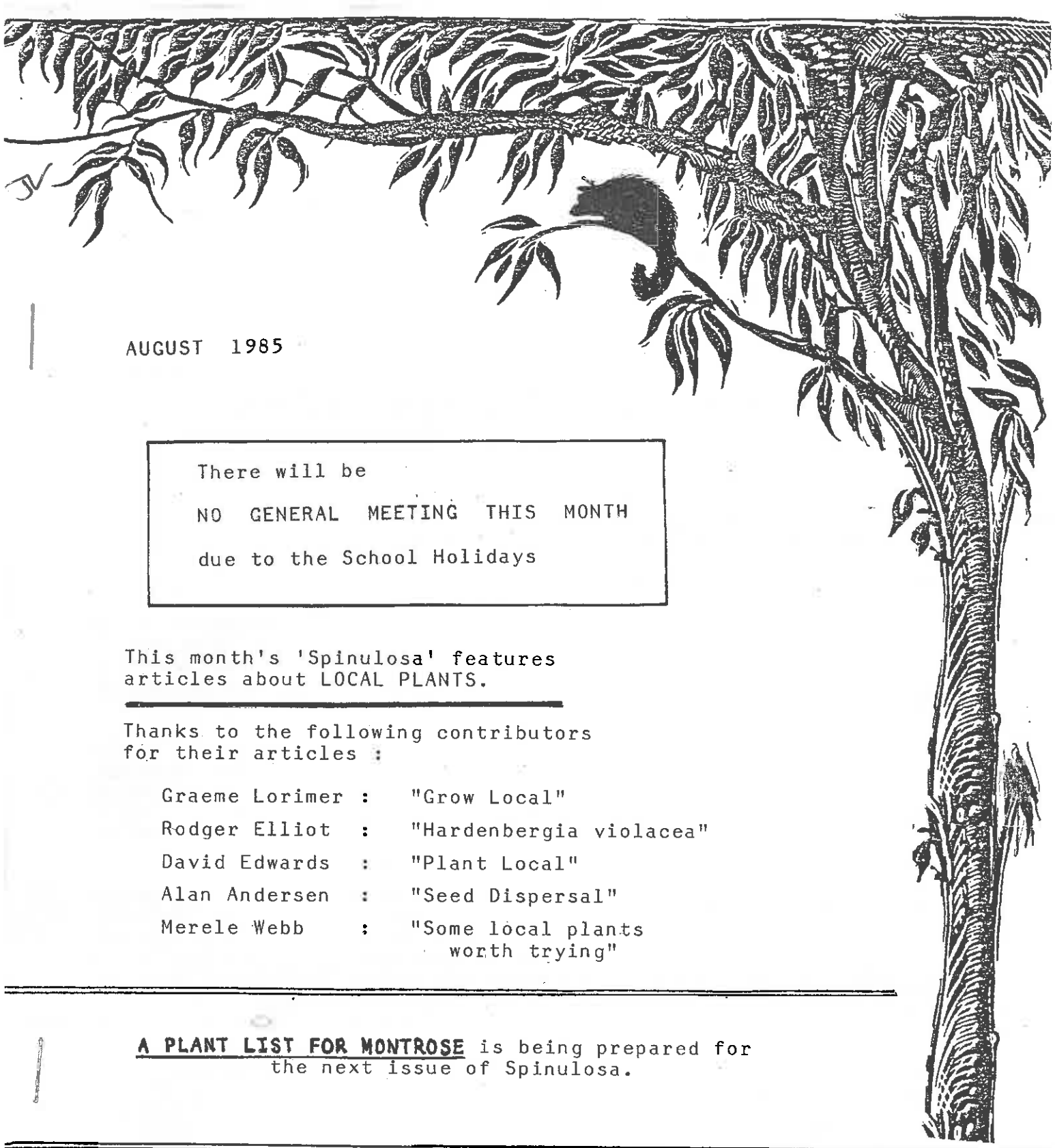


AUGUST 1985

There will be

NO GENERAL MEETING THIS MONTH

due to the School Holidays

This month's 'Spinulosa' features articles about LOCAL PLANTS.

Thanks to the following contributors for their articles :

Graeme Lorimer	:	"Grow Local"
Rodger Elliot	:	"Hardenbergia violacea"
David Edwards	:	"Plant Local"
Alan Andersen	:	"Seed Dispersal"
Merele Webb	:	"Some local plants worth trying"

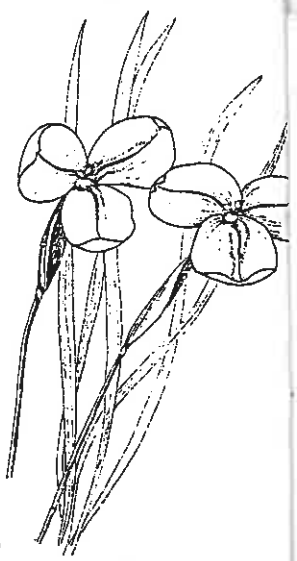
A PLANT LIST FOR MONTROSE is being prepared for the next issue of Spinulosa.

SPINULOSA

MONTROSE ENVIRONMENTAL GROUP NEWSLETTER

P.O. BOX 7, MONTROSE, 3765

MONTROSE
ENVIRONMENTAL
GROUP



Grow Local

for outer-suburban gardens

WHY GROW LOCAL PLANTS?

(a) To create a natural atmosphere

When we set out to design a native garden, we naturally concentrate on the most attractive plants and seek a combination which has the right mix of colours, textures, shapes and sizes to capture and highlight the most beautiful features of the Australian bush. But all too often, we ignore one of the most important visual aspects of our natural landscape.

Look at paintings of bushland around Melbourne by Fred McCubbin or Arthur Streeton, and you see that the beauty comes not so much from the individual plants, but from the overall effect of a natural scene in which everything "belongs". Few gardens really succeed in capturing the subtle qualities - aesthetic or biological - which characterize a natural environment; and yet it can often be done simply by the judicious use of local flora.

The basic strategy is simple: it is to merge an assortment of local plants with a selection of your favourite "nonlocals" which provide the best complement. Implementation of the plan is much the same as the usual approach to native gardening, except that you need a basic knowledge of your local flora to choose which ones go best in your garden (see below). Fortunately, the flora around Melbourne fits in well with a very wide range of other plants - from kangaroo paws of the South-West to bluebells of the alps - so there is plenty of scope for creativity. The visual effect and natural feel which can be obtained is rewarding enough, but there are still more incentives for growing local.

(b) For birds and animals

Most of us love the bird life which Australian plants attract. Of course, many species (such as wattle birds) can be attracted by plants from right around the country, but it's quite a different matter to achieve the diversity which is characteristic of a natural environment. Local plants in your garden will not only increase the variety of bird life, it will also help provide habitat for the less adaptable species which are steadily disappearing from the urban fringe.

In areas like the Dandenongs or Warrandyte, the same is true of animals like echidnas, gliders, phascogales and bats. And the principle extends to insects, which are more beneficial and less likely to cause problems if you promote the ecological balance which exists in natural bushland.

The healthy ecological balance among local plants also makes your garden easier to maintain. Local plants normally grow much better than outsiders (except blackberries, pittosporums and the like). They have amazing regenerative powers, too, and wildflowers often establish themselves if the basic environment is right. On my small block in Montrose, three species of orchids and numerous other plants have appeared in just two years. It's good to have nature on <u>your</u> side in the garden, and it can do a wonderful job on the finishing touches.

(d) And...

There are more reasons for growing local plants, such as education, but ultimately it's for the enjoyment of being a little closer to nature.

WHAT PLANTS SHOULD I GROW?

Your choice of local plants has to take into account the type of land; for example, you need different plants for a shady gully than for a sunny hilltop. To simplify matters, let's ignore complications and concentrate on land typical of Melbourne's eastern and north-eastern fringe.

Trees

Trees are a vital part of any native garden, and it's natural to begin with eucalypts. Narrow-leaved peppermints (Euc. radiata) can look very attractive, or a large garden might be graced by a candlebark (Euc. rubida). Mealy stringybark (Euc. cephalocarpa) is excellent for poorly drained areas and has greyish-green to glaucous new growth. Most of the worthwhile species can be bought ("Treeplanters" Nursery has a good range), but if you particularly like one you've seen but can't buy, they're very easy to raise from seed and grow very quickly (contact MEG for advice).

Wattle trees can be used to form an intermediate tier between the eucalypts and the shrubs. Silver wattles, which occur in moister areas, have beautiful form, with a fine textural effect from their silver-grey foliage. Cinnamon wattles are very popular in cultivation, too, but nursery stocks of these may differ significantly from your local forms. (For authenticity, try seeds or cuttings from local specimens).

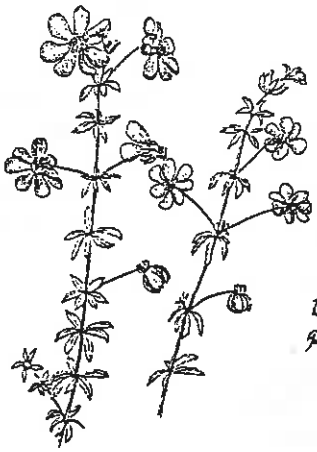
Two other popular trees of the outer suburbs are the Melaleucas (or paperbarks) called Melaleuca ericifolia and M. squarrosa, which grow mostly in damp situations.

Let's drop down a little in height. Hilly areas east of Melbourne are blessed with two species of banksias: B. spinulosa and B. marginata (both around 3 metres high without pruning or flower cutting). The former is particularly showy and popular in cultivation (and even likes clay). It is a favourite with spinebills and honeyeaters when in flower, during autumn and winter. Its fairly dense foliage makes it a good screening plant. It's rather variable, but it probably doesn't matter much if you choose a nonlocal variety.

Prostanthera Lasianthos

Other plants of similar height include the Victorian Christmas bush (Prostanthera lasianthos), around 4 metres high with white flowers marked in purple; tree ferns for shady spots; and

the Yellow Hakea (Hakea nodosa), with its pine-like foliage and strangely-scented flowers in late autumn and winter. All these are available from nurseries.


Bauera Rubioides

There is a wide range of medium bushes. Here are some of the readily available ones:

Wiry Bauera (Bauera rubioides), a bush with interwoven, wiry branches, up to head-height (but perhaps better kept pruned to a metre or so), with pink flowers nearly all year;

Austral Indigo (Indigofera australis), an open, bluish-green bush to head-high, with magenta, lilac or (rarely) white pea-flowers through spring and summer;

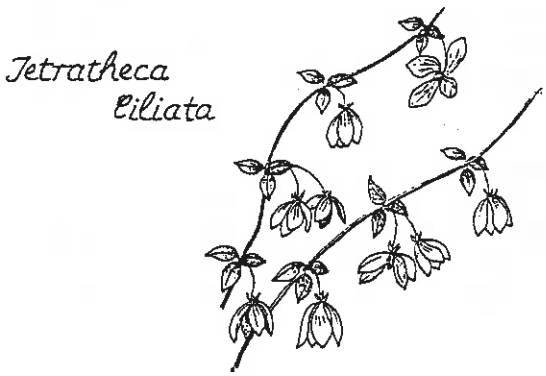

Pultenea Gunnii

Pink Heath (Epacris impressa), best grown in informal drifts (perhaps with mixed tones) in partial sun, and with heavy pruning after flowering to promote dense growth.


Epacris Impressa

Bush Peas (Pultenea gunnii and P. scabra) - not as easy to find in nurseries, but great for their orange-yellow flowers in spring. They're about a metre high, and rosellas love their seeds.

Grevillia alpina, a widespread and extremely variable species, grows as an open bush near Melbourne, with pale flowers. Substitute one of the brightly-coloured forms from a nursery, if you prefer.


Tetratheca Ciliata

Pink Bells (Tetratheca ciliata) forms a low clump with very showy, mauve-pink flowers, 2 cm across, during spring.

Tasman flax lilies, or blueberries (Dianella tasmanica), have leaves often over a metre long and a few centimetres wide, spreading from the ground a little like agapanthus. They have spikes of blue, star-shaped flowers protruding above the leaves in spring and summer, followed by brilliant, blue-purple berries about 1-2 cm long. They like shade, and go well with ferns. (Don't forget the maidenhair ferns!)

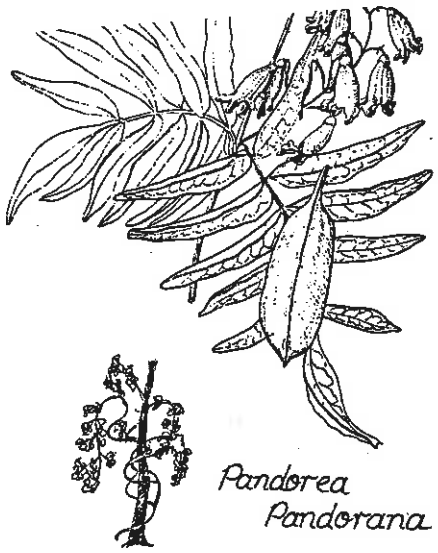

Dianella revoluta

Spreading flax lily (Dianella revoluta) has shorter and proportionally narrower leaves than its cousin above, and is more open, but the flowers and berries are very similar. It's very hardy and easy to subdivide.

Purple flag (Patersonia occidentalis) is shaped a little like the lilies above, but its leaves are only about 30 cm long, and the flowers are elegantly simple, three-petalled, purple flags. It is one of our few native irids (of the iris family).


Dicksonia Antarctica

Down near the ground, you need some Grass Trigger Plants (Stylidium graminifolium) near the lilies to provide a pink to complement the blue in springtime, some cut-leaf daisy (Brachyscome multifida) for among the rocks, and some ivy-leafed violets (Viola hederacea) amongst the ferns in the shade. Some



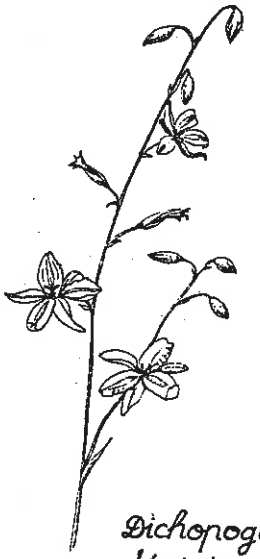
Pandorea Pandorana

wonga-vine (Pandorea pandorana), False sarsparilla (Hardenbergia violacea) or Australian clematis (Clematis aristata) are worthwhile for climbing on established bushes, or (with trellising) on walls or fences. All these are easy to find in nurseries.

Sadly, some of our most beautiful plants are not so easy to obtain. Nevertheless, you can easily grow Vanilla, Chocolate and Fringe lilies, and Blue Pincushions, from seed. They're well worthwile, and MEG can provide advice on seed collection and propagation.

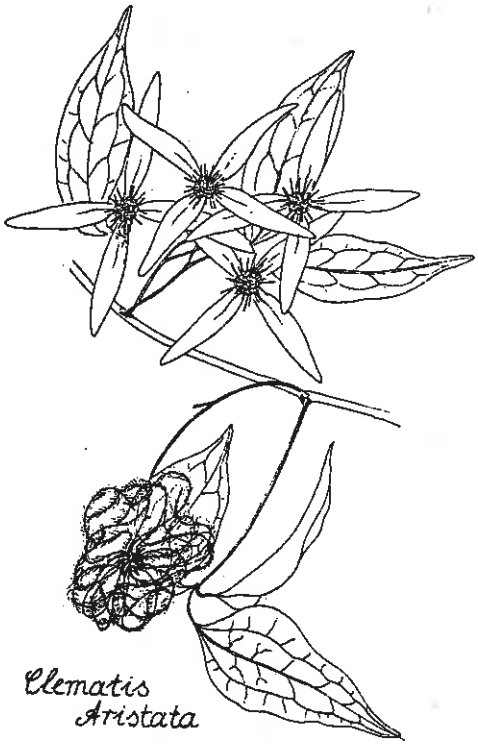
Viola hederacea

Now to perhaps the most overlooked plants of all: the grasses. A few large specimens of kangaroo-grass, spear-grass or Poa can soften the outline of your paths, make the scene look more natural, block out weeds, and provide the right environment for many insects and the wildflowers which depend on them. Unfortunately, you can't rely on nurseries for these.



Dichopogon Strictus

Finally, <u>a note on weeding:</u> Take care that you don't pull out your wildflowers! Blue pincushions look a bit like flat-weeds when they're small, and lilies can look like onion-weed; so if there's any doubt about a "weed", let it grow a little longer until you can be certain. It can make a big difference.



Clematis Aristata

If you have any comments or questions about the cultivation of local plants, write to Montrose Environmental Group at P.O. Box 7, Montrose 3765.

Stylidium graminifolium

text by Graeme Lorimer,
drawings by Trevor Blake.

PLANT LOCAL

by David Edwards

The trees and plants that are indigenous to a district, together with the topography, are what make that area unique.

The River Redgums along the inland river systems and the magnificent Mountain Ash trees in the Dandenongs are obvious examples of this, as are the heathlands along the Gippsland coast or the streamside tea-trees and melaleucas.

When nature has been the architect, hundreds of species make up the whole. It is all too easy to regard the trees and forget all the smaller bushes and plants sometimes regarded as "scrub".

These plants have evolved (some might say were created) to live in balance with each other, forming an eco-system. They are the plants best adapted to the local soil and climate and don't need special encouragement to grow. They provide the best environment for local species of birds, animals and insects, the whole being interdependent. One member of the community doesn't tend to dominate to the detriment of others and consequently of the whole.

Such areas of native bush are self managing and are best left undisturbed. Where weeds have gained a foothold, the Bradley method of bush regeneration as proved to be very effective. It is based on hand-weeding, starting from the best areas and allowing regeneration to move outwards.

An important point to consider when planting local species is to obtain the local variation of the species if at all possible. There is great genetic variation between specimens with the same botanical name. It is best to propagate from seed or cuttings collected locally to obtain the desired characteristics.

Further Reading:

R. Elliot & T. Blake, Common Native Plants of Sherbrooke Forest and Dandenong Ranges (Pioneer) $2.95

M.E.E.P.P.A., Plants of Mt. Evelyn 50¢ (Lesley White : 736 1573)

U.Y.V.D.R.A., Bushland Weeds :(726 0555)

CONGRATULATIONS TO LEN COX, who has been appointed Shire President.

HARDENBERGIA VIOLACEA - False Sarsparilla or
Purple Coral-pea

by Rodger Elliot

This plant is local to our area, but is widespread throughout Victoria and also occurs in Queensland, N.S.W., South Australia and possibly Tasmania.

Perhaps many people are already growing this spectacular flowering climber. For those who are not sure just what it looks like, the leaves have a leathery appearance and feel. They are dark green and very heavily veined in a net-like pattern. Plants can also grow as creepers, and are commonly seen on roadside embankments. The brilliant purple pea-flowers are small, but produced in dense clusters which, during their peak, can literally cover the plant for a period of 4-6 weeks. Flowering starts in late Winter and often finishes in late Spring.

For garden cultivation, this Hardenbergia will grow in most situations and is especially suitable for hot, dry soils. It is ideal as a living mulch beneath other plants, and can be grown as a ground-cover in an open situation. It is excellent for embankments, where it often grows naturally. Other uses include covering of fences or walls of buildings, but it must have some other form of support, such as wire. Copper or galvanised wires should be used because of their durability.

One of the most natural ways to grow this species is to let it climb through other plants which are well established; small plants may be strangled by its twining branches. In the local bush it is often seen scrambling Acadia myrtifolia (Myrtle Wattle). The two plants flower at similar times, and a beautiful colour combination of purple and yellow is produced.

Nature can show us many ways in which this plant may be easily adapted for use in gardens, so make sure you have your eyes wide open next time you are wandering in the bush.

Different forms of Hardenbergia violacea are available with flower colours varying from white, to pink and shades of blue and also with a variety of growth habits. Some shrubby forms can be acquired, and as these mature they can become climbers if they are able to gain support from other shrubs or trees.

Hardenbergia violacea is grown easily from seed. The seed is ripe as the pods become brown (usually before Christmas). Because the seed has a very hard outer coating it needs treatment before sowing. The easiest method is to place the seed into a cup and pour hot water over them, leaving to soak for 12-24 hours. The fertile seeds swell and are then ready for sowing.

The generic name of Hardenbergia was given in honour of Franziska, Countess von Hardenberg who was an active patron of botanists in the 19th century. The specific name violacea refers to the colour of the flowers.

SEED DISPERSAL BY ANTS

by Alan Andersen

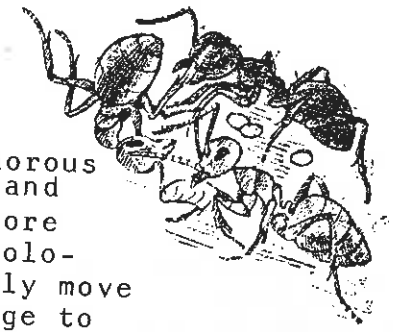
Who do you think are the most important dispersers of seeds in Australia? Birds? Mammals? I bet if you hadn't read the itle of this article then ants would not have featured very highly on your list! But, as a matter of fact, there are more than 1,500 species of plants in Australia whose seeds are especially designed to be dispersed by ants, which is more species than the rest of the world put together.

Seed dispersal by ants goes by the fancy name of myrmecochory (mer-mek-ok-or-y, which literally means 'ant dispersal') and the plants whose seeds are dispersed by ants are called myrmecochores. Myrmecochory is widespread throughout the Australian flora, including representatives of almost 100 genera from about 25 families and is particularly prevalent in our wattles and native peas. Other myrmecochores occurring in the Montrose region include species of Goodenia, Viola, Comesperma, Lepidosperma, Tetratheca and several lilies. Australia also has an exceptionally rich ant fauna, with many thousands of species. Although nobody has ever bothered to look, there are probably well over 200 species in the Montrose area, and about 30 or so of these are likely to be important for seed dispersal.

The uniqueness of Australia as the world centre of myrmechory is illustrated by the fact that although wattles are distributed throughout all southern continents, the only myrmecochorous species occur in Australia, and we have several hundred of them.

The relationship between ants and seeds works like this: Plants 'bait' their seeds with ant food, usually an oil-rich structure called an elaiosome (meaning 'oil body'). The ants collect these elaiosomes, with the seeds still attached, and take them back to their nests. Once inside the next the elaiosome is removed for later consumption and the seeds themselves are discarded. In some cases discarded seeds are merely left within the nest, and in others they are tossed onto an outside junk pile.

The end result is that both sides are better off = the ants have got a feed, and the plants have had their seeds dispersed. This relationship is quite different to the situaiton where so-called harvester ants collect seeds to eat the seeds themselves, which occurs for example in eucalypts. In myrmecochory, ants only eat the elaiosome and the seed itself remains undamaged.



While the relationship between myrmecochorous seeds and ants might seem rather simple and straightforward, there is really a lot more to it. The question that puzzles myrmecologists (!) most is : "Given that ants only move seeds a metre or so, what is the advantage to plants in having their seeds dispersed by ants?" And why is myrmecochory so prevalent in Australia when it is rare elsewhere in the world? The easy answer to both questions is that there is something special about Australian conditions which makes it particularly worthwhile for seeds to be dispersed by ants.

What might these special Australian conditions be? There are three dominant features of the Australian physical environment : drought, low-nutrient soils, and fire, and each of these factors possibly relate to seed dispersal by ants. Firstly, it is possible that soil in and around ant nests, where the seeds are ultimately discarded, has unusually high nutrient levels (particularly in the junk heaps) or has a better water-holding capacity. Secondly, it is possible that seeds buried in ant nests are protected from fire. In both cases, dispersal by ants would improve the chances of successful germination and seedling survival. The few experiments that have been conducted support these propositions.

It therefore seems that the major benefit ot plants is not so much related to the distance their seeds are dispersed, but to their ultimate fate. If this is true, then plants are using ants as specialist 'gardeners' to plant their seeds in places that are most favourable for seedling establishment.

Many thanks to helpers at the Melbourne Wildflower Show. Public response has been very good.

LAST CHANCE FOR MEMBERSHIP RENEWAL :

The mailing list for SPINULOSA is about to be reviewed, so please make sure your membership is financial. If not, there's a renewal form in the last issue, or send $6 for a family, $4 single, or $3 for a student or pensioner.

SOME LOCAL PLANTS WORTH TRYING

by Merele Webb

For a damp spot, try a multiple or mixed planting of some of the following - Acacia verticillata with fine whorled medium green foliage like a wedding veil, and yellow rod flowers all through in Spring transforming it to lace. Leptospermum lanigerum, with copper-tinted foliage, adorned with countless star flowers which bring the bees (in Spring). Leptospermum phyllicoides, a tall sparse, elegantly drooping fine-leafed small tree with dainty, small white flowers in profusion.

For garden beds, or under trees the shrubby forms of Hardenbergia violacea, in lolly-pink, deep blue or white, will make a magnificent show, and can be highlighted with the mauve flowered Indigofera Australis in a counter-point position to flower at the same time. Hakea sericea will bring the birds and deter animals dashing through the garden!

For winter cheer apple-green flowers stand out. The dangling bells of the climber Billardiera scandens and the bushy Correa reflexa are surprisingly bright.

Brachyscome multifida makes a dense fine mat 1 metre across, with upturned bright mauve or pink flowers, virtually all year in a sunny position.

Orange flowers provide drama in the garden. Pultenaea gunnii in multiples, is a knockout in Spring.

Grasses and lomandras can make a garden look more natural and give butterflies and birds a meal or two in Summer. Poa australis is tussocky and Stipa verticillata sprays elegantly out of its clump, while the strappy leaved Dianellas tasmanica and Revoluta (flax lilies) produce blue-violet star flowers and bright blue-purple berries in Summer.

These are a few of the lovely local plants which give a unique character to our area.

Please send copy for next issue to:

Tanya Meadows
40 Brownes Road, MONTROSE 3765
by September 15th.

'Letters to The Editor' would be welcome.