



Lachnostachys eriobotrya: Lamb's Tails

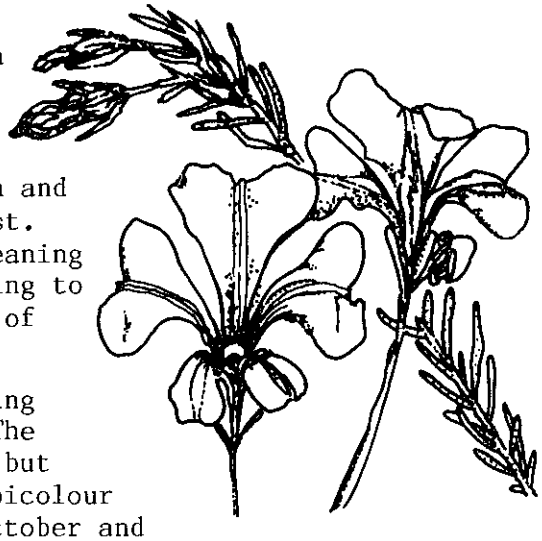
An erect shrub, growing up to 1.5 metres, with woolly stems and leaves. It has small purple flowers which grow in dense, white, woolly spikes, and occur in August-October.

These plants do best in the warm dry inland areas. They grow from seed and need a fully sun-drenched aspect with sandy, well-drained soil. They occur to the north of Perth, around the Irwin River.

LECHENAULTIA SPECIES

The genus Lechenaultia is a group of twenty small woody or semi-woody plants endemic to Australia. All but three of the species are endemic to Western Australia and the most famous of all is the Blue Leschenaultia (Lechenaultia biloba). It is said to have been known as the 'floor of the sky' by the Pingarra Aborigines, and on viewing a massed display of the iridescent blue flowers, one can easily visualise this.

The most important cultivation requirement is a perfectly drained situation, best achieved in rockeries, built-up beds or pots.



Lechenaultia biloba: Blue Leschenaultia

This is one of Western Australia's better known wildflowers. It was first described by botanist Robert Brown and its name commemorates a French naturalist. Biloba is derived from the Latin 'bi' meaning 'two' and 'loba' meaning 'lobe', referring to the two-lobed stigma which is a feature of the flowers.

Lechenaultia biloba is a small, straggling shrub some 30 to 60 centimetres high. The flowers are usually light or dark blue, but colours vary to deep purple, white and bicolour blue and white. They bloom from June-October and have been known to carry through to January.

It is widely distributed along roadsides north of Perth, and occurs naturally on sandy lateritic soils throughout the south-west.

Lechenaultia floribunda: Many-flowered Leschenaultia

This is a small, close-foliaged shrub usually not more than 30 centimetres high. The flowers are bluish-white and appear between September-February. It has small dense leaves, and grows in sand, often in open woodland.

Leptospermum sericeum: Silky-leaved Tea-tree

Leptospermum is a genus of about 40 species, distributed throughout Australia and extending to Malaysia and New Zealand. The common name tea-tree derives from the practice of early settlers of soaking the leaves of several species in boiling water to make a tea substitute.

Leptospermum sericeum is a slender, drooping, shrub, of open texture, growing up to 1.5 metres in height. The leaves are broad, rounded, blunt, silky or smooth, grey-green. It has large white flowers, about 2 centimetres in diameter, single or a few together, which occur in spring. It is regarded by many growers as the best species for cultivation as it is spectacular when in flower, with some flowers all year, and it is attractive to birds.

It grows in light to medium, well-drained, moist soil (withstands periods of dryness, dislikes lime) in an open, sunny situation on coast or inland.

Leucopogon verticillatus: Tassel Flower

Leucopogon is a large genus of about 150 species, mostly Australian, some extending to Malaysia and New Caledonia. They have small flowers, mostly white or pale pink and all with densely bearded petals. Despite the large number of species and the undoubted charm of most of them, very few have been successfully brought into cultivation.

Leucopogon verticillatus is an erect shrub, often sparsely branched, to 3 metres, with narrow-lanceolate leaves to 10 centimetres in apparent whorls. Pink flowers in slender sprays about the same length as the leaves occur in spring.

It occurs in Karri or Jarrah forests of Western Australia, and has been grown successfully in acid soil over limestone near Millicent, South Australia. Some shade is probably an advantage.

Macropidia fuliginosa: Black Kangaroo Paw

The single species of Macropidia is the Black Kangaroo Paw, which has unusual black-felted, greenish-yellow flower clusters. It is closely related to the Anigozanthos genus, differing mainly in the number of seeds.

This striking plant occurs on the lateritic sand plains between Perth and Geraldton. It grows to a metre or so in height and blooms in early summer. The flowers are five to six centimetres long and are covered in sooty black hairs.

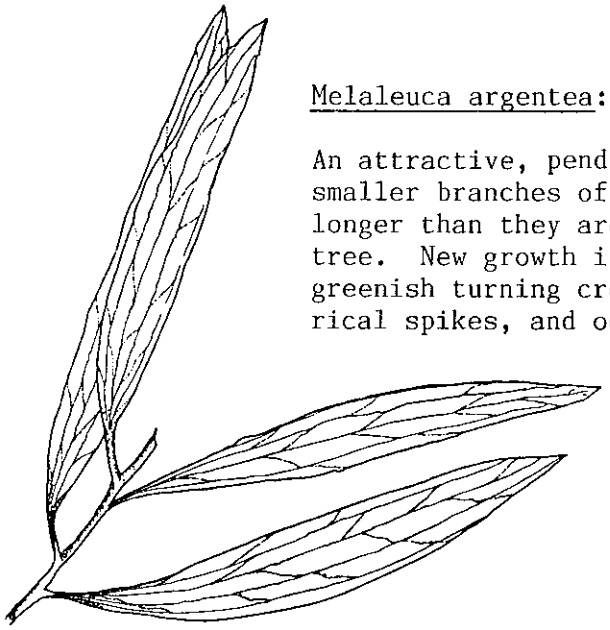
It regenerates after a fire, returning with more profuse flowers.

Macrozamia riedlei (See Toxic Plants)

MELALEUCA SPECIES

The Paperbarks are some of the most widely cultivated Australian plants. With some 140 kinds, they are found throughout Australia in swampy to dry areas, varying from small shrubs to large trees.

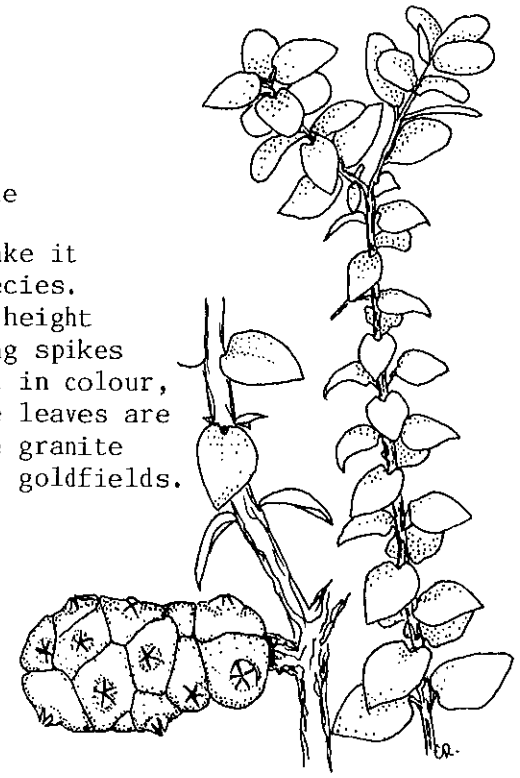
The leaves, except in a few species, are usually small. The bark is papery and spongy. The flowers, in which the stamens are the most conspicuous part, in many species, resemble the bottlebrush, Callistemon, but differ in the stamens being joined into bundles. The colour range is extensive, with various shades of white, cream, yellow to orange, red, pink, mauve, crimson. These plants are most hardy and can be used for both specimen breaks and hedges and will grow under a wide range of conditions.



Melaleuca argentea: Silver Cadjeput

An attractive, pendulous, thick leaved tree to 25 metres, with smaller branches often drooping. The leaves are 5 to 15 times longer than they are wide, which adds to the beauty of this tree. New growth is soft, silver and silky. The flowers are greenish turning cream and are held on fairly dense, cylindrical spikes, and occur between May and August.

It is very common on sandy river banks, with roots in water for part of the year and occurs in the north of the State, preferring a warmer climate.



Melaleuca elliptica: Oval-leaved Honey Myrtle

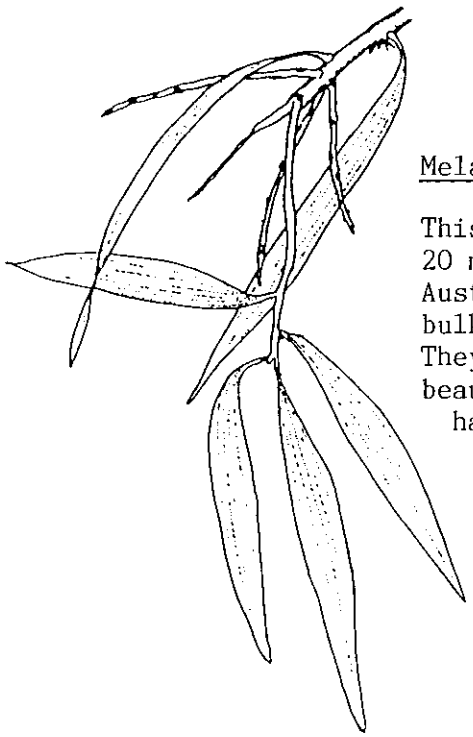
The large, showy red flowers of this plant make it one of the favourites among the Melaleuca species. It is a smooth, bushy plant which grows to a height of 3 metres. The flowers are produced in long spikes from the old wood and are a brilliant scarlet in colour, appearing every August through to March. The leaves are small, oval and opposite. It grows among the granite rocks in the sandy soils of the wheatbelt and goldfields.

Melaleuca fulgens: Scarlet Honey Myrtle

A number of Melaleuca species have showy bottlebrush-type flowers, similar to the true bottlebrush (Callistemon).

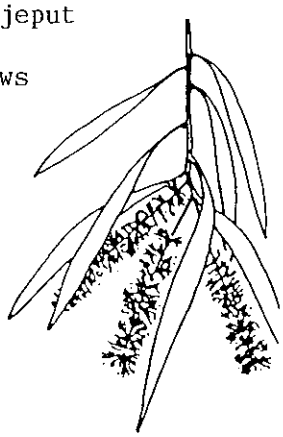
Melaleuca fulgens is a woody, rigid, rather erect, many branched shrub, which grows to a height of 2-3 metres. The specific name refers to the bright red flower spikes; "fulgens" meaning "shiny". The leaves are blue-green and variable in size, up to 3 centimetres long by 5 millimetres broad. The large, loose flower spikes are a brilliant bright crimson, tipped with yellow anthers.

It is an easily cultivated, long lived shrub, occurring in the goldfields and Murchison districts, growing in gravelly or granite soils.



Melaleuca leucadendra: Paperbark or Cadjeput

This Paperbark is a large tree which grows 20 metres high and is common in tropical Australia. The trees have large and bulky trunks, covered in paperbark. They grow alongside creek banks and are beautiful when in flower. The flowers have a strong caramel smell and are very rich in nectar which attracts many birds and insects during the day and flying foxes at night.

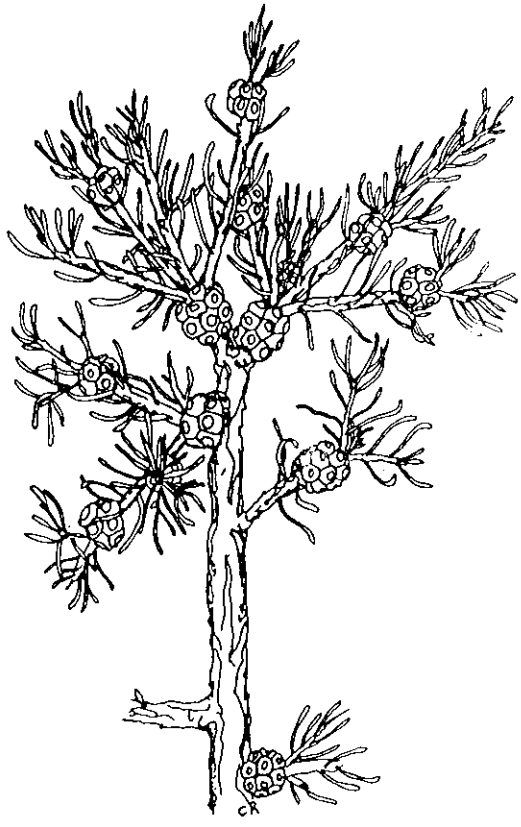


Melaleuca scabra: Rough Honey Myrtle

Few Melaleuca species can compete with this dwarf species for flowers, which literally smother the bush in a bold display during spring and early summer.

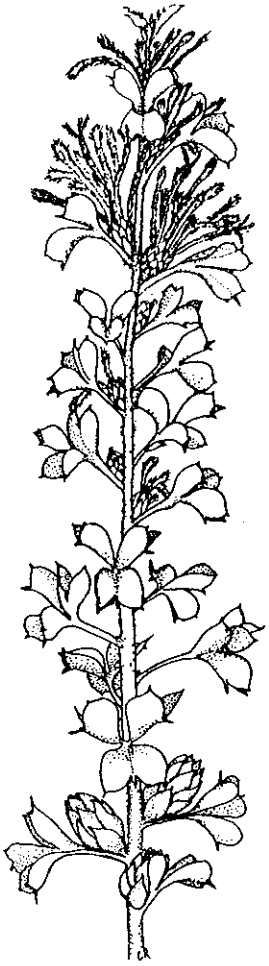
It is mainly a low twiggy shrub, seldom reaching 1 metre in height but often with a spreading habit exceeding its height.

The leaves are slightly fleshy and about 1 centimetre in length. The young foliage is sometimes hairy. The flowers are deep pink or reddish-pink and the anthers are bright yellow, an attractive contrast between leaves and flowers. A particularly ornamental shrub which grows naturally in stony, gravelly or sandy soils of the drier goldfields district and in the sand heaths of the south-west district of Western Australia.



Oxylobium graniticum (See Toxic Plants)

Oxylobium parviflorum (See Toxic Plants)



Petrophile biloba: Granite Petrophile

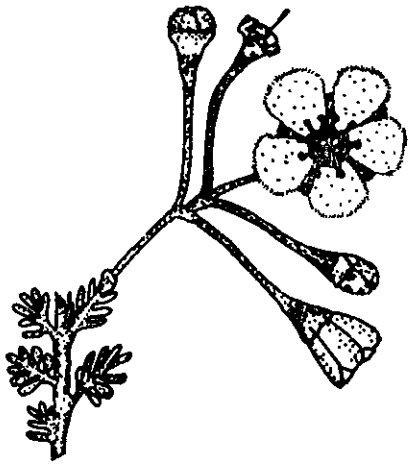
A slender shrub to 2 metres high, with a single stem at the base and then dividing into a few erect branches. The widely spaced leaves have flat, pungent lobes. The flowers are in relatively small heads but are crowded along the upper stems and closely woolly. The style has a bright orange brush with a prominent swelling below. The outer flower covering falls away leaving the fruiting spikes persistent along the stems. The flowers are pink or white and flowering is in August-September.

These plants are somewhat slow in their early growth and require a deep, well-drained soil in sunny positions for satisfactory results.

It is restricted to the Darling Scarp east of Perth.

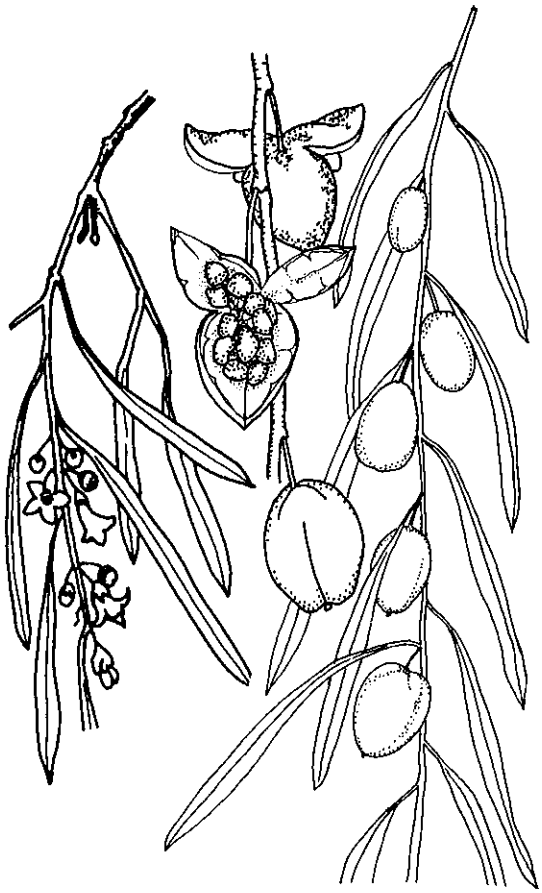
Pileanthus peduncularis: Coppercups

There are only three kinds of Pileanthus, all of which are confined to Western Australia. They are all beautiful flowering shrubs with very small leaves. The flowers have fine delicate petals in shades of pink to orange and are exquisite in bloom.



Pileanthus peduncularis is an attractive spreading shrub to 70 centimetres tall. The thick, stubby leaves are crowded in small clusters along the branches. The open flowers are 10-15 centimetres across and consist of five rich, orange-scarlet fringed petals. Flowering is profuse from September-November. When the bushes are at their best they are a delightful coppery-gold mass.

It occurs naturally on the sand plains of the south-west and inland to the goldfields district.



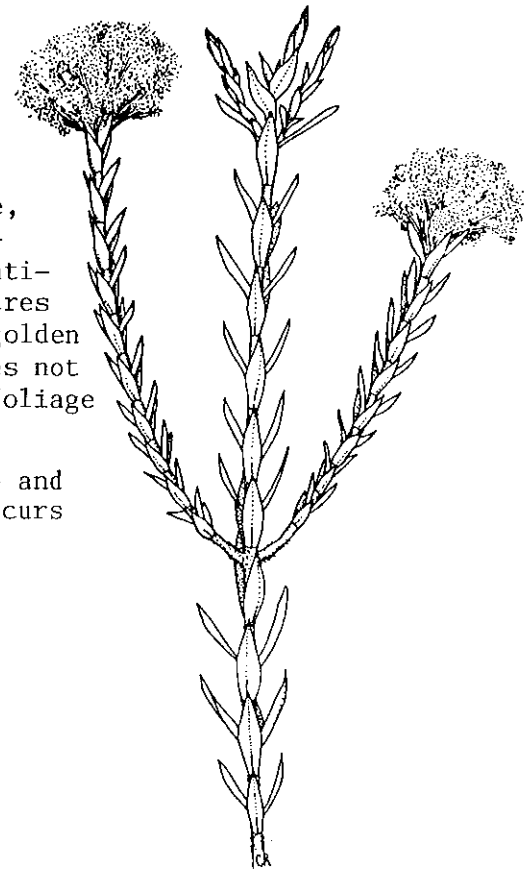
Pittosporum phylliraeoides: Weeping Tree

Named from the Greek "pitta" meaning "pitch" and "sporos" meaning "seed", referring to the sticky resin surrounding the seeds.

When fully grown it is a small graceful tree 5-7 metres, with a smooth, slender, grey-coloured trunk. The leaves are pendulous and willow-like. The ends are tapered or hooked and its high palatability results in regular grazing. The attractive, small, yellow flowers are attached singly and alternate with leaves along the branches. They appear during August-February. An outstanding feature of this delicate tree is the bright, apricot-yellow-orange fruits. Round in shape, they split open when ripe revealing numerous red sticky seeds. These seeds are often distributed by birds as they adhere to different parts of their bodies when visiting the tree.

It is widespread and occurs in all Australian mainland States, even in warm, arid inland areas. The Weeping Tree is a beautiful tree and successful in garden cultivation.

Pteridium esculentum (See Toxic Plants)



Regelia velutina:

A slender, symmetrical shrub of loose, open texture, with cane-like branches and softly grey-blue, stem-clasping leaves in four distinct rows - about 1 centimetre long. It grows up to 5 metres high and 2 metres across. The flower-heads are scarlet-orange with golden tips, short, terminal and fluffy. Sometimes it does not flower for several years but is worth growing for foliage and is attractive to birds.

It requires light, well-drained soil (dislikes lime and is salt resistant); warm, exposed situation, and occurs on the south coast of Western Australia.

Ricinus communis (See Toxic Plants)

Sarcostemma australe (See Toxic Plants)

TOXIC PLANTS

A number of toxic plant species can be seen in the garden. They include both introduced cultivated plants and native species. These plants may be toxic to humans and to stock.

Even before the first European settlement, early navigators and explorers encountered toxic plants on the Australian continent.

The flocks and herds of early settlers in many parts of Australia suffered severely from plant poisoning and there was little the settlers could do about it.

Our present knowledge of poisonous plants of Australia is largely the result of accumulated experience supplemented by feeding tests and chemical investigation.

Livestock owners should be aware of the dangers of allowing valuable stock to browse in areas from which toxic plants have been recorded.

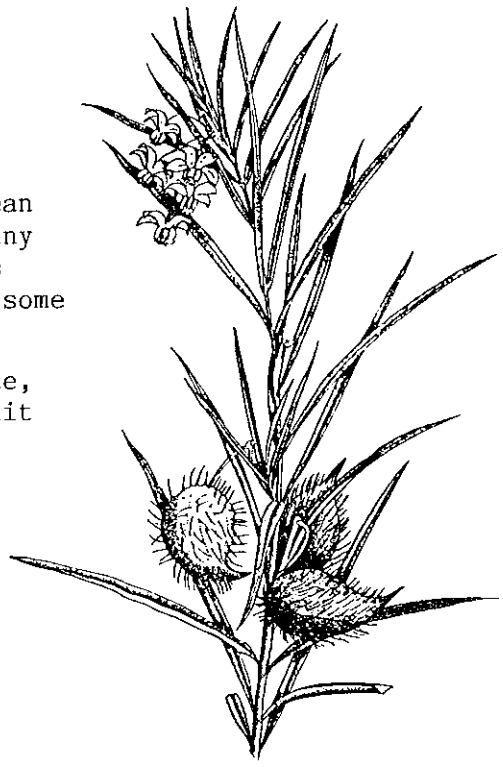
There is a number of potentially toxic plants grown in most suburban gardens. To be cultivated so commonly these plants (many of which are not native to Australia) must have considerable appeal both horticulturally and aesthetically and it is not suggested that these be not grown in gardens. However, as these plants do present a hazard, particularly to the very young, it is essential that adults, and more especially those in charge of children, have a knowledge of these plants. Toxic substances contained in poisonous plants may be harmful when touched or poisonous when eaten. Those which cause harm when handled may act as a corrosive, as an irritant or through an allergic reaction.

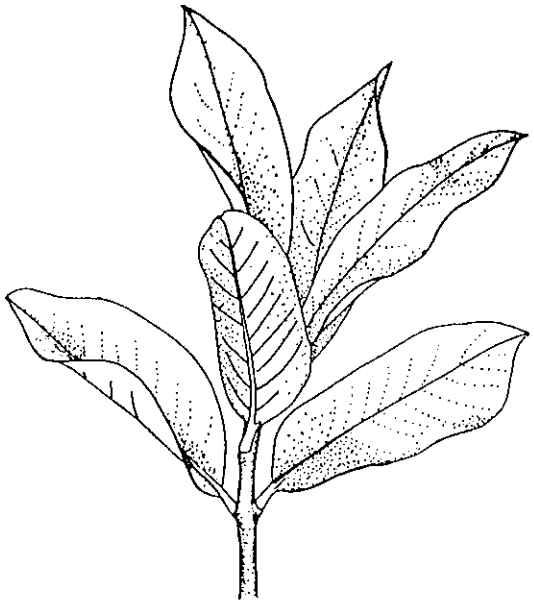
Asclepias fruticosa: Narrow-leaf Cotton Bush or Duck Dush

Named after Asclepios, a Greek physician, Cotton Bush is a shrub native to the Mediterranean region and South Africa, but is cultivated in many parts of the globe. In Western Australia it has escaped from gardens, and become naturalised in some localities.

It is a shrub from 1-2 metres tall, with opposite, narrow, erect leaves. The appearance of the fruit with the stalk attached is responsible for the common name of 'Duck Bush'.

Tests have shown that the plant is poisonous to stock and may be fatal to sheep, but it appears that under normal circumstances it is not eaten in sufficient amounts to cause problems.





Carissa acokanthera: Bushman's Poison

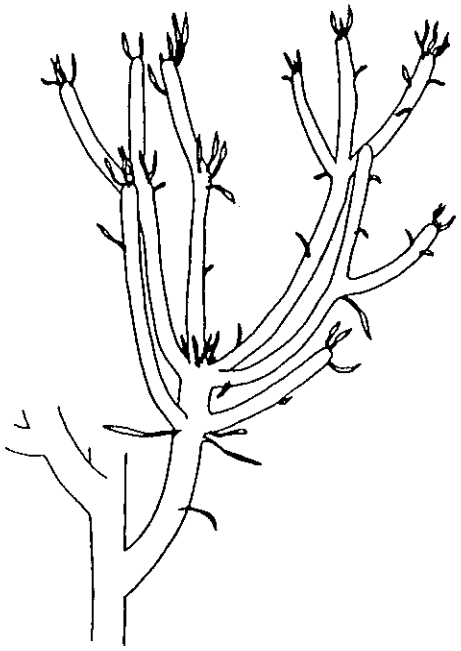
Bushman's Poison is native to South Africa. It is a dense evergreen shrub to 3 metres tall with leathery leaves and small fragrant flowers, densely clustered in the forks of the leaves. The purple-black fruit (resembling a black olive) is highly toxic and the eating of it by children has resulted in fatalities.

Castanospermum australe: Moreton Bay Chestnut or Black Bean

Black Bean, a native of eastern Australia's rainforest, is a tree which has sprays of orange to red flowers, followed by large leathery pods containing up to six chestnut-like seeds. Ingestion of seeds, either raw or roasted, producessevere, painful diarrhoea with vomiting and dizziness. However, the seeds are eaten by aborigines after soaking in water for several days and roasting.

Eremophila maculata: Native Fuchsia

Although of little pastoral value, Poverty Bushes (Eremophila spp.) are occasionally eaten by stock in the arid areas of Western Australia. The Native Fuchsia is regarded as being toxic to stock in eastern Australia.



Euphorbia tirucalli: Naked Lady

Naked Lady is native to Africa and is a large shrub or small tree with smooth, pencil-like branches and a very copious milky sap, usually leafless but sometimes with a few narrow dull green leaves which soon fall off.

The sap is a severe irritant and produces a more intense irritation of the eyeball than of the skin. It is a frequent cause of temporary blindness which may last for several days. Ingestion of the plant caused the death of a man through haemorrhagic gastro-enteritis.

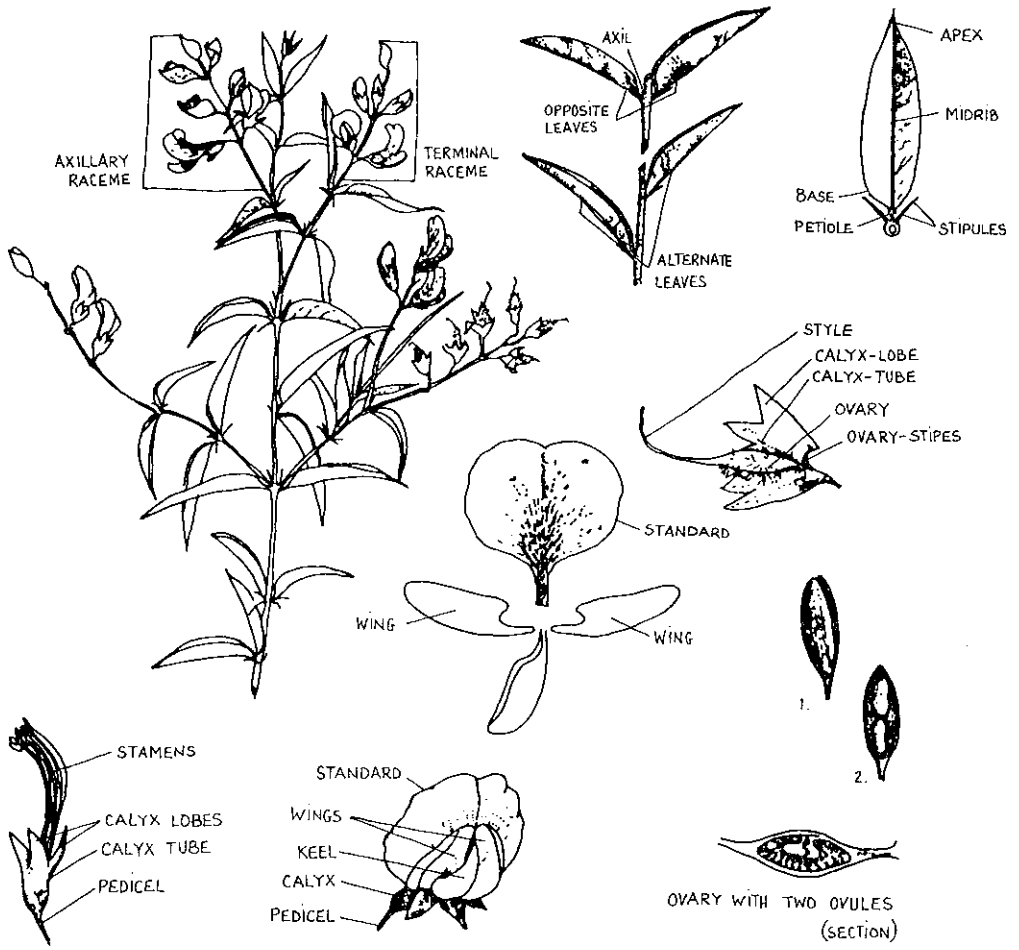
GASTROLOBIUM AND OXYLOBIUM - Native Toxic Plants

Western Australia is remarkable for its many toxic native plants, over 30 of which belong to Gastrolobium and the related genus Oxylobium. The toxic principle of Gastrolobium and Oxylobium is mono-fluroacetic acid; isolated and characterised from Rock Poison was also detected in Box Poison in 1964. This substance, better known by its sodium salt "1080" the rabbit poison, is highly toxic to all domestic stock. The amount of mono-fluroacetic acid present in these toxic plants varies from season to season, from locality to locality or even plant to plant within the one locality.

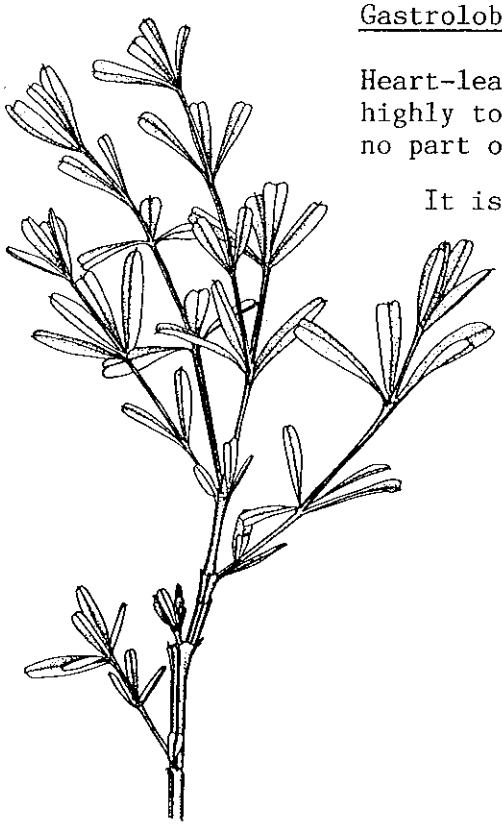
Certain native marsupials and birds, such as the bronze-winged pigeon, are more resistant to this form of poisoning. There are numerous cases on record where dogs and cats eating the entrails of these creatures have been poisoned, the symptoms described being similar to those shown by sheep and cattle poisoned by Box Poison.

GASTROLOBIUM AND OXYLOBIUM

(Characteristics for recognition and identification)



Gastrolobium bilobum: Heart-leaved Poison]
Oxylobium graniticum: Granite Poison] See Under Toxic Plants
Oxylobium parviflorum: Box Poison]



Gastrolobium bilobum: Heart-leaved Poison

Heart-leaved Poison is regarded as being one of the most highly toxic species of the genus to man and animals, and no part of it, including the flowers, should be eaten.

It is a shrub ranging from 1 metre to 4 metres in height, with angular-shaped branches and branchlets. The leaves grow in fours or rarely threes. They are dark green above, paler underneath, and they are usually hairy on the lower surface. They are similar in shape to that of a heart with a central rib which begins at the leaf stalk. The pea flowers are yellow tinged with red.

It occurs, typically, in association with granite rocks, or may be found along the banks of streams due to the seeds being carried down by flood water. It is also found in the Darling Range near Perth.

Grevillea robusta: Silky Oak

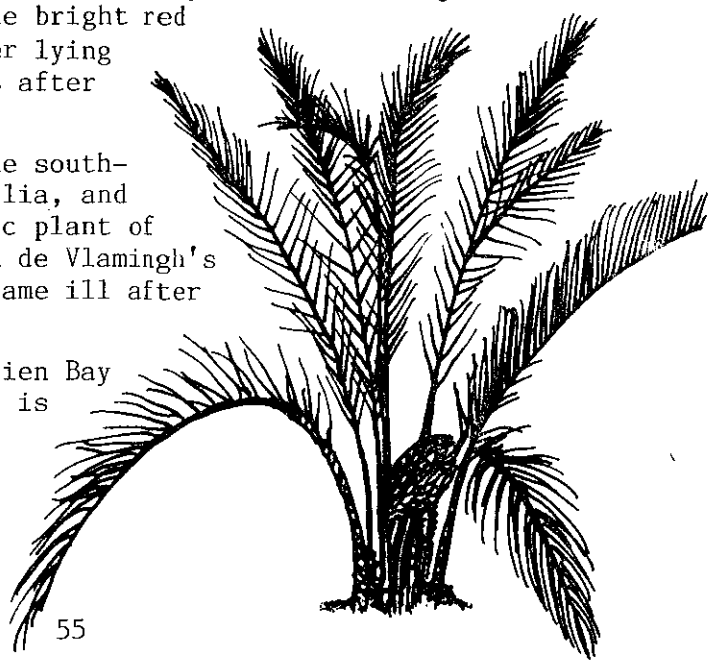
This tall tree, a native of eastern Australia, is well known as a cultivated garden plant, bearing attractive orange flowers. The flower and fruit have both given positive reactions for hydrocyanic acid, and are therefore potentially poisonous. It has also been known to cause skin irritations.

Macrozamia riedlei: Zamia Palm

The Macrozamia is a non-flowering, cone-bearing plant. The leaves arise at, or just above, ground level from a swollen underground stem with a fleshy tuber. Fronds are rigid, up to 2 metres long with a thick midrib and sharp-pointed leaf segments. There are separate male and female plants. Male plants bear cones which produce pollen. Female plants bear pineapple-like cones which produce seeds. The cones appear in May. The following autumn the cone breaks up releasing the bright red seeds on the surrounding ground. After lying dormant for a year, germination begins after the following winter rains.

Macrozamia riedlei is restricted to the south-west and south coast of Western Australia, and is possibly the earliest recorded toxic plant of Western Australia. The crew of Willem de Vlamingh's ship who visited the Swan in 1697, became ill after eating the seeds.

A large-trunked form occurs around Jurien Bay and grows to a height of 3 metres. It is extremely slow growing, in sand and lateritic soils as well as around the base of rocky outcrops.



Oxylobium graniticum: Granite Poison

This is a Latinised name applied to plants growing on granite rocks. It is found in the Coolgardie and Kalgoorlie districts.

The shrub is erect, with erect branches and purple branchlets. It grows to a height of 3 metres, although commonly only 1-1.5 metres tall. The leaves are deep green to grey-green. The flowers are yellow and deep red. The pods are woody, stalked, hairless and usually 12.5 millimetres in length, purplish-black when ripe and contain about six seeds. It inhabits sandy or loamy-sandy soils, forming small thickets.

Granite Poison is highly toxic in all stages of its growth. It is easily eradicated and does not sucker after grubbing. It flowers in September-October.

Oxylobium parviflorum: Box Poison

Box Poison, one of the most widely distributed poison plants in the agricultural areas of Western Australia, is also one of the most toxic. Stock deaths due to grazing this species are still common.

Four main forms of Box Poison may be recognised. The typical form is a shrub some 2 metres high with numerous erect branches. The leaves are leathery in texture, dark green, shining and hairless on top, and paler and minutely densely silky-haired underneath. The flowers are smaller than those of most of the other toxic species. The specific name, derived from the Latin, "parvus", small and "floris", a flower, refers to the small flowers, which are orange-yellow, coloured with purple and red.

Box Poison was listed as a toxic species by Drummond in 1842, and by Bentham in 1864.

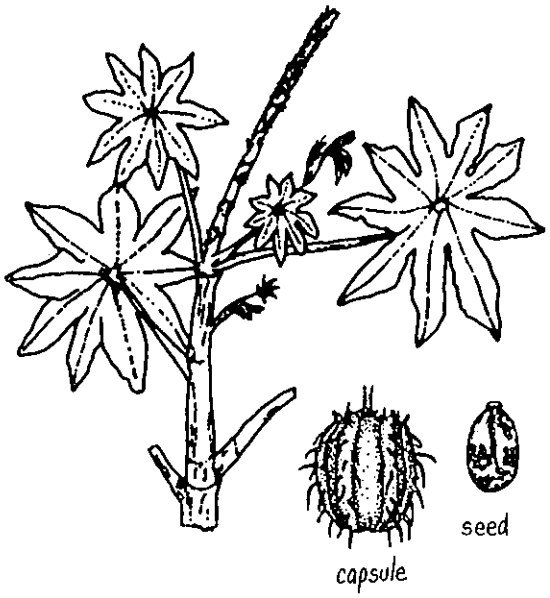
Its range extends southwards throughout the Great Southern districts, eastwards to Carrabin, and along the south coast.

Pteridium esculentum: Bracken

Considerable losses of cattle in Australia have been attributed to bracken, in the south-west of Western Australia. No losses in horses have been reported here.

Bracken is a fern which occurs over the greater part of the globe, and is considered by some botanists to represent one world-wide species. In Western Australia it is largely confined to the lower south-west, occurring as far north as Port Gregory.

The green fronds are held responsible for stock losses. The rhizomes have been reported as being poisonous for pigs. The Maoris, however, used the rhizomes as an article of food, hence the name esculentum (esculentus - edible) given to the plant. Bracken poisoning is common among horses in Oregon and California.



Ricinus communis: Castor Oil Plant

The Castor Oil Plant grows to a height of 4 metres and is common in the metropolitan area even though it is a highly poisonous plant. People have been poisoned from eating the seeds, while grazing animals have been killed from eating the toxic leaves, although not frequently.

This plant has a world-wide distribution and its place of origin is presumed to be Africa. It has been cultivated for castor oil, which was used for many medicinal purposes.

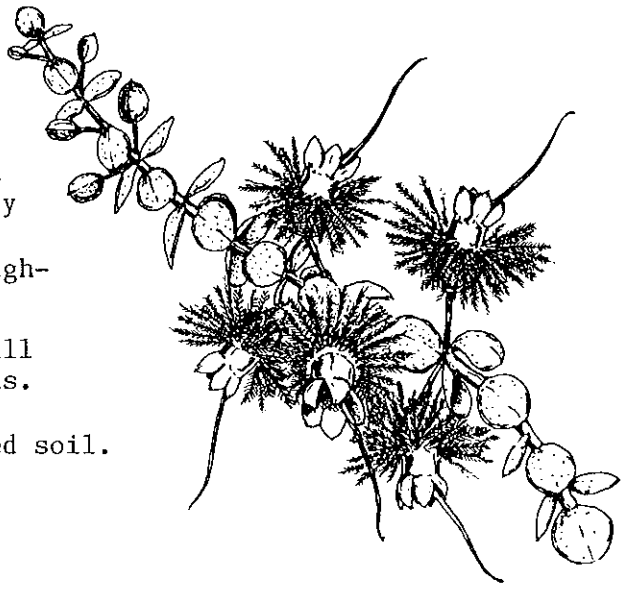
Sarcostemma australe: Caustic Bush

In Western Australia Caustic Bush occurs in two forms; a low shrubby form found in arid or stony places in the Kimberleys, and a tall climbing form which is fairly common in the areas around Shark Bay. The climbing form is readily eaten by sheep and is highly regarded by pastoralists.

Caustic Bush is a leafless, white flowered plant with somewhat succulent stems and abundance of latex, hence one of its common names, Milkbush.

Sarcostemma australe has for long been regarded as a poisonous plant in eastern Australia, although it has not been incriminated as a cause of stock losses in Western Australia.

Verticordia grandis: Scarlet Feather Flower



An open, upright, sometimes straggly, shrub up to 2 metres high. It has oval or round, small grey leaves. It usually flowers in spring, but once established it will produce large red flowers throughout the year.

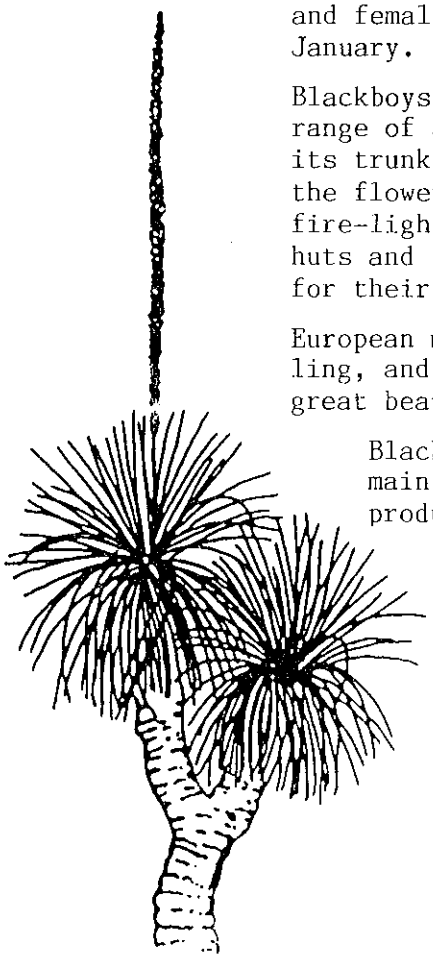
Verticordia grandis extends from the Hill River to Mingenew, growing on sandheaths. It requires a full-sun and a dry, open position in the garden with well-drained soil.

Xanthorrhoea preissii: Blackboy

The common Blackboy Xanthorrhoea preissii is remarkable and ancient species, first described in 1798 from a plant seen in eastern Australia. The Blackboy's generic name is derived from the Greek "xanthos" meaning yellow, and "rheo" meaning "to flow", alluding to the gum which flows from the trunk.

Blackboys grow in a wide range of soils, varying from deep free-draining sands to heavy lateritic soils.

Flowers comprise spikes more than 1 metre in length, with hundreds of small flowers which are pollinated both by birds and insects. The white-cream flowers are produced infrequently, usually following a bushfire. Both male and female flowers are produced on the same spike, in November-January.



Blackboys have provided both Aboriginal and European man with a range of services. Aboriginals were known to use the gum from its trunk as a glue, gum from the scape was eaten, nectar from the flowers was sucked, the dried flower scapes were used for fire-lighting by a drilling action, leaves were used to thatch huts and the young and somewhat blanched leaf bases were eaten for their nutty flavour.

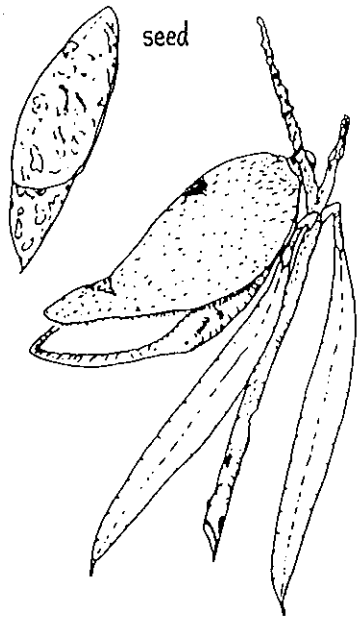
European man first used the dried resinous leaf bases for kindling, and extracted picric acid. Today bowls and artifacts of great beauty are turned and carved by skilled craftsmen.

Blackboys are often confused with Kingia australis. The main differences between the two are that the Kingia australis produces not a single flower spike, but several short 20-40 centimetre long stems with scale-like flowers in round heads (commonly called drum sticks), while the root system starts at the top of the trunk growing downwards beneath the old leaf bases, and thence to the soil.

Many of these plants can be seen growing from the Murchison River in the north to the southern coasts. They grow best in sandy, gravelly, or rocky soils and look quite spectacular among the granite outcrops of the Darling Range and the sedimentary rocks of the Stirling Range.

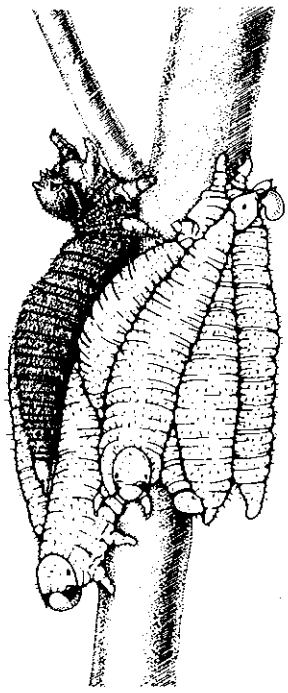
Xylomelum angustifolium: Woody Pear

This plant was described in 1856 from a collection of botanist James Drummond. Its name comes from the Greek "xylo" meaning wood and "melon" meaning apple, referring to its characteristic woody, pear-shaped fruits.



There are two species of Xylomelum occurring in Western Australia. They belong to the family Proteaceae and are therefore closely related to Banksia and Dryandra. The hard, woody fruit is not edible and contains two seeds which are kept on the plant for several years or may be released by a bushfire.

The Woody Pear can grow to 7 metres but is usually smaller. Its greyish-green leaves are 10-15 centimetres in length. Cream coloured flowers are produced from late December-February and are arranged in dense clusters towards the ends of branches. It occurs in the south-west of Western Australia.



COMMON INSECTS IN THE GARDEN

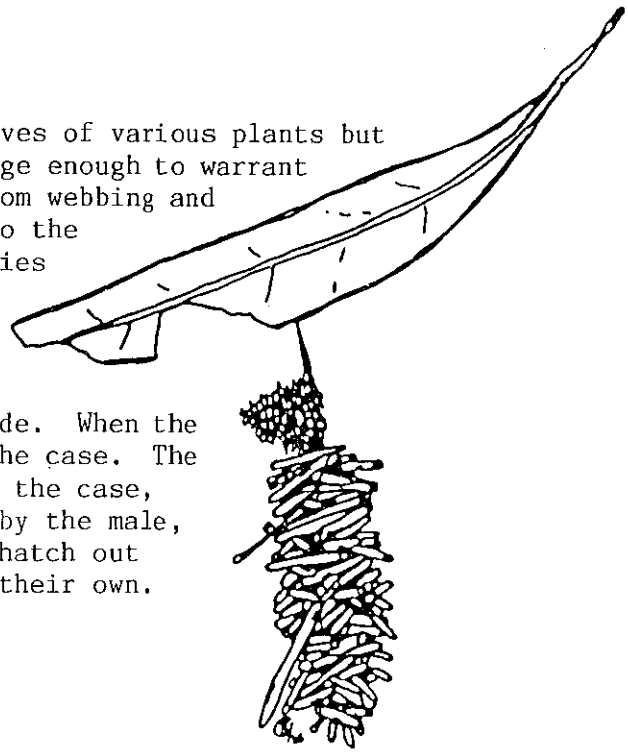
Perga species: Spitfires

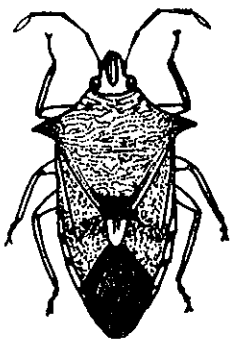
Spitfires are the caterpillar-like young of sawflies, (winged insects that look similar to wasps). The grubs form clusters on the stems of Eucalyptus trees. When disturbed they flick their tails and dribble a thick, strong smelling fluid from their mouths. This serves as a protection from being eaten by predatory birds.

The grubs feed at night upon the leaves of the gum trees. If they become too numerous they may form large clusters which may eat all the leaves of the tree and then move on to another tree. There are several types of sawflies and it is possible to find their grubs as you wander through the garden. They appear more frequently during the spring and early summer months. The adult flies are like many insects, in that they do not feed during their short active lives.

Psychidae family: Case Moth

The larvae of these moths chew the leaves of various plants but are usually not present in numbers large enough to warrant control. Each larva forms a 'case' from webbing and usually adds pieces of leaf or stick to the outside. The larvae of different species thus camouflage their cases in different ways. They never leave the cases completely, but drag them around while they feed, only allowing the top of the body to protrude. When the larva is fully fed it pupates inside the case. The female moth is wingless and remains in the case, there laying eggs after fertilisation by the male, which is winged. When the new larvae hatch out they leave this case and begin one of their own.





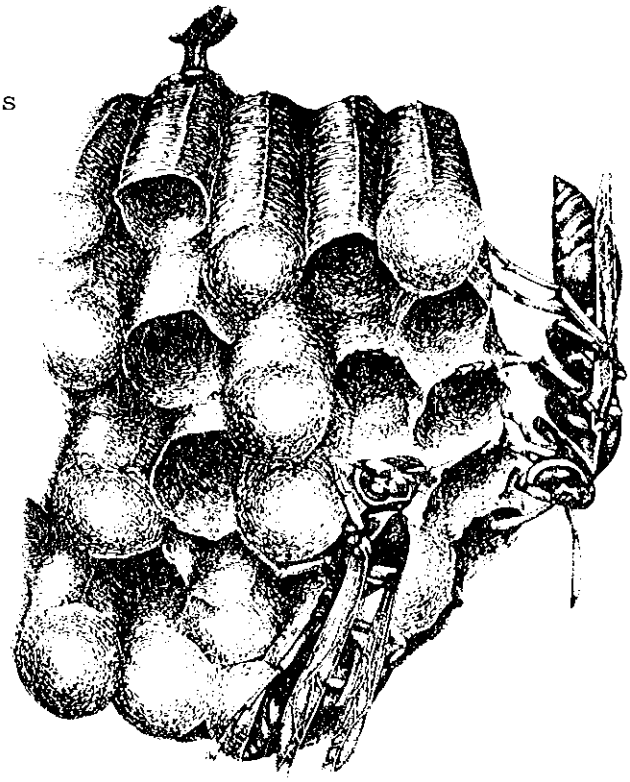
Eumecopus apicalis: Shield Bug

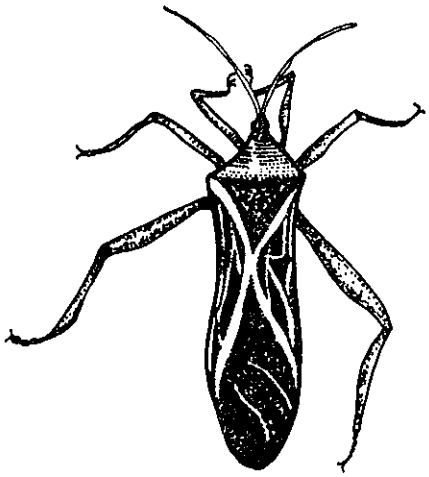
The Shield Bug is very similar to the Crusader Bug in its habitats. The main difference being that the Shield Bug prefers the sap of eucalypts whereas the Crusader Bug prefers Cassia species.

Polistes humilis: Paper-nest Wasp

This insect is easily recognised by its nests which look like upside down toadstools. They can be found in trees hidden amongst thick foliage or under the eaves of the roof of your house. If you disturb the nest, this wasp can become very aggressive and will repeatedly sting you. The sting is painful and causes swelling. Adult Paper-nest Wasps are 15 mm long, generally black to orange-brown with numerous yellow marks and bands. When flying their long back legs hang down.

This wasp is a nectar feeder and can be seen visiting many different flowers in its search for food.





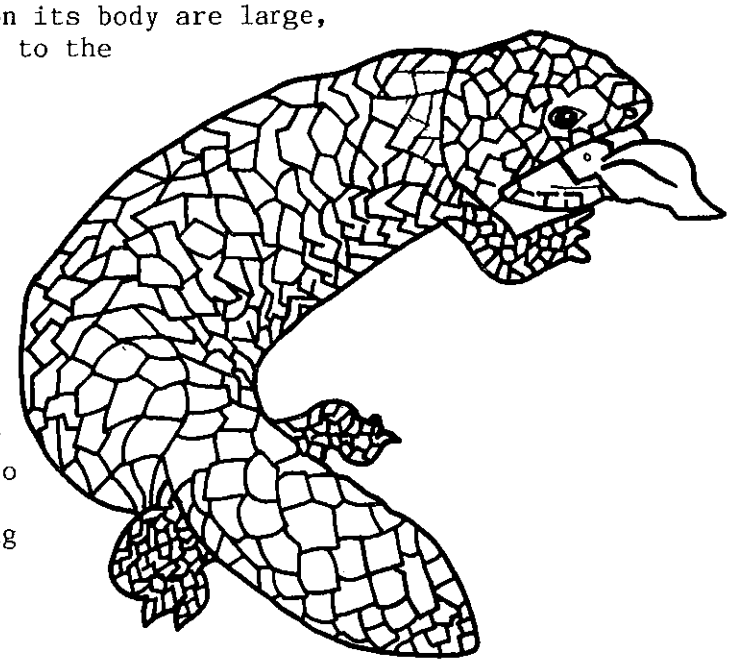
Mictis profana: Crusader Bug

Crusader Bugs feed on the tips of bushes and shrubs and are partial to Cassia helmsii. Their feeding activities on Cassia result in the death of new growth. If disturbed they let out a foul smelling fluid.

COMMON REPTILES IN THE GARDEN

Tiliqua rugosa: Bobtail Skink

The Bobtail Skink is unique in the way that it appears to have two heads, one at each end. The scales on its body are large, thick and overlapping (similar to the tiles on a roof).

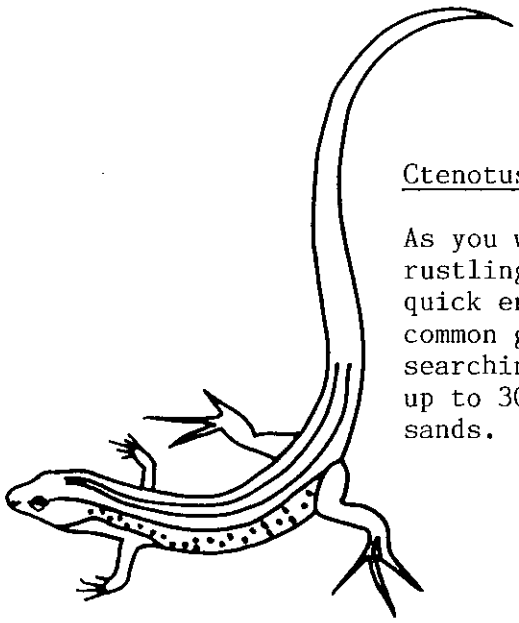


Bobtails are known to eat a variety of foods such as snails, beetles, raw meat, eggs, fruits and flowers.

Most skinks when in trouble have the agility and speed to flee to safety, but the Bobtail being a larger and slower reptile, bluffs its way out of trouble by pretending to look fierce, suddenly opening its mouth to reveal a startling blue tongue.

Menetia greyii: Grey's Skink

Much smaller than the Striped Skink, (usually not exceeding 8 cm), this dark coloured skink is common throughout the State.



Ctenotus lesueurii: Striped Skink

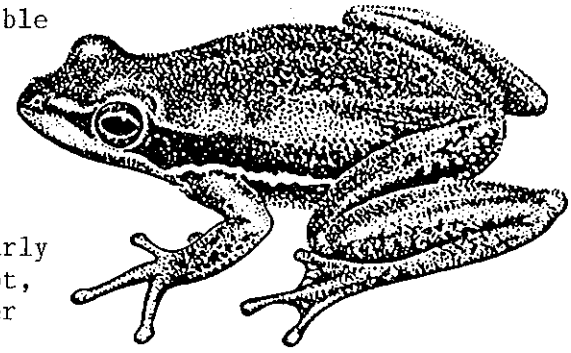
As you walk along the trail you may hear the rustling of leaves on the ground and if you are quick enough you may catch a glimpse of this common garden skink as it moves the leaves searching for food. The Striped Skink can grow up to 30 cm long and is restricted to coastal sands.

COMMON AMPHIBIANS IN THE GARDEN

Litoria adelaidensis: Slender Tree Frog

The Slender Tree Frog is a small frog with a long slender body and narrow, tapering head. As with most adult frogs the males are smaller than the females.

The colour on its back ranges from a pale fawn to brown or green to brown with large green patches. Usually there is a wide brown stripe running down either side from its head to its thigh. This dark stripe is bordered below by a thin white stripe. Both the colour on its back and the two-tone stripe help to camouflage it amongst the reeds and bushes. On the back of the thighs there are small bright orange/red patches on a blackened area. This brilliant flash of colour is visible when it jumps and possibly serves as a scare tactic to would-be attackers.



It eats a wide variety of flying and crawling insects that frequent the area where it lives.

The mating call of the male, during early spring, has been described as an abrupt, grating call. They call from the water or soil level or up on the reeds.

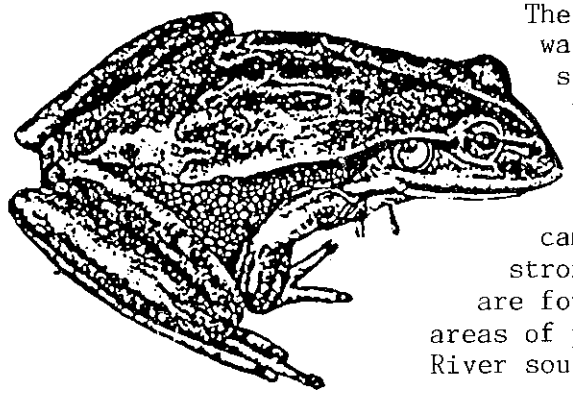
The Slender Tree Frog lives in reeds and bulrushes and other dense vegetation at the edge of streams, swamps and lakes. It spends much of its time clinging to reeds and swamp vegetation and leaps accurately to catch flying prey. It may be found in the wetter parts of the south-west of Western Australia, especially coastal regions near swamps, lakes and streams.

Litoria moorei: Western Green and Gold Bell Frog

Sometimes called the Bullfrog, it is a stocky, muscular frog with a triangular-shaped head and powerful hindlegs. Its colour is usually of a mottled green, brown and whitish pattern but it is able to change its colour. Often it is green and gold in the sun, whereas in little or no light or when it is cold it will assume more of a dull brown colour. There is usually a fawn-coloured stripe running down the centre of its back. It is known to be easy to approach and is said to be placid.

It is quite voracious and eats a variety of aquatic, flying and crawling insects and animals that live in the same environment.

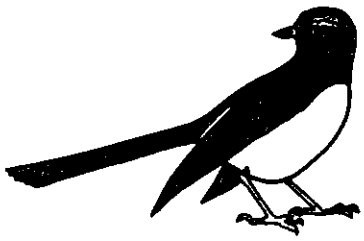
During the warmer evenings of spring you can hear the mating call of the Western Green and Gold Bell Frog as he floats or sits on floating vegetation in the water. His call has been described as a long, low growl, very similar to the sound of a motorbike. Hence another of his common names is the Motorbike Frog.



These frogs live near areas of permanent water - at the edge of swamps, lakes and streams. They like to live amongst the vegetation. They climb to hide beneath the bark of such trees as the Paperbark (Melaleuca) and crawl beneath logs and stones. Their skin colour allows them to camouflage amongst the vegetation, and their strong hindlegs offer a quick getaway. They are found only in the south-west of Australia, in areas of permanent water from the lower Murchison River south and east to Pallingup River.

COMMON BIRDS IN THE GARDEN

Rhipidura leucophrys: Willie Wagtail



The striking black and white plumage and engaging personality of the Willie Wagtail help to make it one of Australia's well known birds. Its distinctiveness is enhanced by its attractive musical whistle and the rather harsh metallic chatter which it utters as it wags its long fanned tail from side to side.

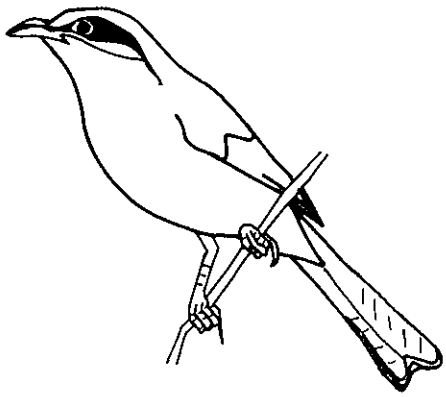
They are found in pairs which are formed for life, protecting their nest by aggressive attacks irrespective of the size of danger.

The nest of the Willie Wagtail is constructed by both male and female who also share most responsibilities of rearing the young chicks. A pair may rear several clutches in a season and the nest, made of cobwebs and small twigs, is reused in following years.

Meliphaga virescens: Singing Honeyeater

The Singing Honeyeater is the most widespread honeyeater in Australia. Its name is misleading since its song, while clear and loud, is not particularly tuneful. Its two-note early morning "wake-up" call, familiar to most residents of Perth, probably influenced the naturalist who named the species.

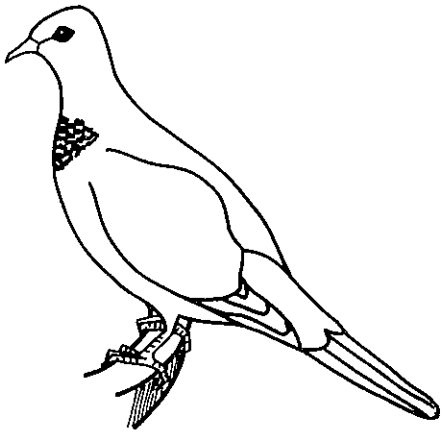
A medium sized, brownish coloured bird that is larger than the Brown Honeyeater and has a black and yellow stripe through the eye. These bold birds are common residents of suburban gardens. They have strong legs and sharp claws which allow them to manoeuvre around flowers, and to feed upside down on pendent blossoms. Banksia and Grevillea species being favoured for their sweet nectar. As well as nectar, Singing Honeyeaters eat substantial amounts of fruit and insects.



Streptopelia senegalensis: Laughing (Senegal) Dove
Streptopelia chinensis: Spotted Turtle Dove

The Laughing (Senegal) Dove was introduced to Perth in 1898 and has since spread as far as Geraldton, Kalgoorlie and Esperance, although it is mainly confined to the townships. A similar species, the Spotted Turtle Dove, also introduced at that time, has not spread so far from the metropolitan area. Both species are commonly seen in the garden.

These small pigeons are sedentary, living in pairs or small flocks and feeding on the ground. They eat domestic scraps, including crumbs of pet food, wheat, bread and seeds of garden plants and weeds. They breed at any time of the year but mainly in spring and summer when they are frequently seen bowing and cooing to one another and puffing out the feathers on their chests.



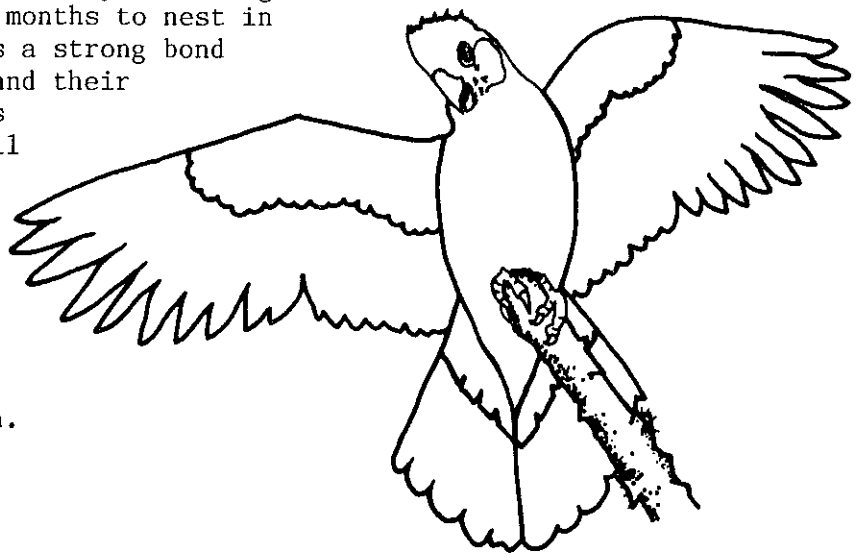
Their flimsy, stick nests are often blown down from trees in strong winds, dumping eggs or young onto the ground where they may be "rescued" or fall prey to cats or larger birds.

Calyptorhynchus latirostris: White-tailed Black Cockatoo (Carnaby's Cockatoo)

Flocks of these large, raucous parrots often cause damage to the herbarium garden in their search for food. They are attracted to the pine trees that surround the garden which were once part of an extensive pine plantation. In addition to the pine cones, they tear apart Banksia cones, flowering spikes and gumnuts. They are also fond of wood-boring insect larvae which they locate by peeling strips of bark and wood from small branches.

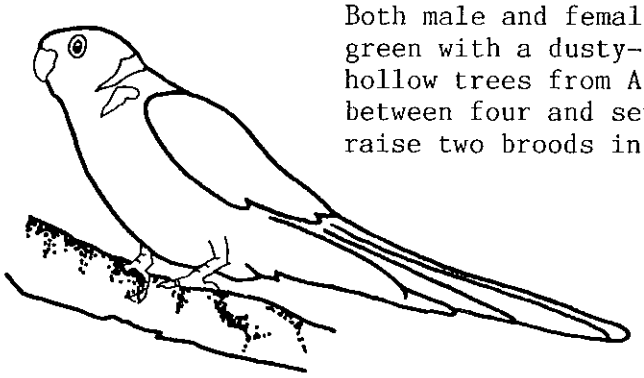
These birds move inland each year during the late spring and summer months to nest in tree-hollows. There is a strong bond between paired adults and their young. The young birds remain with adults until the following breeding season.

There are only approximately 60,000 White-tailed Cockatoos remaining in the world, most of them living in south-western Australia.

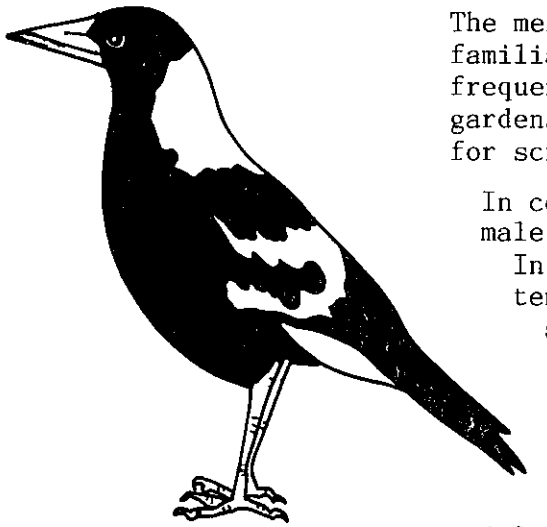


Barnardius zonarius: Ringneck Parrot

In Western Australia this attractive, gregarious bird is often called the 'Twenty-eight' Parrot after its three-syllable call. The Ringneck Parrot is often seen in small flocks. They feed on the ground as well as in trees and shrubs, taking nectar, insects, and the seeds of eucalypts. They are also fond of apples and other fruit.



Both male and female Ringneck Parrots are yellow and green with a dusty-black face. These birds nest in hollow trees from August to February. They lay between four and seven white eggs and will sometimes raise two broods in a season.



Cracticus tibicen dorsalis: Australian Magpie

The melodic song of the Australian Magpie is a familiar sound in the herbarium garden. They frequently nest in the tall pines adjoining the gardens and visit the staff lunch area waiting for scraps of food.

In contrast to the brilliant white back of the male magpie, the female has a mottled grey back. In young birds, the dark areas of the bird tend to be grey rather than black giving a somewhat dusty, dull appearance.

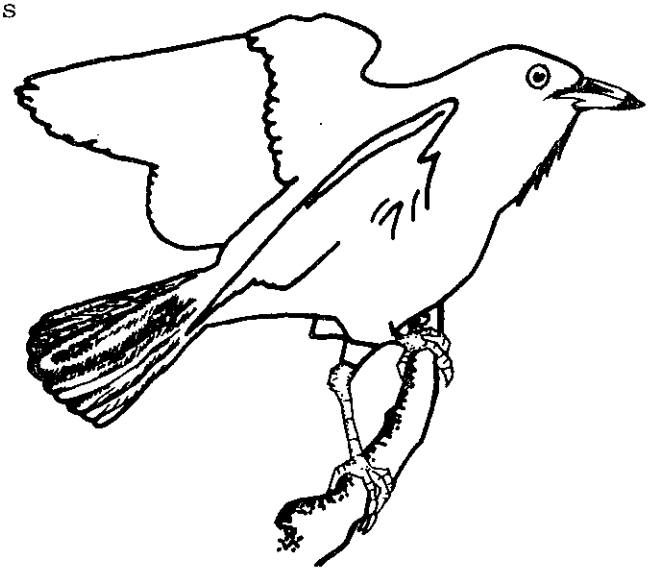
Magpies can live for as long as twenty years. They are territorial, and aggressively defend their territory against intruders. The adult females build nests and incubate eggs between August and October, this is the time when swooping behaviour occurs as the male defends his nest against intruders.

Corvus coronoides: Australian Raven

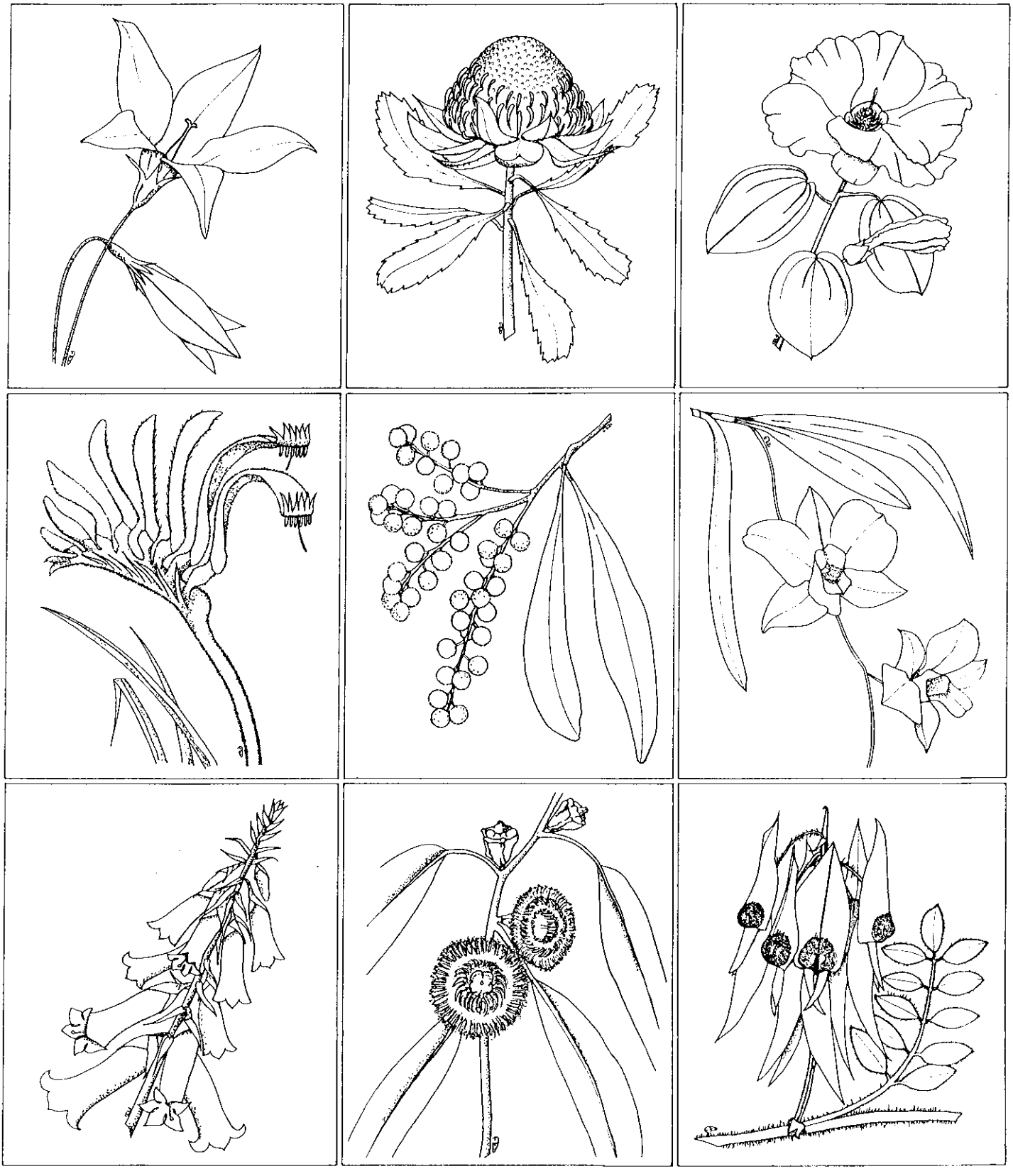
The Australian Raven is the local representative of the group of large, usually black birds commonly called "crows". It can be distinguished from other crows by its guttural 'aah-aah-aaah' call, trailing away as if strangled. Ravens are adaptable, intelligent birds, often very wary of people.

Adult ravens form pairs which are constantly together on their 100 hectare territories, patrolling the boundaries and calling, especially in the early morning.

Ravens build their untidy, stick nests in early spring. The young remain with their parents for three to four months before joining nomadic flocks of young birds. They travel in these flocks for a few years then set off to find territories of their own.

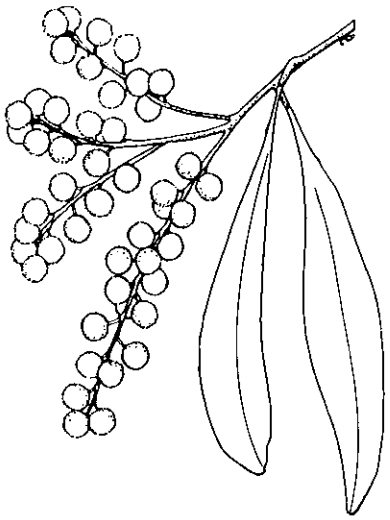


FLORAL EMBLEMS
• OF AUSTRALIA •



Australia

Acacia pycnantha, golden wattle



Australians accept golden wattle as their national flower. It is an unofficial floral emblem because, so far, Commonwealth Governments have not proclaimed it as the national flower.

Golden wattle is a shrub or small tree about 4 to 8 metres tall. Each golden ball contains up to eighty, tiny scented flowers.

Young seedlings of golden wattle have true leaves but the 'leaves' of older plants are really flattened leaf stalks called phyllodes.

Golden wattle occurs naturally in South Australia, Victoria, New South Wales and the Australian Capital Territory. It grows among taller trees in open forest and woodland. As a shrub it also occurs in open scrub where there are no trees.

Although golden wattle may not live as long as some other shrubs or small trees, it is an attractive garden plant. Native plant nurseries often stock potted specimens. Choose a sunny or lightly shaded position and make sure that water is able to drain freely from the soil.

Instead of buying a plant you may prefer to buy seeds and raise your own seedlings. Soak the seeds in hot water to break the seed coat. Then plant the seeds in moistened seed mix in a punnet. When the seedlings are large enough to handle, transplant them into individual pots of potting mix. When well established, plant out in the chosen garden site.

Wattle is widely recognised as a symbol of Australia. It is featured on Australian postage stamps, on the Commonwealth coat of arms and the insignia of the Order of Australia.

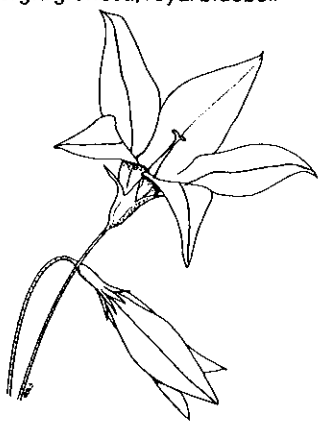
Our national colours of green and gold are the colours of our national floral emblem.

The spring has come, and suddenly
The bush is all aglow.
Its Wattles bow down gracefully,
As if with golden snow.
The air is filled with fragrance,
And - yellow, cream or white -
Those Wattles all are singing
Their magic song of light.

Nuri Mass

Australian Capital Territory

Wahlenbergia gloriosa, royal bluebell



The Australian Capital Territory was the last of Australia's six states and two mainland territories to choose a floral emblem. A committee of residents looked at local native plants to find one suitable for designs on badges and decorative goods. They also wanted a plant which would appeal to gardeners in the garden city of Canberra. Their choice was the colourful and dainty royal bluebell.

Royal bluebell is a herbaceous perennial which may reach 40cm tall in flower. It is called a herb because its stems are soft and non-woody. It is called a perennial because it lives for several years. The violet-blue flowers are up to 2 or 3cm in diameter. Some flowers are upright on slender, straight stalks and others nod like bells on curved stalks. The oblong leaves often have waved edges.

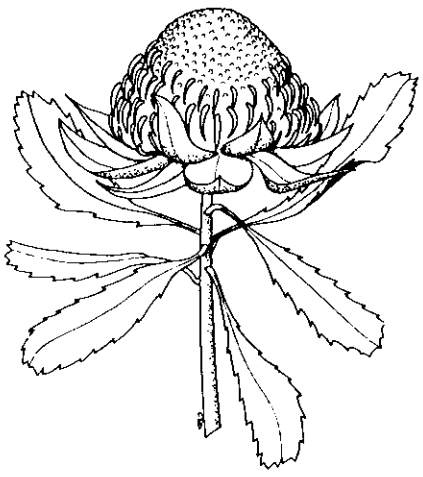
As well as occurring in the Australian Capital Territory, royal bluebell also occurs in New South Wales and Victoria. It grows in woodland in the Australian Alps and nearby mountain ranges where snowfalls are common in winter.

In areas with cool to cold winters royal bluebell is suitable for growing in a rockery. It may also be grown in shallow pots or tubs in sunny or lightly shaded positions. General nurseries in the Australian Capital Territory and native plant nurseries elsewhere often stock potted royal bluebells. They may be propagated from cuttings or root divisions.

Although the region has had a floral emblem only since 1982, royal bluebell is included on the badges and logos of many local groups. It is also popular on souvenirs such as cards, tea-towels and T-shirts. In 1985 the prize-winning entry in a school competition for a Territorial flag featured the floral emblem. People now recognise royal bluebell as a symbol of the Australian Capital Territory.

New South Wales

Telopea speciosissima, waratah



Telopea, the botanical name of waratah, comes from a Greek word meaning 'seen from afar' because the large rounded crimson flowerheads are so conspicuous. They are up to 15cm in diameter.

Early European settlers at Port Jackson were so impressed by the gaudy flowers of the waratah, they sent seeds to England in 1789 hoping that English gardeners could grow such an unusual plant. The results were disappointing because English winters are too cold for waratahs to survive outdoors and they do not readily flower in glasshouses. However market gardeners in Australia, California and Israel now grow waratahs for cut flowers. Australian florists sell the flowerheads for about six dollars each.

People in the First Settlement noticed Aborigines sipping nectar from the large red flowerheads of a shrub they called waratah, a name used throughout the world.

It is an upright shrub to 4 metres and inclined to be straggly in the wild. Each flower is small but they are grouped into large heads surrounded by red bracts resembling leathery petals. The flowers attract nectar-feeding birds which act as pollinators. Later large brown pods develop. These split open when ripe and shed winged seeds.

Waratah grows naturally in open forest from near sea level to the high parts of the coastal range. It occurs only in New South Wales.

Although bushfires burn the leafy branches, the plants are not killed but sprout again after rain. A thick rootstock protects leaf buds from the heat of the fire and so the plant survives.

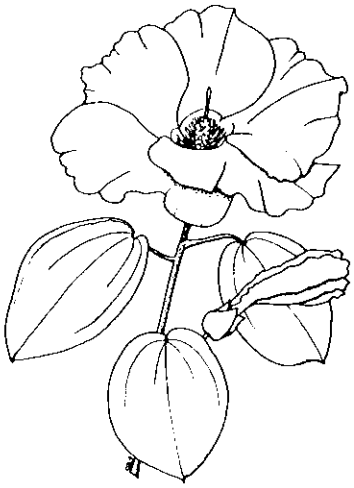
Waratah is a beautiful garden plant. Where the climate and soil are suitable it is long-lived and flowers well. Commercial packets of seeds with instructions are available. Some nurseries stock potted plants which should be planted out in well drained soil in a lightly shaded or sunny position.

Australia is its homeland,
And Waratah its name.
Its flower is like a goblet
Abrim with reddest flame.
Its seeds are small and playful -
They fly with dainty wings,
Then flutter softly earthward
Like tiny fairy things.
Yet, in the bush in springtime,
Of all the flowers there are,
There's none so proud and stately
And grand as Waratah!

Nuri Mass

Northern Territory

Gossypium sturtianum, Sturt's desert rose



The plan to grant self-government to the Northern Territory in 1978 encouraged people to develop a range of symbols of their region. Sturt's desert rose, proclaimed as the floral emblem in 1961, is featured in a stylised form on the Territorial flag first raised to mark the granting of self-government. The flag is black, white and ochre, the Northern Territory's colours. The natural flower has five or six petals whilst the stylised flower on the flag has seven white petals and a black star-shaped centre with seven points, representing the six Australian states and the Northern Territory. The Territorial coat of arms includes Sturt's desert rose as well as the faunal emblems, the red kangaroo and wedge-tailed eagle.

Sturt's desert rose is a small shrub related to cotton and hibiscus. Its mauve flowers have red centres and are about 8cm in diameter.

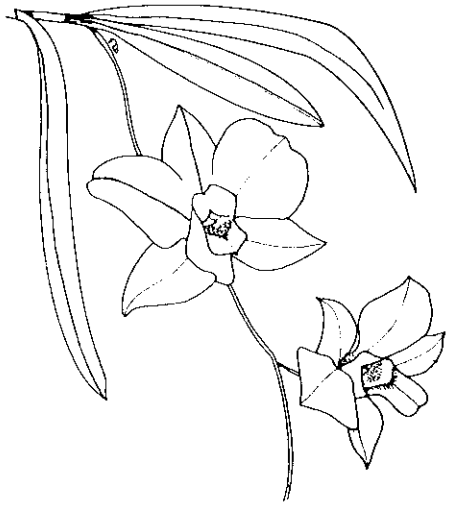
The common name commemorates Captain Charles Sturt's collecting this plant during his journey to central Australia in 1844-45.

It occurs in central Australia where rainfall is low, the days are mostly warm to hot, and the nights are often cool to cold. Sturt's deseft rose tolerates droughts and light frosts.

It is an attractive garden plant well suited to districts with low rainfall and less severe frosts. However it responds well to extra water and pruning. Plants may be propagated from cuttings or seed.

Queensland

Dendrobium bigibbum, Cooktown orchid



Queenslanders helped in the choice of Cooktown orchid as their State's floral emblem. The need for a floral emblem was suggested during preparations for the State Centenary in 1959. The Government wanted a native species with flowers of maroon, the State colour. They also wanted a plant which people could recognise easily and grow in their gardens. To arouse interest and obtain suggestions, the Brisbane newspaper the *Courier-Mail* ran a poll, asking its readers to elect a floral emblem. The convincing winner was Cooktown orchid which the Government later proclaimed as the State floral emblem.

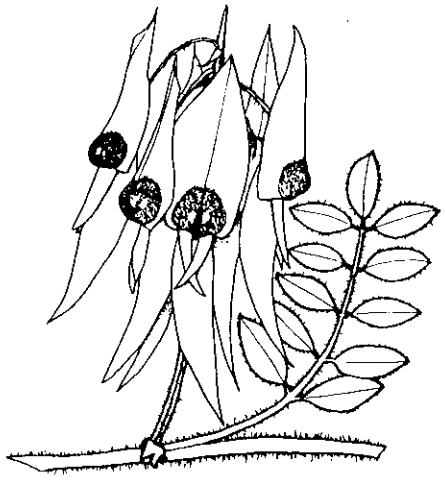
Cooktown orchid is a variable species. The flowers range in colour from white to shades of mauve including purplish-lilac edged with white. They are 3 to 7cm in width with up to twenty flowers arranged along each arching flowering stem.

It extends from the northern Queensland mainland to the Torres Strait Islands. Although it occurs in tropical districts with very high summer rainfall, Cooktown orchid grows in exposed situations rather than in rainforest.

It is suitable for outdoor cultivation in sub-tropical areas and may be grown in pots or hanging baskets, or attached to the sunny side of a tree trunk. In cooler climates protection under glasshouse conditions is needed. Plants in flower are ideal as indoor plants in well lit rooms since the flowers last for periods of up to three months. Division of established clumps is the simplest method of propagation.

South Australia

Clianthus formosus, Sturt's desert pea



Soon after winter rain falls in arid parts of Australia, the desert seems to come alive with carpets of wildflowers. Among the most colourful are the red flowers of Sturt's desert pea which occurs in all mainland states except Victoria.

The common name, Sturt's desert pea, honours Captain Charles Sturt who noted it in 1844 while exploring between Adelaide and central Australia. He described it in his journal as 'beautiful' and 'splendid'.

The explorer William Dampier collected Sturt's desert pea in 1699 on Rosemary Island in the Dampier Archipelago. This group of islands is off the north-west coast of Western Australia, about 12km from the modern mining port of Dampier. Almost three centuries later the flowers of Dampier's dried specimen, now housed at Oxford, are still a rich red in colour.

Sturt's desert pea is a spreading plant with stems lying on the ground. The flowers are clustered in groups of six to eight on short upright stems. Crimson flowers are the most common either with or without a raised glossy black centre. There are also pink and white flowered forms. The grey-green foliage and stems are covered in downy hairs.

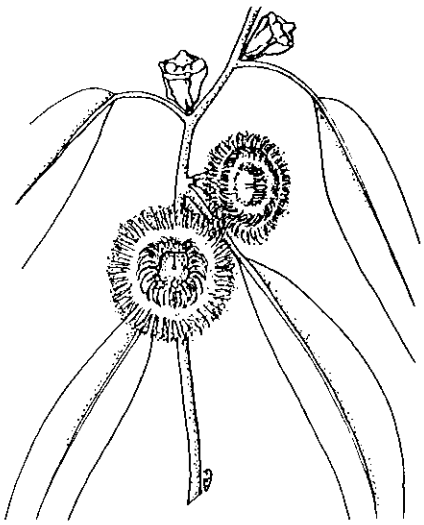
Being a desert plant Sturt's desert pea is suited to harsh conditions. It withstands drought and a wide temperature span. These extreme conditions range from light frost to the great heat of exposed sites with much bare soil.

It is a spectacular garden plant when grown in full sun in freely draining soil. Some gardeners obtain good results using terra cotta drainpipes as tall pots. Garden shops stock packets of Sturt's desert pea seed, sometimes under the incorrect name Clianthus Dampieri. The packets carry instructions on treating the seeds to increase germination.

Many South Australian departments and clubs use Sturt's desert pea on logos and badges.

Tasmania

Eucalyptus globulus, Tasmanian blue gum



Although Tasmanian blue gum is a flowering plant, it grows so tall that many people may not have noticed its attractive creamy white flowers. Under cool moist conditions it may reach 70 metres in height with the trunk 2 metres in diameter near ground level. It occurs in Tasmania and Victoria usually in tall open forest.

The common name blue gum comes from the blue-grey bloom, a powdery layer which covers the young leaves, stems and buds. When the waxy deposit is rubbed, it brushes off, and a strong smell of *Eucalyptus* oil is released.

Tasmanian blue gum has two kinds of leaves. The greyish, round juvenile ones are arranged in pairs on square stems on young plants. By contrast the dark green, sickle-shaped adult leaves are arranged singly on round stems on mature trees. Both kinds of leaves may be seen on the same tree as it matures.

The buds are warty in appearance and shaped like spinning tops. Each bud is covered by a flattened cap with a central knob. The cap is pushed off as the flower opens. The flowers produce abundant scented nectar which yields strongly flavoured honey.

Tasmanian blue gum is too large for home gardens but is recommended for parks and large grounds in areas where severe frosts are unlikely. Although the seeds are small, they germinate readily, and propagation from seed is simple.

Both fresh and dried juvenile foliage retains its grey colour and eucalypt scent when picked. Florists use the leaves as backing in flower arrangements. For this purpose trees are pruned to encourage the growth of juvenile foliage which is easily reached for harvesting.

Tasmanian blue gum produces hard, long lasting timber which is used for poles, wharf piles and railway sleepers. It is widely grown in plantations in many overseas countries where it is a source of building timber and pulpwood for papermaking.

Victoria

Epacris impressa, common heath

Victoria, the 'Garden State' was the first Australian state to proclaim a floral emblem. Although the chosen species, common heath, also occurs in white, rose, crimson, scarlet and double-flowered forms, the pink form is Victoria's official flower. Two plants in flower are included in the State coat of arms between the central shield and the female figures representing Peace and Plenty.

Common heath is a slender, upright shrub with small sharply pointed leaves. Each flower arises just above a leaf, but the flowers are often so densely packed that the cluster of flowers looks like a brush. It resembles some of the heathers and related plants of the Northern Hemisphere.

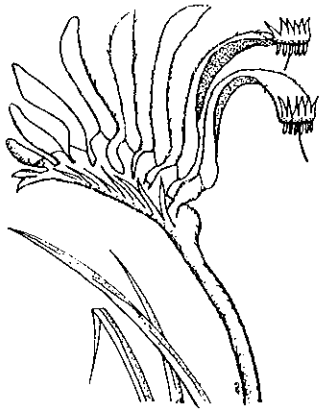
Common heath occurs in heathland from near sea level to mountainous areas. These heathlands contain many different kinds of stiff-leaved low shrubs closely spaced. The widest occurence of common heath is in Victoria but it also occurs in New South Wales, Tasmania and South Australia.

Common heath is a beautiful garden plant suited to cool moist areas. However it tends to be short-lived in cultivation. To lessen this difficulty, some gardeners plant a new specimen at intervals to ensure a continuity of this attractive plant. Pruning improves the plants by making them more compact and bushy. It also encourages more prolific flowering.

Victoria's celebration of 150 years of statehood in 1985 has drawn special attention to the State's colourful and dainty floral emblem and made it more familiar to residents.

Western Australia

Anigozanthos manglesii, Mangles' kangaroo paw



Western Australian wildflowers are famous for their unique beauty which has been recognised since the early days of European exploration and settlement. Kangaroo paws are amongst the strangest and most beautiful of all Western Australian wildflowers. Their common name comes from the shape and furry texture of the flowers.

Mangles' kangaroo paw was introduced to England in 1833 and described botanically from a specimen grown to flowering stage in an English garden. It has leathery sword-shaped leaves arranged in a tussock. The flower stems grow up to 1 metre in height and may be undivided or forked. Mangles' kangaroo paw is best known in its deep red and brilliant green form in which the flowers are red at the base and green for most of their length. The smooth pale green interior is revealed when the flower opens. Other less common forms include orange, green and orange, yellow and red, blue and red, and even all white. The flowers produce nectar. This attracts nectar-feeding birds which act as pollinators.

Mangles' kangaroo paw occurs only in Western Australia in heathland on sandy or gravelly soil.

As a garden plant it grows best in well drained soil in a sunny position. It tends to develop fungal diseases of the leaves in moist climates or where the plants are watered excessively.

It is propagated fairly readily from seed stocked by garden shops. Some nurseries sell plantlets growing in nutritive agar medium in glass tubes, as well as potted plants growing in soil.

Both fresh and dried flowers of kangaroo paw are popular for indoor decoration.

The State coat of arms includes two upright clusters of the State floral emblem.

Prepared by the Australian National Botanic Gardens, Canberra.

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SOURCES OF INFORMATION ON THE VEGETATION AND FLORA OF WESTERN AUSTRALIA

Compiled Oct. 1986 by K.F. Kenneally

Based on an original list
by N.S. Lander

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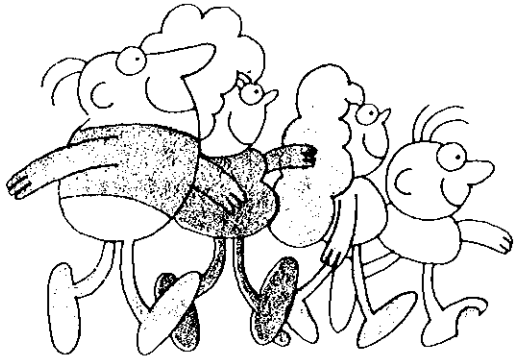

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