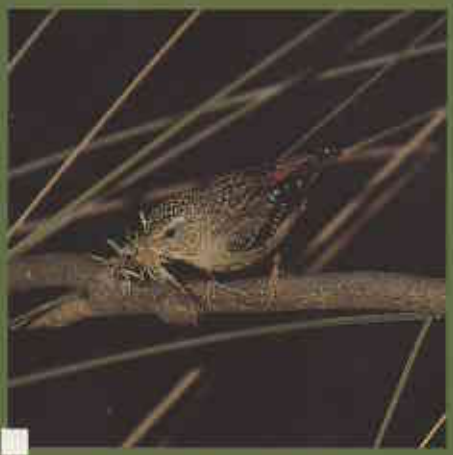
LANDSCAPING FOR WILDLIFE

by Robert Powell

We tend to think wildlife lives in the country, but much of it also survives in the Perth area. Every person can help to conserve the city's wildlife. Naturalist Robert Powell tells us how.



MORE than ever it is in our interest to conserve Perth's wildlife; its presence, especially that of birds, gives us a sense of well-being. The more wildlife we have around us, the more we can learn about and appreciate nature.

As Perth continues to expand, there is a danger that its wildlife will diminish; but this can be minimised if enough habitat is conserved, or re-created.

One of the most important things is the choice of plants. In recent years there has been a trend towards planting native plants, for their appearance, and for their ability to withstand harsh natural conditions. Most Australian native plants, however, are not natural to Perth, and may be quite 'foreign' to the local wildlife. By taking a further step we can plan our open spaces to benefit wildlife, an approach called wildlife landscaping.

THE VALUE OF LOCAL PLANTS

Wildlife landscaping uses local plants - the species that grow naturally on the site, or grew there before it was cleared or disturbed. These are the plants with which our local animal species have evolved.

Many people believe that any Australian trees or shrubs will provide good habitat for wildlife. Although many non-local native plants do provide nectar and pollen for some birds and insects, insect larvae mostly use local plants. Therefore we need local plants if we are to preserve the great diversity of insect species, which are a very significant part of our fauna, and the main food of many lizards, birds and bats.

Under Western Australian law, both local plants and animals are defined as wildlife, and are valued for their own sake. And they are a living link with the past: by having local plants we keep something of the setting that our forebears knew. Local plants are also very practical. They are adapted to the soil and climate of their site; so, once established, they need no watering.

The flora of south-western Australia is famous for its richness and for the proportion of species (nearly seven out of ten) that do not occur naturally anywhere else. Perth's natural flora is fairly typical of the South West in general, and shares its richness and interest.

Firewood banksia - one of the two commonest banksias on the coastal plain near Perth. Although its flower-spikes are greatly admired, it is rarely grown. Visiting it is a New Holland honeyeater.
Photo - Michael Morcombe ▲

The foliage of this flooded gum, a local eucalypt, shows the marks of numerous different insects; yet the tree is healthy and vigorous. Local trees support many insects, which provide food for birds. In contrast, the foliage of Eastern States trees commonly planted in Perth, such as river gums, is often almost unmarked, showing that it is of little use to wildlife.
Photo - Robert Powell ▶

Of the 1 400 or so plant species that occur naturally in the Perth Metropolitan Region, the vast majority are small - herbs and low shrubs. Many are highly admired. Some of WA's best-known orchids, kangaroo paws, buttercups, banjines, leschenaultias and myrtles belong to this region.

There are many distinctive plant communities, such as banksia woodland, jarrah forest, tuart forest, heaths on limestone ridges and granite slopes, and vegetation bordering swamps and rivers.

PLACES FOR WILDLIFE LANDSCAPING

Bush reserves are the most obvious places for wildlife landscaping. Since the local vegetation is already present, the main concern is to control the pressures that cause degradation. An important step is for the body in charge of the reserve to draw up a management plan (contact the Department of Conservation and Land Management's Planning Branch for advice). The planning process should involve the public, and can often result in the formation of a 'Friends' group to help protect the area.

The Darling System - System Six, a report produced by the Department of Conservation and Environment (now the Environmental Protection Authority) in 1983, stressed the value of retaining and managing bush in Perth. Though the report could deal only with the larger areas, virtually any patch of bush (even if very small) provides some valuable habitat.

Many other types of land can be used for wildlife landscaping. Golf courses and many suburban parks and open spaces are very suitable. The verges of railways and major roads can be particularly valuable in providing routes of dispersal for wildlife, especially birds.

Wetlands are a special kind of habitat, with distinctive plants and animals. Many Perth wetlands have been filled in, affected by changes in the depth or quality of water, or turned into ornamental ponds surrounded by lawn. Restoring the natural bands of waterside vegetation, such as reeds and paperbarks, greatly increases their value to birds and other widlife, and may help to keep insects such as midges down to a natural balance. Earthworks may be useful, for instance, to deepen a disturbed wetland or to create islands safe from dogs and cats.

Ordinary street verges have their limitations, such as power lines over one side, and the need to maintain visibility for users of footpaths and driveways. There are, however, some local trees that are suitable for street verges. Collectively, street verges occupy a very large area, so their landscaping can have a very positive influence on the amount of habitat in the suburbs, especially for birds. For example, the Kings Park Board is replacing the non-local memorial eucalypts in the Park, when they die, with mostly local species, such as marri. This is one way of ensuring that verges will offer improved habitat in the future.

Private gardens occupy a very large part of Perth. Although most of us have other uses for much of our gardens - for lawns, vegetables, and so on - in many cases there will still be room for a small patch of local plants. Many local shrubs need little space. The rewards are: giving your block a special identity as part of the natural environment; seeing the plants being used by associated animals, especially insects; and knowing you have done something to preserve the habitat of insects, lizards and birds.

The references given under FURTHER READING will help you determine which species are likely to have occurred naturally on your block. Some are available from nurseries, but it is best to grow the plants yourself (see ESTABLISHING PLANTS). A group that specialises in obtaining and growing local plants is the Local Plants Group (31 Auborough Street, Doubleview, WA 6018). The Western Australian Wildflower Society (PO Box 64, Nedlands WA 6009) sells seed of a number of local species.

DESIGN

In creating new suburbs it should not be necessary to destroy all vegetation: many home-buyers would prefer to move into a harmonious bush environment. Bush should be left in many open spaces, and on private blocks it should be possible for the planning authority or the developer to minimise clearing by limiting it to the house site and its service lines. The common design of suburbs nowadays, with crescents and cul-de-sacs, and many

Bush areas are rich in plants, and animals such as insects, lizards and birds.
Photo - Robert Powell ▶▲

Part of a garden on the Darling Scarp, containing plant species that grow on the Scarp naturally.
Photo - Robert Powell ▶▶▲

Seedlings of blueboy, with the parent plant behind. Many local trees and shrubs will regenerate readily if allowed to.
Photo - Stephen Kelly ▶

Title page: (clockwise from top left) cowslip orchid, spotted pardalote
Photos - Jiri Lochman,
red and green kangaroo paw
Photo - Marie Lochman,
the jewel beetle *Cyria vittigera* on its host plant, swamp banksia
Photo - Peter McMillan.

Peppermint, Swanbourne. Naturally occurring trees should be retained wherever possible, for their character as well as their biological value.
Photo - Stephen Kelly ◄

Young freshwater paperbarks, Herdsman Lake. In the spring of 1982 two branches containing seed-capsules were cut from trees near by that were about to be destroyed by land development. The branches were placed in the shallow water; when the water receded in summer, they dried out and released their seed. The trees seen here are the subsequent regeneration.
Photo - Robert Powell ►

power lines underground, offers more scope for preserving stands of trees and shrubs on verges as well. This reduces the need for planting and watering, and gives an instantly attractive environment.

In established suburbs, modern traffic planning often allows for narrowing some roads and the creation of cul-de-sacs, providing extra room for wildlife landscaping.

New parks can be developed in many different ways. Usually plants from different geographical regions are mixed together in the one place. However, where wildlife landscaping is chosen, it is best to make it the sole theme. If natural associations of local plants are used, the result is a harmonious blend that offers relief from the regimented effect of buildings and formal planting. Labelling the local plants can help the public to get to known and value them.

Local trees and shrubs can be added to established parks, increasing their value as fauna habitat. It is even better to develop them, or parts of them, for wildlife as the sole theme, by removing non-local trees and shrubs and replacing them with local ones. This should be considered especially in suburbs where there are no bush areas left.

On a small scale, the same things apply to gardens. The most harmonious effect is gained by setting aside one part, even if tiny, for local plants alone.

ESTABLISHING PLANTS

In wildlife landscaping, natural regeneration is preferable to planting. It has a more natural effect, and it maintains the character of the vegetation. In many situations, mature local trees and shrubs will reproduce. If they appear not to, it is usually because their seedlings are killed when very young, by mowing, hoeing, burning, trampling, and so on. In grassed parks, creating garden beds near groups of trees will allow their seedlings to survive.

Where all the natural plants have disappeared, it will be necessary to plant either seedlings or seeds. The plant community that would have grown naturally on the site can serve as a model. It is difficult to restore the full diversity of natural vegetation, but at least representatives of the different sizes of plant can be obtained.

Many parks will have had several plant communities that differ from each other slightly or considerably. The distributions of remaining trees and shrubs may confirm this. Planting in a way that preserves that natural variation increases the interest and educational value of the park.

The plants should be grown from seeds or cuttings collected from naturally occurring specimens near by. Many trees and shrubs vary in form in different parts of their natural range. Collecting locally will help preserve this variability, and ensure that you have the form adapted to your locality.

Irregular groupings of plants will give a more natural effect than even spacing. It is preferable to plant trees out when small and not to tie them to stakes: they will then develop more strongly and produce more varied, graceful growth-habits.

MANAGEMENT

Mature local plants are best left unwatered. However, the survival rate of planted seedlings will be improved by watering weekly or fortnightly in their first summer. Weeds should if possible be controlled, but the soil should be left undisturbed. Wherever possible, allow the mulch that collects under natural plants to remain. It provides habitat for soil fauna, helps conserve soil moisture, and may suppress weeds. Logs and fallen branches too should be left where possible. They provide homes for a diverse range of animal species.

Lopping trees reduces the habitat they provide. It may also make them structurally unstable: the regrowth is easily blown down. Besides, trees are more than a trunk and a mass of foliage: much of their natural beauty lies in their great variety of form and fine detail.

We can minimise the need to prune by not planting trees and shrubs where they will outgrow their space, particularly the space above them. Near the coast, allow for plants to lean away from the south-west.

If pruning is necessary, we can minimise its impact by removing only branches that are in the way. Remove

the whole branch, leaving no protruding stump. Dead limbs should be left wherever possible. Many birds favour them as perches, and they often contain hollows or crevices that provide nest-sites or refuges for birds, bats, lizards, spiders and insects. Besides, dead limbs contribute to the beauty of a tree or shrub, by adding interesting detail and reinforcing its natural patterns.

CREATING HABITAT ARTIFICIALLY

Some animal species have benefited from new habitats created by urbanisation. The welcome swallow, which has learnt to nest in buildings, has become more plentiful in Perth. For many other birds, however, nesting-habitat has been reduced.

Providing more natural vegetation will eventually increase nesting-habitat, but the process might be speeded up by installing nest-boxes. These have been successful in many other countries, and have enabled some bird species to re-establish themselves in districts where they had not been seen for a long time. The same could happen here. Experimenting with different designs and positions of nest-boxes will help you find the requirements of different species.

HOW YOU CAN HELP

Each one of us can help wildlife in the city and suburbs. We can take an interest in public open spaces, and point out to the relevant authorities areas where wildlife habitat can be conserved or created. We can join 'Friends' groups, and help manage bush areas.

Sacred kingfisher returning to its nest. Mature to old trees are needed to provide nest-sites for the many bird species that nest in tree-hollows.
Photo - Bert Wells ▶▲

Some local trees, such as this limestone marlock, are of suitable size for street verges, especially where there are no wires.
Photo - Robert Powell ▶

Furthermore, many of us have our own gardens. If we each grow even one plant that is local to our block, we shall be doing something towards preserving wildlife - both the plant species itself and the insects and other animals that use it.

FURTHER READING

The following publications provide information on the flora and plant communities of the Perth area:

The Bushland Plants of Kings Park, Western Australia, by Eleanor Bennett (Kings Park Board, 1988)

Flora of the Perth Region, by Neville Marchant *et al.* (Western Australian Herbarium, 1987)

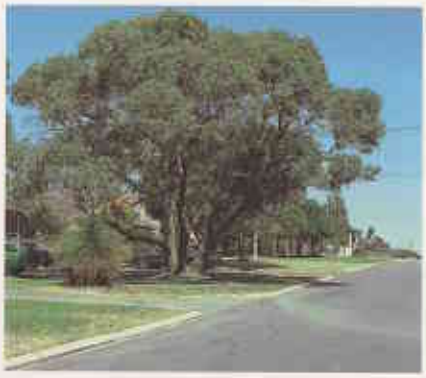
A Guide to the Coastal Flora of South-Western Australia, by Gordon Smith (Western Australian Naturalists' Club: Handbook No.10. Revised edition, 1985)

Leaf and Branch, by Robert Powell (Department of Conservation and Land Management, 1990)

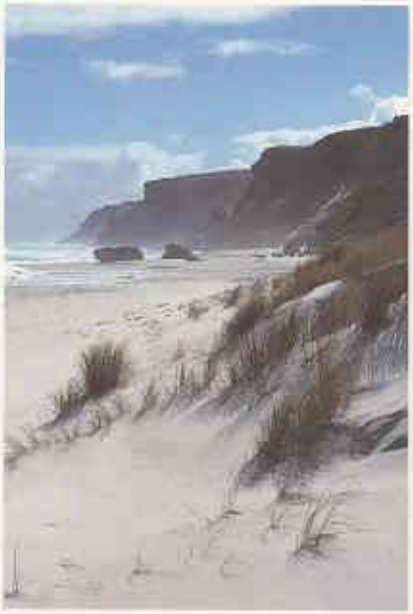
The Self-effacing Gardener, by Robert Powell & Jane Emberson (1979, reprinted 1988; available from the authors)

Sense of Place, by George Seddon (Uni. of Western Australia Press, 1972).

Lizards such as this spiny-tailed gecko can survive in gardens where habitat is suitable. ▼▼
Photo - Robert Powell



Robert Powell is the author of *Leaf and Branch*, the definitive guide to Perth's trees and tall shrubs, and is a firm proponent of landscaping for wildlife. This article was written with the assistance of academic Jane Emberson. It is a revised form of the leaflet *Greening Parks and Gardens for Wildlife*, published jointly by CALM and Greening Australia (W.A.).



LANDSCOPE

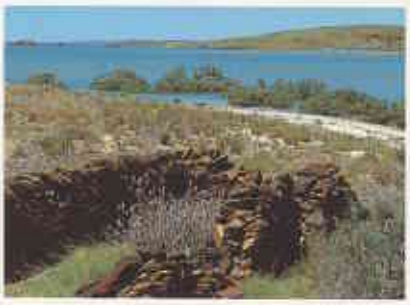
VOLUME SIX NO. 3 - AUTUMN EDITION 1991

*Visitors from around Australia are discovering what those who live nearby already know - D'Entrecasteaux...*C'est Magnifique. *Turn to page 10.*

There's more to invertebrates than slugs, maggots and spiders. Turn to page 28 to find out just why invertebrates are so important.

What has happened to Fitzgerald River National Park since the 1989 wildfire? See page 34.

Seabirds nest on Pelsaert Island in the Houtman Abrolhos by the million. See page 17.



Explore the Dampier Archipelago, a group of rocky islands with a violent past and a wealth of wildlife. Turn to page 48.

FEATURES

REGULARS

COVER

Invertebrates play an important role in the ecosystem of WA's jarrah forest. Earthworms, termites and ants fragment leaf litter and mix organic matter. Some soil and litter invertebrates stimulate plant growth. Soil insects such as larval beetles feed on roots, stimulating the plants' growth rate. Our cover illustration is Philippa Nikulinsky's impression of this process at work in the jarrah forest.

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