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K S. Cole

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Native plants—water savers in the garden

by Ken Cole
Irrigation Branch

The climate of Western Australia may be one of the best in the world for people but it is a difficult one for many of our imported, and common, garden plants. As a consequence, some 70 per cent of our summer water usage is for gardens and lawns. This 70 per cent amounts to many thousands of millions of litres each year.

This is not the sort of statistic that we should accept easily or happily. Each year the State's population increases, and water needs increase even faster. Available water resources are thus becoming fully extended, and because of our relatively flat countryside, new dam storages are not easy to find. Available underground sources are extensive but are not unlimited, and can be easily over-exploited.

There is a solution to this problem: a new approach to home gardening is required. Traditionally, gardens have involved large expanses of green lawn, lush water-loving trees and shrubs, and masses of shallow-rooted annuals.

The new garden is based on W.A.'s own colourful native plants, which are adapted to the mild winters, hot dry summers and poor soils, and are also resistant to many local pests and diseases. In addition many plants imported from parts of the world with a similar climate to W.A. add to the choice available to the gardener.

However, weeping willows, poplars and similar soft-leaved and thirsty trees can increase garden
Planting a young native tree. The secret of a native garden is to establish it well, and this depends on thorough preparation at planting. The hole is dug, ready for refilling with compost, about half a handful of complete fertiliser and then a layer of soil.

Lawn

Most people want some lawn for recreation such as for children to play on and for barbeques. However, there is little need for large expanses of lawn, as much present lawn is little used. Drought tolerant native ground covers can therefore be used as a water-saving replacement.

Many excellent native ground covers are available, with a wide diversity of appearance which makes a pleasant contrast to a small area of lawn. These ground covers often flower for long periods, further enhancing their appearance. They are not adapted to heavy traffic and are sometimes prickly, making at least some lawn necessary.

The amount of water required by the lawn can be reduced by planting species such as couch \((Cynodon dactylon)\), buffalo \((Stenotaphrum dimidiatum)\), Queensland blue couch \((Digitaria didactyla)\), saltene green \((Paspalum distichum)\) and kikuyu \((Pennisetum clandestinum)\). These hardier species need less water than softer species such as bent grass, Kentucky blue grass and soft lawn mix.

Shrubs and trees

Native trees and shrubs are available to provide shade, screening, and colour from almost continuous flowering. They are available for almost every situation—small plants for borders, and larger species for beds, clumps, or for a background. Creepers and vines are also useful for colour and variety.

No garden is complete without trees for shade, as a wind-break or as a feature. Species selected should be suitable for the situation, with enough room to grow. For example, large trees such as the tuart \((Eucalyptus gomphocephal)\) and Tasmanian blue gum \((E. globulus)\) and trees with brittle branches such as the river red gum \((E. camaldulensis)\) are not suitable for home gardens. These large trees are suited to the open park or very large garden situation.

Establishment

The secret of growing a native garden is to establish it well in the first year or two, using trickle irrigation. After establishment, most species thrive with minimal additional watering, although if black plastic sheet cover is used, continued watering may be needed to replace the natural rainfall which the cover deflects.

Once the types of trees and shrubs have been decided on, it is best to select small healthy specimens. A young healthy tree or shrub 20 cm high in a good-sized container will grow much better than larger advanced plants, which are often root-bound.

While smaller specimens often are not as attractive when first planted, they establish much better and soon catch up to larger plants. They will also be much hardier, particularly in drier areas or on sands, where they develop a deep root system which will anchor the plants.

If planted early in winter, the young plants establish a vigorous root system and can withstand the summer drought, although if watered over summer, they will
The position of the trees and shrubs can then be marked out, leaving enough room for each. If the plants are crowded, they will grow spindly, and will require pruning when mature.

Dig holes about 50 cm in diameter and 50 cm deep and add a small handful, about 50 or 60 grams, of complete fertiliser to the bottom of the hole. Compost or old animal manure is also useful, mixed with an equal volume of soil. Cover the fertiliser with about 5 cm of soil, and plant the tree, tamping the soil firmly, and watering if possible to settle the soil and exclude air pockets.

If water is available, and for quick growth, use trickle irrigation. However, in arid areas or where water is short, native plants can be raised without supplemental water, and develop a more extensive root system; this makes them more hardy, although growth is slower.

Trickle irrigation is desirable on the coastal sands which hold little water. It allows plants to survive the first summer or two, until they are established. Compost is also useful on the sands as it helps retain moisture, and may supply some nutrients.

Do not use the trickle system after the first summer or two or your plants will be soft and will flower poorly. Hardy plants usually flower much better.

A common fault is to prune side branches as they develop, in an attempt to encourage tall, straight growth. Such pruning restricts root growth, which is proportional to above-ground growth. Species selected for tall growth from a single trunk naturally shed their lower branches, and if branching species such as the mallee type are pruned for upright growth, they often do not grow into attractive plants.

Generally, staking of smaller trees and shrubs is not necessary, and some stakes can be dangerous in a garden.

Older trees which have been crowded in the nursery or have had all branchlets removed as they have formed, are usually spindly, and will need staking and tying if they are to grow upright. This staking must be continued for several years and poor tying can cause bark damage.

If consistent high winds are expected, then staking is usually necessary to avoid distorted growth. Where high winds are persistent, such as on the Greenough Flats near Geraldton, trees and shrubs should be planted in clumps.

Once native plants are well established, they may be pruned to desired shapes or left to grow...
normally. Overcrowding is a common fault which makes heavy pruning necessary. Planting species which grow too big, such as the Tasmanian blue gum, also adds to later pruning needs.

Ground covers may be planted close together, but usually must be watered at least for the first summer so that they spread well. Once established, they need little care.

Establishment of creepers is similar to methods for other species, but for best results they must have a support to climb over.

Plants suited to a native garden

Although species may vary in growth due to changes in soil and habitat, the following classifications should help the selection of plants for a garden.

If in doubt, check with a reputable authority as nothing is more frustrating than a beautiful plant in the wrong place.

Listed below are a few of the suitable plants.

Ground covers

*Acacia bidentata*—well suited to lighter soils.
*Acacia pilosa*—a good cover for lighter soils.
*Banksia prostrata*—red brown flowers.
*Brachyserma latifolium*—dark red pea flowers.
*Dryandra nivea* (prostrate form)—good on sands.
*Dryandra obtusa*—good for sandy soils.
*Dryandra tenuifolia*—prostrate form.
*Dampiera diversifolia*—purple flowers.
*Dichondra*—prostrate creeper.
*Grevillea prostrata*—cream flowers.
*Grevillea bidentata*—cream flowers; prostrate normally.
*Hakea bipinnatifida*—can be forced into prostrate form.
*Hakea prostrata*—yellow flowers.
*Hardenbergia comptoniana*—normally a creeper but can be used as a ground cover.
*Hemiandra pungens*—very pretty but leaves are prickly.
*Hibbertia lasiopus*—yellow buttercup.

*Kennedia coccinea*—coral vine.
*Kennedia prostrata*—red flowers.
*Lechenaultia hirsuta*—red flowers.
*Lechenaultia longiflora*—red/yellow flowers.
*Myoporum parvifolium* (prostrate form)—white flowers.
*Carpobrotus* (Mesembryanthemum)—pig face plants.

Shrubs

*Acacia* spp.—many varieties from small shrub to tree size.
*Atriplex* spp. (salt bushes)—mostly have attractive grey-green foliage.
*Agonis* spp. W.A. peppermints—vary from small shrubs such as *A. hypericifolia* to *A. parviceps* in the medium range, and *A. flexuosa* which is a small tree.
*Adenanthes*—very attractive red flowers.
*Anigozanthos* spp.—the Kangaroo paws.
Astroloma spp.—small shrubs with attractive small tube-like flowers.

Actinotus spp.—the flannel flowers.

Baeckea spp.—masses of small flowers.

Beaufortia spp.—a type of bottlebrush.

Banksia spp.—many fine shrubs but they succumb to die-back easily.

Calceasia cyanea—star flowers.

Calothamnus—one sided bottle brushes.

Callistemon—bottle brushes.

Calytrix—the star flowers—very showy.

Cassia—very showy flowers—mostly yellow.

Casuarina—the sheoaks.

Chamelaucium—wax plants such as Geraldton etc.

Chorizema—numerous pea flowers in reds and pinks.

Conostylis—small grass-like plants with grey foliage and yellow flowers.

Dampiera—small plants with masses of blue flowers.

Dryandra—Banksia-like plants of great charm.

Eucalyptus—many may be used as shrubs (see special list).

Grevillea—a very numerous group of hardy plants with magnificent “spider” flowers.

Hakea—another very numerous and hardy group of plants with a very showy flower display.

Hibbertia—the buttercups.

Hypocalymma—small plants commonly known as myrtles. Hardy, good floral display and often perfumed.

Kunzea—another bottle brush type of plant in pinks and reds.

Lechenaultias—easily grown and well known. Colour of flowers vary from blue to red and plants are all quite small.

Melaleuca—the paperbarks and honey myrtles. Many forms and flower colour varying from white to yellow, pink, red and purple. Ideal garden plants with heavy flowering in season.

Nuytsia—the W.A. Christmas tree. A semi-parasite which is very slow to grow, sometimes taking 10 years to flower, but is worth waiting for.

Pimelea—the banjine and sometimes called a native rose. Small shrubs with very attractive pink, white or yellow flowers.

Regelia—another plant similar to the bottle brushes, very well worth growing.

Templetonia—the red flowered cockies tongue grows well near the coast.

Verticordia—the morrison of many colours and sometimes called feather flowers. An ideal plant for clumping.

Feature grasses

Danthonia spp.—the wallaby grasses.

Themeda australis—kangaroo grass. Both these grasses are attractive and do not spread easily from the clumps.

Trees

Banksia—many small trees exist in this group from B. grandis to B. prionotes and B. menziesii. All have beautiful flowers and interesting seed cones.
Hakeas—some varieties such as *H. laurina* and *H. preissii* are small and very attractive trees.

Acacias—many grow into quite large trees. Unfortunately most have a life span of less than 20 years.

Casuarina—the sheoaks provide some magnificent trees such as *C. decaisneana* (desert Oak), *C. decussata*, *C. dielsiana*, *C. fraserana* and *C. suberosa*.

Agonis—the W.A. peppermint trees are widely used, for example, *A. flexuosa* grows to 16 m while *A. juniperina* is a very small tree or large shrub.

*Callitris robusta*—the hardy Rottnest Island pine.

Eucalyptus—a very numerous family with a plant for almost every situation from almost on the beach to the inland desert.

- *E. botryoides*—grows to 20 m—a good tree.
- *E. calophylla* (rosea)—beautiful but big at 30 m.
- *E. cladocalyx* (nana)—to 10 m and very attractive.
- *E. erythrocorys*—the illyarrie of large yellow flowers.
- *E. falcata*—white mallet—smaller tree.
- *E. ficifolia*—red flowering gum.
- *E. gomphocephala*—the tuart grows to 30 m.
- *E. lehmannii*—unusual type of small tree.
- *E. leucoxylon* (rosea)—pink flowers in profusion.
- *E. platypus* (heterophylla)—a dense shrubby tree.

E. *robusta*—the swamp mahogany has masses of creamy yellow flowers.

Others which are worth growing—
- *E. caesia*—the magnificent pink flowered gungunnu.
- *E. decipiens*—grows on coastal limestone and resembles a miniature tuart.
- *E. macrandra*—masses of yellow flowers.
- *E. torquata*—the beautiful coral gum.
- *E. spathulata*—very attractive and salt tolerant.
- *E. sargentii*—very attractive and salt tolerant.
- *E. toditiana*—the coastal blackbutt.
- *E. eremophila*—an inland mallee of great beauty.
- *E. kingsmillii*—a desert type of great beauty.

**Climbing plants**

*Hardenbergias*—the native wisterias give a magnificent display of purple or mauve flowers.

*Kennedia nigricans*—a very strong grower with black and yellow flowers.

Other Kennedias will climb and provide a very colourful display.

*Clematis*—covers a considerable area and has attractive white star-like flowers.

The above are only a few of the many hundreds of Western Australian and Australian plants available for a native-type garden. Each year many more are being made available to add colour and interest to the garden.

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**Drought-hardy plants of overseas origin**

- *Agapanthus* (lily of the Nile)
- *Agave*
- *Acalypha*
- *Antigonon* (Mexican rose)
- *Acalypha*
- *Bauhinia*
- *Bougainvillea*
- *Bignonia*
- *Caesalpinea* (pride of Barbados)
- *Coprosma*
- *Cotoneaster*
- *Erythrina*
- *Galardia*
- *Gazania*
- *Geranium*
- *Hoya*
- *Jacaranda*
- *Kalanchoe*
- *Vinca*
- *Genista* (yellow broom)
- *Crepe myrtle*
- *Lantana*
- *Lavender*
- *N.Z. Christmas bush*
- *Loquats*
- *Olive*
- *Plumeria* (frangipani)
- *Portulaca*
- *Portulacaria* (jade)
- *Sansevieria*
- *Schinus molle* (peppercorn tree)
- *Stenolobium* (yellow bells)
- *Thevetia* (yellow oleander)*
- *Rosemary*

*poisonous*