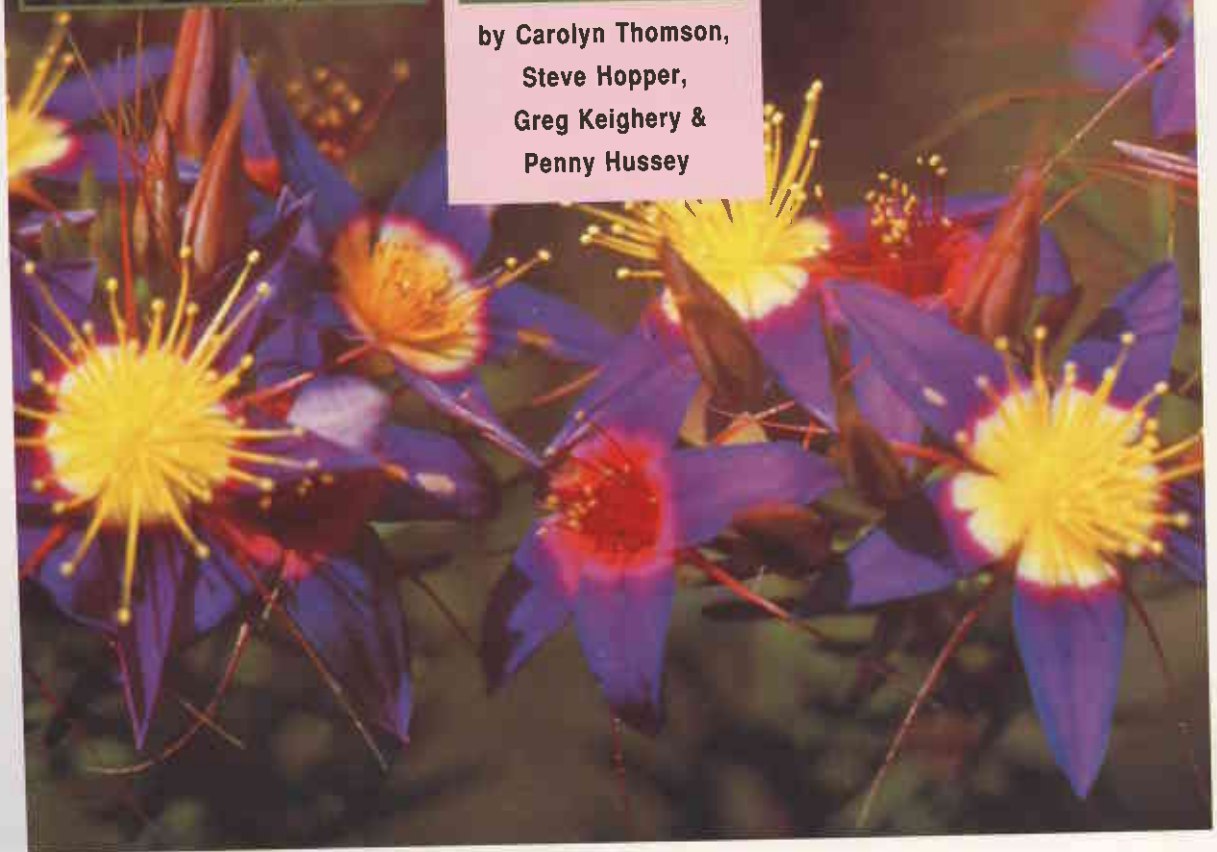


Wildflower Country

Kangaroo paws, everlastings, featherflowers, orchids and banksias - many of them unique to WA - are just a few of the many wildflowers that draw tourists and wildflower enthusiasts to the country north of Perth. A new book, *Wildflower Country*, explores this flora-rich area from Jurien to Shark Bay and inland to Meekatharra.



by Carolyn Thomson,
Steve Hopper,
Greg Keighery &
Penny Hussey



Wildflower Country covers an area with over 3 000 species of flowering plants. It is one of the most diverse wildflower areas in the world, with a great burst of flowers during spring. The book encompasses the kwongan (shrublands) of the northern sandplains, the woodlands and shrublands of the northern Wheatbelt, the desert regions of the Murchison Goldfields and the arid peninsulas of Shark Bay.

Previous page:

Parakeelya. Photo - Jiri Lochman
 Honey possum on Hooker's banksia.
 Photo - Jiri Lochman
 Cowslip orchid. Photo - Andrew Brown
 Purple starflower. Photo - Tony Tapper

Hooker's banksia, confined to the Eneabba area, is favoured by the wildflower trade.
 Photo - Jiri Lochman

The northern sandplains and Batavia Coast is one of two parts of southern Western Australia where species-rich heathlands are best developed. Flowering is at its peak in August and September, depending on rains.

The plants of the northern kwongan are the typical Australians: the banksia family, the eucalypt family, the boronia family, the southern heaths and the peas. These five families dominate the vegetation types of the region, and provide more than half of the area's species.

NORTHERN SANDPLAINS

The sandy or lateritic soil of the northern sandplains supports mostly heath or kwongan, but there are also large areas of mallee shrublands and swamps or woodlands in valley floors or depressions.

Low heath dominated by blackboys

is common on the lateritic uplands. This plant community is conspicuous around the Badgingarra and Mount Lesueur area. Another striking plant is the zamia, seen growing over two metres tall along the banks of Coomallo Creek, near the Jurien Bay turn-off on the Brand Highway.

In spring, colour is provided *en masse* by perennial herbs and shrubs, especially the wattles, smokebushes, banksias, grevilleas, bottlebrushes, numerous species of pea, coneflowers, starflowers and leschenaultias. This colour continues into spring with copper cups and feather-flowers, the famed *Verticordia* species. One of the most striking verticordias is orange morrison, which flowers in early summer and can be seen in profusion at Moore River National Park.

The yellow kangaroo paw, which has many flowers borne on tall stems, is one of the showiest plants of the sandplains, flowering from December to January. The region's abundant orchids include sun orchids, such as the Queen of Sheba and its spectacular relative Cleopatra's needles, and spider orchids.

Common banksias of the heaths include candle banksia, which can be recognised by its long, yellow flower spikes, and the firewood banksia, which has red, white and yellow flower spikes. Both species grow all the way to Kalbarri and at least one of them is usually in flower at some time of the year. Hooker's banksia, confined to the Eneabba area, is favoured by the wildflower trade because of its rich orange and white flower spikes.

Inland, kwongan grows on sedimentary sands mostly comprised of quartz. The heath is interspersed with small lakes, swamps and occasional woodlands. The heath contains eucalypts, chiefly pricklybark, or banksias. Hooker's banksia and sandplain woody pear are common on the deep sandy soils. Spectacular examples of heath communities can be seen in Badgingarra, Alexander Morrison, Watheroo and Tathra National Parks and Mount Lesueur.

In many of these places, a bewildering variety of different plants coexist in a small area. The region is especially rich in dryandras and there





This one-sided bottlebrush grows at Badgingarra National Park and Mount Lesueur.
Photo - Tony Tapper ▲◀◀

Zamia fruits were used by the Aborigines for food, after first treating them to remove the poisons.
Photo - Jiri Lochman ◀▲

Candle banksia is used by many birds and insects. Honeyeaters drink the nectar and they and other birds pluck insects off the flower-spikes.
Photo - Gerhardt Saueracker ▲

This tall grevillea is known as "old socks" because of its unpleasant smell.
Photo - Jiri Lochman ◀

are numerous pea plants. *Daviesias*, with their crowded stems of red-brown flowers, are noticeable, as they flower in winter. The staghorn bush, a *daviesia* with flattened stems and large nodding scarlet flowers, also grows here.

BATAVIA COAST

The Batavia Coast has a similar character to the northern sandplains. The tall sandheaths between Dongara and Kalbarri support 12 types of banksia, including sceptre banksia and the uncommon Burma Road banksia, which has globular, rather than cylindrical, flowerheads. There are about 10 other species with similar flower spikes, most of which are found in the northern sandplains. The presence of large numbers of similar species within the same group is a typical feature of the region's rich flora.

Parrotbush, an upright shrub with prickly-toothed leaves, grows on limestone outcrops amid a distinctive heath vegetation. Its cream flowers, which appear from late autumn to late

spring, are used extensively by beekeepers. Isolated clumps of *illyarrie* grow best on the limestone hills between Cervantes and Dongara and north to the Zuytdorp Cliffs. This small white-barked tree stands out with its scarlet bud caps and bright yellow flowers. The spoon-leaved wattle flowers in August, turning the area golden yellow. North of Dongara, low wind-pruned heath covers the tall coastal cliffs, and succulent herbs become increasingly common towards Shark Bay.

There are many different hakeas, including the spectacular red pokers, and there are avenues of a tall grevillea with cream flowers, known as 'old socks' because of its pungent smell. Beneath the taller plants are a wealth of smaller ones, including many delicate orchids, and the tiny stars of yellow *logania* and the felted bellflower.

Kalbarri National Park is also rich in plant species. Several species are unique to the area, including the Kalbarri spider orchid, which can only be seen at Kalbarri National Park and adjacent areas.

Sandstone species grow along the gorge and at Red Bluff, while the heavier redder soils at the eastern end of the park support mallee and wattle scrub and small pockets of eucalypt woodland. Low coastal heaths and banksia heaths and thickets grow on the sandplains which dominate the park.

NORTHERN WHEATBELT

The woodlands and shrublands of the Wheatbelt merge into the heathlands on their eastern margin. This region is drier, and the soils are less sandy. The loamy soils of the broad valleys are covered with woodlands of salmon gum, York gum or wandoo. Sandy soils usually support thickets of sheoaks, wattles or melaleucas. Granite outcrops are scattered throughout the area.

The granites are among the oldest rocks in the world. They are islands in a sea of woodlands or wheatfields and they contain many diverse habitats within a small area. Many plants are confined to them. Lichens are the only plants able to gain a foothold on the bare rock. Depressions that fill with water in winter

support primitive fern-like quillworts and tiny annual mud-mats. Pincushions - which dry out and appear to be dead in summer but rapidly rehydrate and turn green after rain - are found in the shallow soils that fringe the rocks. Sun orchids and spider orchids are often scattered amongst the pincushions. Larger shrubs, such as hop-bushes and blind grass, and wattles, such as jam, grow in adjacent deeper soil.

The salt lakes that are found in depressions throughout the area are typically covered in heath of samphires, which are low and spreading salt-tolerant plants. A few species of these fleshy plants, such as the large-articled samphire, are rare and confined to the northern Wheatbelt. The slightly elevated sandy rises fringing the salt lakes are home to several unusual orchids. Perhaps the most bizarre species in the northern Wheatbelt is the hinged dragon orchid, which is pollinated by male wasps. The orchid has

inconspicuous flowers that mimic flightless females.

The thickets can be colourful in spring. Within the woodlands the first carpets of brightly coloured annuals are found, which reach the apex of their development in the Murchison Goldfields.

Pigface growing at the edge of Lake Moore near Paynes Find.
Photo - Marie Lochman ◀▼

Bright podolepis forms part of the floral carpets that form in the Murchison during August and September if there are good rains.
Photo - Marie Lochman ◀▼▼

The spotted bowerbird is fairly common in the Murchison, where it builds bowers in the undergrowth.
Photo - Jiri Lochman

MURCHISON GOLDFIELDS

The Murchison Goldfields is a transitional area, rich in plants, that links the central deserts and northern Wheatbelt. This is a region of red sand, salt lakes, low ironstone hills, red-brown loams and granite rocks. Woodlands, mallee over spinifex, and acacia shrublands or woodlands, especially mulga, grow here.

If rain arrives in winter, the shrublands or woodlands are carpeted with annual flowers in spring. The area has the highest concentration of such annual short-lived species in Western Australia. There are many different species of everlastings - plants in the daisy family with papery flower parts that, if dried carefully, will keep their colour and form beautiful, long-lasting flower arrangements. They have a breathtaking array of different forms and colours. There are pom-pom everlastings, pink cluster everlastings,



poached egg everlastings (with yellow and white flowers), sticky everlastings (pink), charming sunrays (bright yellow) and, with the largest flowers of all, the splendid everlastings (cream flowers with a yellow centre).

Some of the daisies in the floral carpet are not strictly everlasting, as they do not have papery flower parts. They include the mauve or white-flowered Swan River daisy, golden longheads, bright podolepis and billy button sunray (all yellow). Some of the most delightful daisies are the tiny ground-hugging plants in odd shapes, like the committee plant, which looks as though the designer could not decide what it was supposed to be. Tiny plants from other families include the pink trumpet stylewort, which is related to the trigger plant. On drying claypans and river banks, look for the trailing stems and bright blue flowers of peplidiums.

Two species in the *Leschenaultia* family contribute substantially to the colour carpet, especially on the edge of the Wheatbelt. Pink velleia is prominent at Jibberding, while swathes of the large, delicate yellow flowers of cut-leaf goodenia form drifts under the shade of wattles between Yalgoo and Morawa.

All of these are temporary plants, and they survive the dry season as seeds. However, there are some plants which regrow each year from bulbs or tubers. They include the upright pale lilac spikes of Murchison Nancy and the



delicate mauve of nodding chocolate lily, which smells, in the evening, of milk chocolate.

As you go further north and east into the drier areas, the composition of the ground flora changes, and everlastings give way to mulla-mullas, which have pink, mauve or green hairy flowers, and to peas such as swainsonas, which have deep purple flowers.

The sandalwood tree grows throughout the Murchison and can also be seen in some areas of Shark Bay and the northern sandplains. It has irregular



The Shark Bay daisy is a creeper that grows over shrubs and covers them in daisies.

Photo - Jiri Lochman

Yellow-faced whipsnake.

Photo - Jiri Lochman

spreading branches, grey-green fleshy leaves and red fruits. The small tree's aromatic wood provided vital export income in the early days of the Swan River Colony and is still a valuable export today. Sandalwood is a semi-parasite that uses a range of host species.

DESERT COAST

A unique mix of southwestern species and desert plants grow on the arid prongs of Shark Bay. The southern heaths end on Edel Land, and over 20 unique plant species are found only here. The aromatic Tamala rose is one of the region's most well-known and showy species. The spectacular sceptre banksia flowers in summer and provides nectar for honeyeaters and insects. At 30 centimetres, its cone of flowers is unusually long.

The red sandplain country traversed by the Useless Loop Road extends well southwards. It is home to many plants found nowhere else. Among them are Royce's gum, Rogerson's grevillea and a golden lambstail, a shrub that grows to two metres tall, covered in golden felt-like hairs.

Peron Peninsula is much more arid, with sandhills, limestone, and shallow

saline lakes known as birridas. The scenery is spectacular but the vegetation is low and wind-pruned and dominated by wattle shrubland or spinifex grasslands. Annuals, such as the Shark Bay daisy, are only common around saline depressions.

Whether your interests are wildflowers, or enjoying some of the spectacular landscape of this part of the world, *Wildflower Country* has something for everyone. It includes a seven-page wildflower calendar that features over 150 species. The calendar will help people identify wildflowers by their colour, the locality in which they are found, and the season in which they flower. There are also comprehensive wildflower indexes of scientific and common names and a locality index to the area's many attractions. The region it covers is about to burst into masses of spring flowers, so grab the book and take a walk on the wild side. □

Carolyn Thomson, a Communications Officer with CALM, is the editor of *Wildflower Country*. Botanists Steve Hopper, Greg Keighery and Penny Hussey also work for CALM and contributed extensively to the book. *Wildflower Country* is a sequel to the successful series of guides to WA's natural areas that include *North-West Bound*, *Wild Places*, *Quiet Places*, and *Beating About the Bush*. It is available from CALM offices and all good bookshops and newsagents for \$19.95.

LANDSCOPE

VOLUME SEVEN NO. 1 SPRING EDITION 1991



A wave of colour is spreading from Shark Bay to Jurien and inland to Meekatharra. Our story on page 10 takes you into Wildflower Country.



The WA Museum is 100 years old. It houses a staggering four million specimens of insects, marine animals, fish, birds, reptiles and frogs. Page 22.



Seven species of microscopic dieback-disease fungi are attacking WA's unique wildflowers. See page 28.



The rugged Pilbara landscape has some hidden delights. On page 16, go up hill to Hamersley Range, then down Dales and other spectacular gorges.



How does WA's conservation heritage look to the people who look after it? Turn to page 26 for some great photographs from a recent competition run for CALM staff.

FEATURES

WILDFLOWER COUNTRY CAROLYN THOMSON, STEVE HOPPER, GREG KEIGHERY AND PENNY HUSSEY	10
UP HILL, DOWN DALES ALAN PADGETT, STEPHAN FRITZ	16
COLLECTIONS OF A CENTURY PATRICK BERRY	22
THROUGH CALM EYES	26
WILDFLOWER KILLERS BRYAN SHEARER, RAY WILSON AND MIKE STUKELY	28
OF MISTS AND MOUNTAINS JOHN WATSON	35
SPACE INVADERS OF A WEEDY KIND! PENNY HUSSEY	39
PARADISE ON THE EDGE TONY FRIEND	45
DRAWING THE LINE ROBERT POWELL	49

REGULARS

IN PERSPECTIVE	4
BUSH TELEGRAPH	5
ENDANGERED QUENDA	15
URBAN ANTICS	54

SPECIALS

PHOTO COMPETITION	9
KIDS AND TREES ARBOR DAY POSTER COMPETITION	52

COVER

Out now! Wildflowers are blooming in the vast tracts of country north of Perth, especially in the northern sandplains and Murchison, which is experiencing a bumper wildflower season following heavy winter rains. Philippa Nikulinsky's illustration shows some of the wildflowers for which WA is justly famous: the splendid everlasting, buttercup, red leschenaultia, Sturt's desert pea, catspaw, wattle, native wisteria, black kangaroo paw, flame pea, and scaevola - all covered in the newly released book, Wildflower Country. See page 10.



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