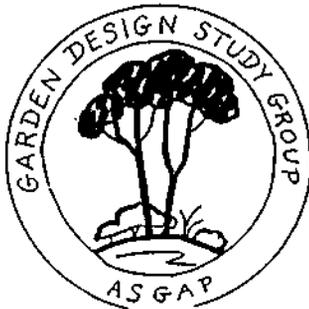


ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

**GARDEN DESIGN STUDY GROUP**

NEWSLETTER No. 8

February 1995

Study Group leader/editor: Diana Snape

Treasurer/membership: Peter Garnham

Dear Members,

We start another year (a wetter one I hope) with a newsletter with a theme - trees (particularly small ones) in garden design. If you haven't yet sent in your thoughts on this topic don't worry, it's never too late! You may find reading about the topic raises questions in your mind as it did in mine. Other themes emerge, in some quite solid articles which I hope you enjoy and find stimulating. A description of a very interesting garden too, but no actual plans of garden designs - maybe in the next newsletter.

MEMBERSHIP now 176

It's That Time Again

Now is the time that many banksia buds are swelling and lots of correas are coming in to flower again. What else is stirring?

It is also the time that every keen member thinks about renewing their subscription for the 1995/6 financial year! As the new Membership Officer/Treasurer, I will be very pleased to receive your cheque (made out to AS GAP Garden Design Study Group, with your name and address printed on the back) before winter sets in and your subscription runs out. My address is shown above.

Subscription is \$10 per year, with a special rate of \$5 for full-time students, pensioners or unemployed people. (The rate is the same for an individual or a family at the one address, as it basically covers the cost of the newsletters and postage.)

If your membership has not been renewed by July 1st, it is Group policy not to send any further newsletters.

FINANCES

Bank balance at 23/1/95 is \$1345.87; this provides a healthy base from which to start the many activities planned for 1995. I look forward to hearing from you soon.

Peter Garnham

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Extracts from members' letters

"Thanks for the feedback with 'Design ideas - for fun' and other concepts introduced like the 'informal wave picture' from Peter Graham (Vic). They clarify my otherwise loose thoughts. I had fun designing a daisy iow-garden and a strip planting." Grahame Durbidge NSW

"I don't know if I have missed a newsletter or not, or maybe I'm just getting impatient! The design weekend was truly wonderful - houses just aren't built fast enough!!! Please send on my special thanks to Paul Thompson as he was particularly inspirational and his beautiful books were a joy to look through." Jacquie Winder Vic

"I think any debate on the use of Australian trees as street trees replacing the use of exotics needs to be very specific about their ultimate height and where they are placed. I have an evergreen Australian street tree in front of my house (north facing) and frankly will say that a deciduous tree (or one that provides very light shade in winter) would make me a lot happier. For planting on the south side or eastern side of the street the need for winter sun/summer shade should not be forgotten! Especially where the houses are quite close to the street." Anne Pye SA

"Thanks for the latest edition of the newsletter which arrived today. I showed no strength of character - sat down and read it through immediately." Shirley Bloomfield NSW

"The major point that came from the Karwarra Seminar was that natives have only been in cultivation for such a short period and that the 1970s gave natives a bad name. With experts like Rodger Elliot and co. and the enthusiasm of Paul Thompson and co., the future looks bright. . . . Natives can do the same job as exotics, the same type of results with a minimum cost. A client has discovered that you can get a cottage garden effect using natives. They thought that natives were just bottle brushes, grevilleas and gum trees. After giving them a look at several publications which show a cottage feel, they went on with the design concept. This is going to be my particular field, designing cottage gardens using natives. The number of people who have not heard of cottage style natives is quite worrying. . . .

The GDSDG is a plus for me because of the articles of information which is simply not commercially available ie Gardening Australia, B. Backyard, etc." Peter Graham Vic

"The garden is looking wonderful, callistemons never better and my potted plants - all new ones since winter - have come along very pleasingly. I planted a new area with about 7 species of grasses in groups of three (of the same) and now that all are flowering they look most impressive. A white leaved Helichrysum (Chrysoccephalum) aiculatum that I grew from the Portland coastal area is a real treasure - with long trailing stems finished off with quite large clumps of brilliant yellow flowers. (This form grows right on top of almost perpendicular cliffs the other side of the Alcoa Smelter at Portland.) I have planted pieces in hollow stumps and the stems almost reach the ground. I must take some photos as it is the best 'container' plant I have grown. I have a large potted plant of flowering Scaevola 'Fanfare' adjacent to one of these logs and the brilliant blue of this against the white and yellow reflect the blue and gold of the beach in the Summer." Cherree Densley Vic (leader, Australian Plants for Containers Study Group)

7 just received newsletter 7, which was a terrific issue. . . . I saw on page 15-GST- and thought, oh heck, the Tax Department has caught up with us again. Imagine my relief when I figured out - groundcover, shrub, tree! (The term GST will never seem the same again. DS)

The comment on *Brachyscome* as a lawn- realised last year that I had unwittingly done a planting of three different forms which gave a mass effect, and then extended it so that from the street you see a patch of brachyscomes, footpath, and then a mass display of brachyscomes. Over winter it looked a bit tatty and hasn't become as spectacular this year - maybe I should cut it back vigorously in autumn/winter." Nicky Rose Vic

"I have enjoyed reading the back copies of the newsletter very much indeed. I continue to be amazed at the WA flowers that are grown in the eastern states - you all grow far more of our flora than we do ourselves. I was particularly interested to read Barbara Buchanan's article in the last NL - "No all-Australian gardens in a wildflower paradise?" - her comments were just so true and accurate. We are probably more fortunate in Albany in that we do have access to one good Native Plant Nursery and many other nurseries which stock a variable choice of natives. However the only way to get many plants is to grow them yourself and that is often not possible and rarely easy." Helen Allen WA

"There might be a delay with part 4 of 'Views of the Australian landscape'. I will need to do some more reading about gardening and views of the Australian bush in the first 30 or so years after settlement. What I have read so far has only served to show me how really little I do know and I'm not finding it easy to provide a short account. Another difficulty is that there was almost no interest in gardens (ie flowers) for perhaps 20 - 30 years after settlement - it was all vegetables and crops and not much comment on the bush (except to cut it down)." Tony Cavanagh Vic

One member's story

Penny Munro NSW

"What a year! At the moment, where I live in rural south-western NSW on a 5,000 acre farming property, the entire countryside is dormant, covered by a huge blanket of drought Shrouds of dust hang in the air after rolling in from further out west; whole paddocks lie banked up along fence lines, so much is being lost. We wait for the rains of autumn.

My interest in native plants began when I went to Galore Scenic Reserve, a local flora and fauna spot, about 5 years ago and discovered that there was more to native plants than the "gum tree" and prickly grevillea always seen down the back of the local nursery (a familiar story?). I began a collectors style garden and joined SGAP but as a lone member, having at that time no local group. As my collection grew so did a desire to learn design and style, colour and coordination.

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We have beautifully designed English style gardens as seen in the ABC Open Garden Scheme, but where were the native gardens? There were none. There were some of sorts, overgrown, straggly, no design at all, just thrown together in some sort of hopeful heap. During this time I was propagating unusual plants, mainly hakeas to sell at a new local nursery, but they went broke and closed down. I was then left with hundreds of seedlings, so I started my own nursery here at the farm with my established collector's garden and to-be-completed garden beds as a backdrop. It is named "Nardoo Natives" after the property name. I also rear native animals, a task I find both challenging and stimulating. At the moment I have an Eastern Grey kangaroo and a swamp wallaby in residence. As a result of having these animals an interest in grasses emerged. I would ask what grasses the kangaroos ate, but usually a blank face was my answer. No-one knew enough about the local flora, so I began to learn and now regularly propagate local grasses for people and kangaroos.

In your last newsletter there was an extract from a talk by John Patrick in which he spoke of repeatedly using similar colour and foliage forms in garden design to achieve a sense of continuity. I am attempting to emulate these principles in some new gardens. I have repeated Cassia eremophila underplanted with Helichrysum apiculatum, Eremophila drummondii with Dampiera diversifolia and Mvomrum floribundum with M. parvifolium to name just a few. The raised garden beds are mainly floral displays but interspersed with large shrubs and trees for the depth and strength that any large garden needs.

I am looking forward to a long and fruitful association with the GDSG to share and glean knowledge for the betterment of all Aussie gardens. All the best for a wet 1995."

Extracts from friends' letters

"I have recently received a letter from Marion Da Costa of Wilson Park SGAP. Their group has been given 10 acres to plant with native plants in the Wilson Botanic Park, Berwick. They would like the various study groups to have an area each within the 10 acres. It would seem to me an ideal opportunity for the Garden Design Study Group to prepare an overall plan for this exciting project.

I have since spoken to Lex Enibor who is the Superintendent of the Park. He said the area to be planted is in the west of the Park and that it has the best soil. He also told me that they would like part of the 10 acres to be planted with indigenous plants so as to show visitors what originally grew in the area." Bob MyHus, Study Group Coordinator SGAP Vic. (I wrote to Bob expressing our strong interest in the project. I do have some concern though about the support in terms of finance, planting and maintenance such projects with Australian plants get compared with the support given to the planting of exotic sections of such gardens. DS)

"Thank you for your letter and good wishes. Re the Chelsea Flower Show, I shall contact Jeff Irons, who provided the photographs (not slides), with a request for some slides for your collection. We shall publish his article on the flower show in the March issue. Keep up the good work with the GDSG - your group's energy and enthusiasm are inspirational!" Christian Narkowicz, Editor 'Eucryphia' (Tas SGAP newsletter).

"The garden (a garden design project) is starting to take shape. With the lovely weather we have been experiencing and a new watering system the plants should be happy! The pond has been filled in, after much discussion - perhaps we will put one in the back garden! Everything else is going according to plan - we have spread about 6 cubic metres of mulch around the garden. It looks very good. We are now starting on the area outside the kitchen window. Part of it will be paved with crazy cobblestone shapes, with some garden, some plants in containers, BBO and seating area. It should look wonderful! I will send you some photos of the front garden." Kellie Blythe, Membership Officer SGAP Vic

"Your newsletter is excellent. I like the section on "plant combinations". The articles would gain a lot if they were accompanied by colour photographs. I realise that it is very difficult for the camera to capture what the eye sees but we should try. Were any photographs taken of the plant combinations described?" Bill Payne, Editor 'Australian Plants'. (Please let me know if any photos were taken. DS)

GDSG library

The GDSG regularly receives copies of *Australian Plants* and newsletters from the SGAP state groups of NSW, Queensland, Tasmania and Victoria. I've recently written to SGAP South Australia and the Wildflower Society of WA to find out if we need to subscribe to receive their newsletters (we don't need to for the other States). We have been sent copies of NL of the Melaleuca and Allied Genera SG and the first NL of the revived Australian Plants for Containers SG. As we are now collectively members of Cranbourne BG we receive their newsletter too.

These are all in our library (currently at 3 Bluff St) and available for members who can call in here to borrow. I'm sorry that's not much help for distant members - paying for postage would be an alternative but elapsed time is a disadvantage. All these newsletters have articles of interest, e.g. 'Your Own Dryland Wildflower Colour Parade', from the Dec 1994 *Eucryphia* (SGAP Tas), will be included in a NL soon when we concentrate on wildflower ('Australian cottage') gardens.

Books for the booklist

Planning Your Australian Garden: a new look at the principles of creative garden design by Anne de Verteuil & Val Burton with Frances Hutchison (1987) Collins, Sydney recommended by Colleen Keena Qld. Not specifically on the use of Australian plants but a very good approach. We might include more detail about this in a future NL.

The Grevillea Book by Don Burke (1983) Kangaroo Press recommended by Peter Graham Vic as interesting, informative and quite unexpected.

Town Gardens by Caroline Boisset (1989) Georgian House, Melbourne recommended by Wilma Garnham. No Australian gardens, but it could well inspire the creation of Australian gardens just as (or more!) appealing.

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DESIGNING and MANAGING AUSTRALIAN NATIVE LANDSCAPES

2nd Biennial Seminar of KARWARRA Australian Plant Garden at Kalorama, Victoria, in November 1994

Karwarra is a community run Garden open to the public, supported by the Shire of Lillydale and an advisory committee with representatives of the Mt Dandenong Horticultural Society and SGAP. Marilyn Gray is the Curator of Karwarra. The following talks were all accompanied by slides which illustrated, clarified and extended points made in the text. Many thanks to Marilyn for permission to include these selections from the Seminar Proceedings in our newsletter.

Landscape in the future

Paul Thompson Vic

The need to collect and spread information on cultivation, experience and methods is now more important than the earlier need to collect plants themselves. Collecting plants was, I believe, the motivation for many of the thousands of enthusiasts who furnished gardens, streets and parks over the last 37 years since the formation of the Society for Growing Australian Plants. The excitement was such that travellers spread all over the continent to find and collect new species and plants that may be worthy of cultivation. Early collections promoted both the hardy and the difficult. The approach was to increase the interest and use of our plants for horticulture, and through this process assist in the preservation of natural areas - preservation through cultivation.

Collection was not enough for some in the sixties who wished to develop approaches to landscape design that expressed the nature and character of the land. Large landscape projects in Melbourne that used Australian plants were few until John Steven's plan for Monash University. Large projects were influenced by only a few people who gave rise to the Institute of Landscape Architects. Municipal Melbourne was over-affected by the aesthetics of City Engineers and a gardening approach to landscape. In the beginning, there appeared to be three influences towards the use of Australian plants:

1. The Horticulturist/Collector
2. The Conservationist/ Activist
3. The Landscape Designer/Architect.

These three categories exist today yet operate differently with differing influences upon the planned landscape.

The motivation for the movement towards Australian plants was, I believe, both nationalistic and aesthetic. The patriotic recognition that we were losing precious natural landscape to urbanisation, and the spread of farms to feed it, was a powerful force, stimulating interest and involvement. Conservation movements arose at the same time as the development of interest in our plants. Often the same people were involved. Sensitivity to the aesthetic values of the natural landscape and all that it contains remains a powerful reason for involvement today. Whilst the patriotic motivations were a fear of losing something of value for all, the aesthetic connection remains as a deeper purpose, enabling a continuing experience of memorable associations of happy times holidaying in the country, Sunday drives and picnics. Attachments to the natural landscape exist for many people, and not only Australian born.

Primarily, I believe we must be concerned with the landscape at large where the greatest gains are to be made and the greatest losses are occurring. There is a blinkered belief that all happens in the city, failing to recognise the interdependence of the metropolis and the country beyond, yet the city is where most of the influences, education and change are generated from. Continued growth and interest in extending knowledge, use and preservation of our flora still rests with the horticulturists who continue to show us more of the how, what, when and where of Australian plants than any other group. This is amply demonstrated by the collaborative voluntary effort of the Maroondan SQAP in the production of *Bora of Melbourne*.

The challenges are still there to learn more about the characteristics of the cultivation of our flora so that more accurate predictions can be made regarding uses and expected results. Using Australian plants in landscaping has been calculated guesswork. Fortunately, this is happening less and less. Hasty proliferation and use of some inappropriate plants in gardens and parks during the early days led to a poor result and repercussions upon the notion of Australian Gardens. We have had at least thirty years of experimentation in private and public landscape, and the countryside at large. Assessments of the effects and the results are as yet holistic, personal opinion, as with this paper. The landscape would benefit from more serious study. Landscape, horticultural or social historians, put your hands up.

The experimenting, the horticultural, ecological and botanical investigation must go on. This work must continue into provenance, cultivars, descriptions, methods of use and many other intrigues. The work must expand. More empirical investigation is needed now into seeding techniques, weed control, and the establishment processes of the broad landscape. Self-regenerative, sustaining landscape is the direction we have been moving in. Maloney and Walker said that it was all easy and such low maintenance. Initiates have been lost along the way because it was intended to be inspirational and it was indeed, yet it meant work as well. Through examination and research, progress can now be on a more substantial base.

For the broad landscape, the most relevant development over the last twenty years has been the growth of a movement towards an ecological approach to the use of land, as exhibited by John Fenton in Portland, the Potter Farmland Plan and the increased use of locally indigenous plants in refurbishment and regeneration projects. This movement has been slow to rise until the last ten years when it has expanded to its present status. That is how it ought to be. It has been a process of hastening slowly.

Landscape gardening, designing, planning and 'architecting' all have something to do with the creation of spaces using

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plants. This differs from the horticulturist or the scientist who deal with the content rather than the effect. A common approach to planting design has been the universal style of repetition of forms treating plants as solid and static objects. The early, now mostly extinct, shrubberies of LaTrobe University were an example of this lack of understanding of plant dynamics. This block planting approach is only successful as a style should every plant grow evenly and stop when it is meant to. Such a technique requires greater reliability than can always be predicted. Designers can rely on *Eucalyptus maculata* and can predict the result. This is true of many others also, yet for some projects - be they in St Albans, Dandenong or Frankston - they always have the same plants. One of the purposes of design is to enrich life's experience.

So much has been a matter of opinion in the planting of the landscape. A lot of money has been spent planning, building and maintaining landscapes. These landscapes, to be instructive and develop into maturity, have to be designed as a dynamic process that tacitly sells itself to all who influence it towards that maturity. Consideration of the ecology of the area is the only way forward.

Concerns for today are to do with soil degradation, saltation, the use of dwindling water resources and the loss of tree cover and habitat. The collective experience and knowledge gained since the fifties is preparing us to deal with the increasing demands of people and the land. We have all instructed each other.

The revegetation of public landscape in our city, such as Merri Creek and Royal Park, provides an escape without four wheel drive vehicles and re-establishes the bond between humans and the countryside. The bush picnic may be just along the local bike path. Establishment and management of these spaces has relevance for restoration and revegetation everywhere.

The private garden of the enthusiast supported the broadening of knowledge that defines variations in styles such as the formal, naturalistic and eclectic. The industrial and public landscape is articulating a clearer diversity in style and content as a result of observation and exchange in what has been successful. As gardens are never finished, it is so that we will never know enough. The limits of what is possible can always be extended if you are prepared to learn. Any office that adopts a pallet of 300 plants that they are familiar with for every project is denying themselves and their clients opportunity and potential. Designers who experiment with a high percentage of a project's vegetation may be committing a greater wrong.

Within the urban setting, the challenge is to produce a sustainable landscape that is satisfying to the population yet has low demand on resources, particularly water. To do this thoroughly, we must be more nationalistic about allowing the green of winter to turn to the gold of summer. Horticultural selection and understanding of plants is increasing the potential. Understanding more about soils where plants grow is of immense benefit. Knowledgeable and encouraging management of landscapes has become a professional specialty. Together, by working closely in teams with specialist colleagues, and no longer believing that any one of us is the fount of all knowledge, developing and maintaining landscapes in the future will be more exciting, particularly if they are born out of the place rather than imposed upon it. Recognition that the future holds the potential for greater respect for the land out of necessity will lead to redefinition of regional identity and national landscape character, a recognition of the "Genius of the place".

Further Reading

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Different Approaches to Australian Garden Development

Diana Snape Vic

I think there are as many different approaches to Australian garden development as there are gardeners. However some aspects should be consistent in general terms, although they'll differ markedly in actual details. I came to this conclusion while doing the research for my book, *Australian Native Gardens: Putting Visions into Practice*, which gives details of thirty different gardens in the four south-eastern states. Visions are of course elusive and may change as the garden develops.

The first aspect is careful planning, including assessment of the site - its orientation, topography and situation in respect to the total environment. In the country a garden's design may be influenced by natural forms, textures and colours. It's important wherever possible to retain valuable features such as rocks and existing plants - especially trees - on the site and any views of 'borrowed landscape'. For a suburban block this environment may be quite artificial and give no helpful guidelines; often unwanted outlooks require screening.

The second aspect which should be consistent is the predominant use of Australian plants, which have wonderful beauty

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and variety. There is increasing awareness of the advantages of using plants indigenous to the area as a matrix. Indigenous plants have evolved to suit the soil and climate and they don't demand extravagant use of water. They are the basis of the natural ecosystem and encourage wildlife such as lizards, frogs, small mammals, butterflies and indigenous birds so that pesticides become unnecessary.

Another common aspect is the use of mulch to conserve water and discourage weeds. This can be inorganic mulch - sand or gravel - or any type of organic mulch, which also gradually improves the soil. There is also the need to provide good drainage for the majority of Australian plants, other than "bog" plants which like the soil to be permanently moist. Drainage can be improved by raising beds and water retention on the block is important for conservation.

After these initial considerations, many very different approaches are possible. Which one will be taken depends on the gardener's aesthetic views, interests and needs. Following one style consistently achieves the maximum effect. People may choose any of a variety of garden styles, which will then guide their choice of plants and their placement in the garden. A broad knowledge of Australian plants increases the range of options. Design-oriented gardeners will decide first on the style of garden wanted, design the garden accordingly and then select suitable plants to fit their criteria.

Alternatively a plant-oriented 'collector' will choose plants first and then work out how to use them to best advantage. Both will try to 'see' a plant in terms of both its growing requirements and its appearance. Knowledge helps the result but growing new or rare plants is always to some extent experimental. Both these approaches are valid, of course, and I suspect most gardeners have varying proportions of each.

The style of garden will influence the degree of maintenance involved and also the frequency of rejuvenation. It is difficult to plant a garden 'once and for ever', and not many people want to. Succession in a garden, illustrated for example by several plants of the same species but of different ages, has a strong appeal to me, probably because it is reminiscent of a natural environment. A garden featuring trees is most likely to minimize both the maintenance and the need for further planting, though of course the garden will change as the trees mature. A 'minimalist' garden featuring paving with just a few trees could be contrasted with a garden of small plants including annuals, likely to require most maintenance and most frequent renewal. The latter style may well suit a keen gardener.

Treatment of open areas is also important in connection with the style of the garden. In very large gardens there are only two real alternatives for an open area. One is grass. This can vary with the seasons; it doesn't have to be green all year round, with excess water bills. Now it's possible to use Australian grasses instead of exotic; for example Weeping Grass *Microlaena stipoides* can be mown. The other is water. Lakes attract water birds; they offer the additional beauty of their light, reflections and changing moods, as well as the practical benefits of low maintenance and reduced fire risk. In small gardens, or small areas of large ones, there are many more options for creating open areas. Many types of paving can be selected - stone, brick, concrete. The colour and texture should be in sympathy with those of the house and the colour may be significant in the garden. This is true for sand and gravel too, particularly a strong colour like red scoria. Timber is another possibility, for decks or boardwalks. An area of organic mulch has a less formal look than paving, gravel or timber. With organic mulches, small plants need a finer texture than larger plants do.

An enormous variety of Australian groundcover plants can be used, individually or grouped, to carpet the ground. This is most successful where weed control has already been established, otherwise heavy mulch can be used to inhibit weed growth until plants are established. The genera and species chosen will depend on the size of the area, its situation and the style of the garden. There are many different genera to choose from, including prostrate grevilleas, hibbertias, scaevolias, dampieras and daisies. Just two examples of individual plants are *Grevillea* 'Royal mantle' and *Pultenaea pedunculata*. (Also available now are prostrate or low-growing forms of many larger shrubs, including acacias and banksias.) A lovely tapestry effect can be achieved at ground level, or a metre or so high.

The biggest and most significant and permanent plants to be selected are the trees. Their size must be appropriate for the garden space, with small trees for small gardens. Considerations include their future spread and shade, which will help reduce garden maintenance but alter its quota of sunlight. We need to remember neighbours too. Trees can give 'open' space below the canopy and frame vistas, as well as providing partial screening. Tree trunks give structure and form to a garden - as well as being beautiful in themselves. Eucalypts will provide leaf and bark litter, to mulch and also integrate the garden, but leaf litter increases fire risk if allowed to accumulate in gutters or close to the house. Eucalypts are wonderful Australian trees - and so are a hundred others.

I'd now like to consider basic styles of garden - and I don't mean superficial fashions. Formal gardens of Australian plants, with symmetry, straight lines and circles, 'hard' landscaping and pruned, controlled plants, are rare. Many gardens however do have formal touches, especially close to the formal structure of the house with paved terraces and patios. Some formality such as a lawn or statue can "set off" an informal garden, tame it a little. I know one gardener who says that all you have to do to make a garden of Australian plants look good is to sweep or tidy the paths. To me the skilful combination of 'formal' and 'natural' aspects is a most exciting challenge and has a special appeal.

A 'natural' garden I think of as one created by nature alone. There are many very beautiful ones, to provide inspiration - in the high country, heathlands, coastal areas, woodlands or rainforests. Naturalistic gardens are created by people who are influenced strongly by nature and the study of natural ecosystems. These gardens tend to be asymmetric and repetition of plants is characteristic. Compared with most formal gardens they require relatively low maintenance and use

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little water. Letting plants 'do their own thing' leads to interest and character in a garden. Most indigenous gardens are naturalistic, but could be quite formal. Groups of plants which form natural communities elsewhere can be used in a garden, or those which come from similar environments but in different places.

Gardens can also follow one or more themes, which may dominate their overall style. The use of water in pond, pool or creek has wide appeal and helps attract a variety of birds into a garden. Many Australian plants contribute to a garden's fragrance, including the lovely perfumes of *prostantheras* and *boronias*. Colour schemes can be created which are obvious - peaceful white or cheerful reds - or as subtle or wild as an artist's palette. A collectors' garden can be influenced by the brilliance of a natural wildflower garden in Western Australia, or can concentrate on a particular family or genus of plants. All year round there is beauty and interest in the foliage of Australian plants, fine and delicate or bold and striking, with wonderful colours and textures. Lastly a garden may feature sculpture, serious or occasionally humorous, or be quite idiosyncratic (a garden can be fun!).

A garden with satisfying consistency of style and theme is long remembered but so too is a garden of dramatic contrasts. Most gardens are eclectic, as gardeners extract from styles or themes which they find appealing and combine them in an individualistic way. Garden design is an art practised *in* the four dimensions of space and time -1 think one of the highest and most challenging forms of art - and all creative gardeners will find their own approach.

Reports of four other papers

Diana Snape

It was fascinating how many papers (focused on other areas of landscaping with Australian plants) had relevance to aspects of garden design. Here are reports, with extracts, of four of these which I found especially interesting.

Design and Management of Open Parkland Andrew Shannon & Pauline McCarthy

Andrew Shannon is currently Community Programs Coordinator with Melbourne Parks and Waterways Program. Pauline McCarthy is currently Landscape Architect with the City of Springvale.

The speakers observed that plant selection for parklands over the last five decades has changed from exotic plants through showy Australian species (the "bottlebrush plague of the '60s") to the current widespread use of local indigenous plants, important as corridors and reservoirs for plants and animals. Using local plants and materials (stone or timber) also reinforces the particular local character or "sense of place". However cultural heritage should not be overlooked and exotic plants and well kept, European style parks are favoured by many in the community. Aspects such as built structures and safety are major issues, with the park's infrastructure of roads, signs, toilets, fences, etc. Boardwalks can provide controlled access to sensitive areas while seats can signal viewing spots.

The critical, traditional elements of a park were described as "a strong and definite framework of tall trees, either in rows, or clumps or scattered singly; a central "clearing" for the focus; well defined pathways and a sense that the park is cared for". One local tree species may be chosen to be dominant. "Clump planting using a range of tower mid and upper storey species has become popular, to incorporate biological diversity and for ease of maintenance. Interspersing single species clumps of local "signature" species can highlight the beauty of a particular species and create a definite local character."

Placing of small local wildflowers such as *stylidium*s (Trigger Plants) or *patersonias* (Purple Flags) at focal points like the intersection of two pathways can help people notice the more subtle Australian flora. "Well defined edges to a planting give a clear signal that someone has the situation in hand - that nature is not running completely rampant, that the area is cared for, that humans are in control. A kangaroo grass regeneration plot on the edge of a suburban park can be legitimised by mowing a definite edge around it. A small sign saying why it is there will also help."

Training Plants, Including Coppicing and Pruning

Michael Looker

Michael Looker is currently a lecturer in environmental horticulture at Victorian College of Agriculture & Horticulture, Burnley Campus.

Extended Abstract - Michael Looker's abstract plus additional inserted extracts from his paper.

The management of Australian plants by the use of various pruning techniques has been slow to develop, with a few notable exceptions such as *Acmena sm/fMand Pittosporum undulatum* hedges in the 19th century. In the past they were promoted as plants which generally did not require pruning. However, in the wild many of these plants are subjected to a range of pressures, including fire, grazing by animals, insect attack, unfavourable climatic conditions such as drought, and low soil nutrient status. These cause canopy removal to greater or lesser extent and plants have as a result developed responses which may allow their functional-aesthetic life to be extended. Pruning of Australian plants occurs as a natural phenomenon and often needs repeating in contrived plantings.

The response of many native plants to regenerate vegetatively after canopy removal can be used to create formal effects in the landscape by manipulating forms into hedges, pleached trees and topiary. There are possibly two main reasons why manipulation of Australian plants to create formal effects has not been widely used. First, a general lack of knowledge of their ability to respond to pruning. Second, landscapes having these features are more formal in design and therefore do not relate very strongly to the natural wildscapes which provide the setting and context for a local impression of the Australian flora.

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Of greater significance is its potential for use in long term management of woody ground covers and shrub massing. Removing the canopy by severe pruning to allow the plant to renew itself by resprouting rather than pulling the plant out and replacing it is seen as important to its cost benefits, it avoids the high initial establishment costs and minimises weed invasion by rapid regrowth and lack of disturbance of soils which is usually beneficial to germinating weed seeds (Hitchmough, 1990). Severe pruning of woody ground covers to regenerate growth is a well established practice in Europe which is not yet widely used in Australia. Some success though has been recorded at La Trobe University with a range of species and cultivars. *Grevillea* 'Canberra Gem', *G.* 'White Wings', *G. cutviloba*, *Thryptomene saxicola* and *Calothamnus quadrifidus* have all responded well to heavy pruning. The use of this technique is also successfully practised at the National Botanic Gardens in Canberra.

Much of the Australian flora is subjected to fire, which can destroy the whole or part of a plant's canopy. One response to fire is regeneration by vegetative growth and a number of variables have been observed after fires which influence resprouting ability. Variables include:- ability to regenerate from dormant and adventitious buds and the type of growth produced; age; fire free period required to establish sprouting ability; the number of times canopy removal can take place before loss of vigour; the time of year burning/canopy removal takes place. There are many woody forms with specialised structures which are able to sprout from the base following canopy removal, and the term woody clump has been proposed to describe the resultant multistemmed form. This term enables a better recognition of plants able to sprout following canopy removal for their potential as ground cover and shrub massing and its subsequent rejuvenation by severe pruning.

The use of groundcover has become one of the most important concepts of present day planting design (Thoday, 1982; Hitchmough, 1990). The complete cover of the ground, often by a single species, is not seen only as aesthetically desirable but also as a low cost landscape treatment. ... Its long term success and cost effectiveness (compared with alternative treatments such as mown turf) relies on several factors which include plant selection, initial establishment techniques and its subsequent long term management. The appearance of plants immediately following canopy removal and before rejuvenation takes place can be harsh. However, the more closely plants are cut to the ground and if mulch is added to the site following pruning an acceptable appearance can be achieved.

References

Hitchmough J.D. (1990) The Establishment and Management of Ground Cover in the Urban Landscape" *Landscape Australia*, 3, 281-285

Thoday, P.R. (1982) "Ground Cover - Factors influencing its success" In: *Cost Effective Amenity Landscape Management*, HEA Conference Proceedings, Cannington U.K.

(A list of more than 80 Australian plant species which have been severely pruned at the Australian National Botanic Gardens was given with this paper and, if members are interested, I'll include it in the next newsletter. DS)

Propagating, Growing and Establishing Australian Plants for Public Areas

Darren Wallace

Darren Wallace, a horticultural consultant and contractor, advised all users of Australian plants to follow these basic steps - plan ahead if possible (eg order large numbers of plants well in advance), know your species and the site you are using them in and match them, and consider where the plants have originated from to ensure maximum success. "All Yellow Gums (*Eucalyptus leucoxylon*) axe the same aren't they? And what does it matter where the seed of the *Lomandra longifolia* has come from?" Darren showed photographs to illustrate just how different such plants might be. He explored the important issues of provenance of indigenous plants in terms of geographic location, soil type and aspect.

'The origin of propagation material may often determine a particular plant's height, size, soil and moisture requirement and flower colour. Some plants may show very little variance throughout their natural range whilst others exhibit substantial differences to the point of having very few similarities to specimens which we know as horticultural selections. Generally, Australian plants in the mainstream nursery industry give no indication of their origin. ... For anyone who has regularly used some of the more common ornamental eucalypts, it is not difficult to see that there is often little uniformity in supply. *E. leucoxylon*, *E. viminalis*, *E. nicholli*, *E. scoparia*, *E. sideroxylon* and *E. radiata* all exhibit substantial leaf and form variations from varying seed sources and from batch to batch you may find pendulous and erect forms, colour and shape differences in the leaves. I am not suggesting that we need to produce these plants from cloning, just improve our selection criteria at the juvenile stages of production and be on the lookout for plant batches that are 'regular in appearance'."

Strategic Planning and Design for Weed Control

Karen Smith

Karen Smith is currently doing a Masters course at VCAH Burnley; her background is in horticulture and botany.

The section of Karen's paper I found to be of special interest dealt with ground cover plants, linking in with Michael Looker's paper and drawing on James Hitchmough's 1990 article mentioned there. She identified species selection and planting density of groundcover plants as crucial factors in weed control, as plant canopies must close or 'knit' together. This ability depends on the plant's growth habit and growth rate, and then its capacity to be regenerated "in situ", it is easy for weeds to invade and colonise gaps. "For indigenous plantings, densities of one plant per square metre, combined with pre-planting weed control and mulch, have proven very effective for rapid canopy closure."

"Hitchmough defines the height of ground cover as anything from 150-200mm to an upper limit of 900mm. Those less than 150mm in height are rarely able to deter weed invasion due to their lack of foliage density. Plants which are able to self sow into gaps within the planting or which spread by suckering or with self rooting stems are particularly useful. These plants eventually form a community rather than one individual plant. Examples include *Myoporum parvifolium* and *Dianella revoluta*. Other types of ground cover produce foliage that can be traced back to a single stem eg. *Grevillea* 'Royal Mantle'.

The capacity of ground cover to resist weed invasion ... depends on a number of factors, including leaf-shoot density, canopy depth at maturity and leaf litter characteristics." Ground cover plants mentioned as good examples were *Rhagodia spinescens* and *Grevilleas thelemanniana* ssp. *obtusifolia*; many correas eg *Correa* 'Mannii' and *C.* 'Dusky Bells'; *Dianella revoluta*, *D. longifolia*; *Lomandra longifolia*, *Isolepis nodosa*; and clumping perennial grasses such as *Poa labillardieri* and other *Poa* species for closing in the edges of areas of revegetation. ('*Poa lab.*' and *Lomandra longifolia* were both mentioned many times at the seminar.)

TREES (ESPECIALLY SMALL ONES) IN GARDEN DESIGN

Defining Trees in Terms of Function

Geoff Simmons Qld

There are many ways to define trees - deciduous or evergreen, gums, pines, tall or bushy. These terms serve to give the reader an image of a plant but not necessarily an idea of the reason for choosing it as part of the design.

Some of the terms that imply an element of function are categorised as follows.

1. SPECIMEN: Many gardeners desire to have one special tree to be a centrepiece of their garden. The special feature may be its shape, flowers or type of foliage. It may be bought as an expensive, advanced plant to give an instant effect. Desirable characteristics may include longevity and growth that never becomes a nuisance such as being too large or roots blocking drains. This function seems to be used more in southern than northern Australia.
2. ANCHOR: These perform the function of drawing attention to the start of a feature that may be, for instance, an avenue of trees or a clump of plants. For example one of the smaller figs such as the sandpaper fig may not be remarkable in itself but at the start of a line of trees or shrubs with contrasting foliage may be sufficiently unusual to draw attention.
3. MARKER: This tree has the function of marking a specific point. This says - look for me and you know this is my house, or nearby you will find the water control point. When coming to my present house I decided to plant two bunya pines as markers some metres in from the front fence, one each side of the drive. Although they thrived, they grew at an abysmally slow rate and a recent bushfire hasn't improved their chances of fulfilling their function of making another distinguishing feature (other than the letter box).
4. WINDBREAK: This function is described in many landscaping books complete with diagrams for heights and spacing of the trees. Given the variability in growth these can be considered as only potential outcomes.
5. NOISE SUPPRESSION: A function that is vastly over-rated and, for all practical purposes, can be ignored.
6. TREES FOR BIRDS: Besides the usual reasons such as food from blossoms, berries and insects, other factors include prickly branches for protection especially for small birds, tall trees for perching and trees for nesting. Recently I heard a plant nursery attendant bemoaning the fact that local people were not buying trees that grew to more than several metres, even though these were needed for birdlife.
7. TREES FOR SHADE: These are of prime importance in the warmer areas of Australia but, as most of this continent is subjected to weeks if not months of hot dry weather, virtually all regions benefit from protection provided by shade trees. The factors in choosing a tree for this purpose include speed of growth, eventual size and shape, and density of foliage. As few Australian trees are deciduous for prolonged periods this is not of great importance. The selection of suitable trees for large areas is not difficult and one can think of species of *Ficus*, *Flindersia* or *Brachychiton* as well as the usual acacias etc. For small areas the choice may be more difficult. Whatever the species, pruning will be almost an essential practice to remove lower branches and increase the bushiness.

This incomplete list of functions may stimulate search for trees to suit.

Describing (Small) Trees

Diana Snape Vic

When designing a garden, we need to be able to picture how a tree will look when mature and sometimes to convey this picture to others. I think it would be useful to have a repertoire of standard terms to describe trees so that other people know just what we mean. I used Bodfan Gruffydd's *Tree Form, Size and Colour* (1987) Spon, London for my starting points in considering each of these components of a description of a tree. The *Encyclopaedia of Australian Plants* is a very useful reference for the descriptive terms used.

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SIZE OF TREES.

Bodfan Gruffydd's suggestion regarding size was: small trees < 15 metres (or 50 feet); large trees > 15 metres. I think 15 metres is not really small and is certainly not suitable for a small inner suburban garden! For such gardens suggested size definitions are:

small trees < 6 metres (20 feet, or one telephone pole in height) - an appropriate size

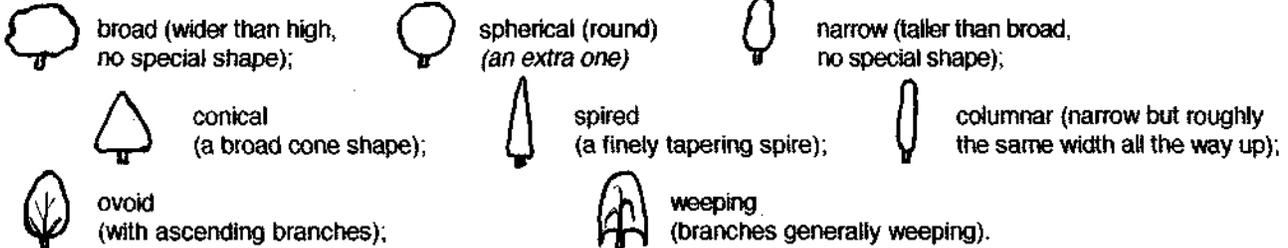
medium trees - from 6 to 12 metres - could be considered

large trees >12 metres (40 feet) - probably getting too big

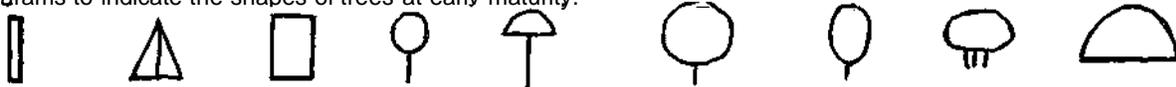
One factor here is the size of the block of land and the house. If it is a large house, especially if it has two storeys, a taller (medium size) tree is likely to be more appropriate in scale.

FORM OF TREES.

Seven canopy shapes, used by Bodfan Gruffydd, are geared towards deciduous trees with uniformly dense foliage.



These shapes don't necessarily suit all Australian evergreen trees. In *An Introduction to Trees for South Eastern Australia* (1992, Inkata Press), covering both Australian and exotic species, K. J. Simpfendorfer uses 9 basic shape diagrams to indicate the shapes of trees at early maturity.

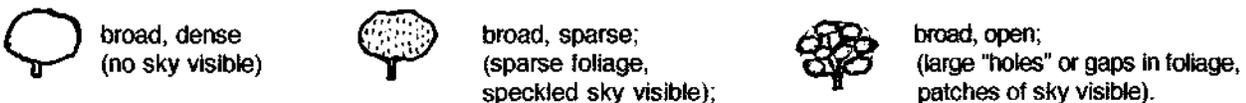


These are useful too, though I'm not sure about the two rectangles - I prefer 'columnar' and 'narrow'. However, for eucalypts in particular, I think this range of shapes is still inadequate. How can the huge variety of eucalypt shapes be described? Even within the one species there may be startling differences depending on the subspecies, variety and/or local provenance, and also where they're planted. We're familiar with examples of almost prostrate eucalypts in windswept coastal sites or alpine areas, which in other places grow upright and of normal height. Other eucalyptus species (and other genera) are more consistent in their height and shape.

In addition to Bodfan Gruffydd's original seven terms, I think six additional terms would be useful - spherical (which is included above), two of Ken Simpfendorfer's shapes and three more. These five shapes could be called:

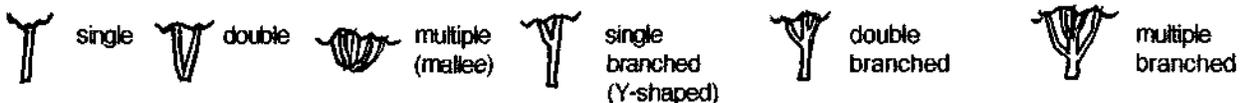


This gives a final total of 13 terms, some of which could also be combined, eg narrow weeping, layered fan or broad dome. For foliage density three main terms might be used, eg for a broad canopy:

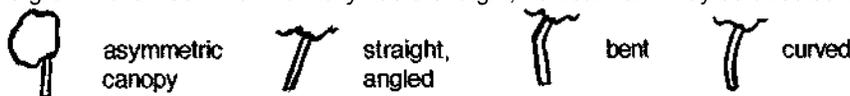


The foliage of many eucalypts is both sparse and open, which for me adds to their interest and charm.

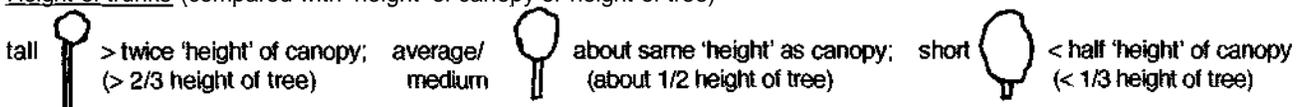
The number and shape of trunks and of main branches below the foliage are all obvious, but help us to picture the tree:



The growth of a tree which normally has a straight, vertical trunk may be affected by its environment.



Height of trunks (compared with 'height' of canopy or height of tree)



So if I now describe *one* eucalypt in my garden as: medium size, asymmetric fan; single, average trunk, double branched; sparse, open foliage: another as small, spherical; double, curved, average trunks; sparse foliage: a third as medium, umbrella; tall Y-shaped trunk; dense, slightly open foliage: you may be able to picture these three different trees. However one important characteristic still remains undescribed - colour.

COLOUR OF TREES

Foliage Colours are not easy to define, as members of the Daisy Study Group know well! It's amazing how peoples' ideas of colours can differ, for example where green and blue interface; and what colour is blue-grey? Foliage can also be shiny (or glossy) or dull and the colour of the underside of leaves may be different from the upper side. Ideally we should probably try to specify well known Australian trees to identify or illustrate the main foliage colours. These could possibly be:- dark green; mid green; light green; grey-green; blue-green; red-green; blue-grey; yellow; bronze; silver-grey; red-purple. (There would be an even greater range of course if we included new or juvenile foliage colours.)

Does anyone feel sufficiently interested and brave to have a go at this?

Trunk and bark Similar comments to the above also apply to trunk and bark colours. Descriptive terms such as smooth, furrowed and fibrous are useful and, for eucalypts, names for bark types (boxes, ironbarks, stringybarks, etc.).

Please let us know what you think of the suggestions in this article.

Small Trees other than Eucalypts**Roger Stone Vic**

From a talk (illustrated by slides) given by Roger in November 1992, at the first Karwarra Symposium which was entitled 'Towards a Better Understanding of Australian Plants'.

Trees are defined as plants with a permanent woody stem developing branches at some distance above the ground. The structure of a tree is the same, whether large or small. With small Australian trees (less than 10 metres or 30 feet in height) we tend to think of eucalypts but there are many in other genera.

To some extent the shaping of small trees can be assisted with thinning and pruning. In nature, trees are often kept small as a result of wind and fauna feeding. Nevertheless trees which are deemed to be very large should not be kept abnormally undersized. When selecting small trees for feature planting consider the foliages, textures, trunks and general habit in relation to the surrounding plants and landscape features.

Often trees are planted in unsuitable positions as in some street plantings. They may become too large and rather than removing them and planting something more suitable they tend to be maintained in a manner which is of no benefit to the appearance of the plant and is a costly exercise. *Allocasuarina torulosa* and *A. verticillata* are used quite a lot as street trees. Some people refer to them as small trees and yet they can grow quite large eventually. They are beautiful both in form and foliage and have very interesting trunks.

One of the early plants used in streetscapes is *Agonis flexuosa*. It is not often seen flowering in the suburbs, tending to flower better near the coast where it is more exposed. A specimen in Maranoa Gardens would probably be at least 30 years old and, while I would still classify it as a small tree, it is probably bigger than most people expect. Variegated forms of some species have been produced and propagated. Variegated forms of *Agonis flexuosa* tend to be smaller than the typical form. *Lophostemon confertus* (Brush Box) is used fairly extensively in the suburbs as a main tree because of its traditional shape. There are also variegated forms, which grow more slowly than the normal forms and remain small trees. A lot of people involved with Australian plants are not too keen on variegated foliage but that is a matter of preference and situation.

An interesting note can be made about the planting of trees and the size of stock used. The choice is usually whether to select advanced stock or young stock from 6 inch (15cm) pots or tubes. I have found that, planted side by side, after about two and a half years *Eucalyptus mannifera* ssp. *maculosa* plants from 6" pots have grown more rapidly and are much larger, a fair case for planting small rather than advanced plants unless you need to make an immediate visual impact.

Several acacias fall into the category of small trees. Two species which are not intrusive in a smaller area and normally grow to about 5 metres in height are *Acacia fimbriata* (Fringed Wattle) and *A. spectabilis* (Mudgee Wattle). *Banksia* 'Giant Candles' can be called a large shrub or small tree. It grows vigorously and will eventually fill out to a canopy at round about 6 metres. As with all banksias, they are particularly useful for bird attraction. *Banksia marginata*, a plant that is not used often enough, is generally a fairly large shrub or small tree that often reaches 5 m, providing interesting flowers. There are also dwarf coastal forms.

Callistemons are generally good plants to use because of their adaptability to many different conditions, particularly wet spots. For bird attraction and mass flowering you cannot go past *Callistemon* 'Harkness'. It tends to be fairly upright and quite a good small tree to use in a restricted space. *C. viminalis* may be planted beside a path or creek bed and grown to form a canopy to walk under. There are various forms of *C. viminalis* available. *C. satignus* is a very hardy and useful plant which can be either cream or pink flowering. In spring it has the added bonus of attractive *new growth*.

Melaleuca linariifolia is an extremely common plant often seen around the suburbs and in gardens. It is a tree that is quite suitable for street planting and fairly easy to maintain. Most melaleucas and paperbarks do not really come to the fore until they begin to age and the trunks start to show out. *M. elliptica* has an interesting trunk because it is always rather contorted. If used as a specimen tree it can be shaped to suit the landscape. *M. ehcifolia* has a beautiful trunk, old specimens becoming gnarled and full of character.

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Leptospermumpetersonii's good to use as a small tree where you are restricted in space. It will be very upright and has lemon scented foliage and white flowers, while *L. brevipes* is weeping. *Backhousia citriodora* has very aromatic lemon foliage. It may be a small or medium tree depending on its growing conditions, but does not grow as vigorously in southern Australia as it does in its natural habitat.

Hakeas tend to be neglected. *Hakea laurina* is one of the old standbys, one of the earliest Australian plants to be propagated. Many of these original plants seem to have gone out of fashion but most have a lot of good qualities and are still worth planting. *H. laurina* is a good bird attracting plant with an interesting shape. A weeping form which recently became available makes an ornamental tree. Quite a few hakeas are now grafted onto a hardier rootstock. They are a little more expensive but it does give us the opportunity to grow species in our conditions which would not otherwise grow here such as *H. muttlineata*, *H. coriacea* and *H. bucculenta*.

Myoporum floribundum's an interesting plant for a short term effect. It has the rather unusual habit of displaying its white flowers along the top of the stems. *Persoonia pinifolia* is a fairly large plant once it is well established. It makes an excellent specimen plant or small tree with the advantage of interesting foliage and flowers which are followed by bunches of fruit which hang like grapes. I have seen it marketed in a nursery as an Australian Christmas tree. Another plant I like to use is *Baeckea virgata*, especially if you are very restricted for space and want slender trunks and a light canopy. It grows to about 5m and has white flowers in summer.

A form of *Grevillea barklyana* from Labertouche in Victoria is a small tree reaching 5 to 10 metres. It will grow under a light canopy in a semi-shaded position and prefers some moisture. *Grevillea* 'Pink Surprise', a good bird attracting plant, grows to about 5m high and can be used as a small tree. It is quite a vigorous grower as are most of the hybrids and, often being bare-trunked, it can be underplanted.

Melia azedarach (Australian White Cedar) is a deciduous tree with fragrant, blue-mauve flowers followed by orange fruit. It has been used for many years and is frequently seen around the older suburbs. An excellent plant to use where you are really restricted for space is *Kunzea recurva* var. *mantana*. It is very upright in habit and yellow flowering. There are so many gardens around the suburbs where you see Chilean Willow planted, a rather large plant to be put in the small areas where it is often grown. *K. recurva* would fill the spot and be much more practical.

Australian trees offer a broad variation of flower, form and texture so, with our widely used eucalypts put aside, there is still a good selection of small trees to choose from.

Large Shrubs/Small Trees

Diana Snape Vic

Trees are important in a garden as focal points, living sculptures, screens, habitats for wildlife; they frame vistas, add structure and height, provide protective canopies, shade and shelter. At a recent meeting in Melbourne we discussed trees for small suburban gardens and decided to try classing a small tree as one < 6 metres (20 feet, or one telephone pole) in height, a medium sized one as 6-12 metres and a large tree >12m. When I started to check up on the maximum heights of trees which I had previously thought of as small, I was amazed at how many now became 'medium' or even 'large'. More recent reference books, particularly the *Encyclopaedia*, have realistically extended height ranges compared with earlier books. My discovery applied to eucalypts, acacias and a great variety of other genera. The minimum height given was often <6m but we know the danger of having faith they'll keep to this. Forms are variable of course and sizes depend on conditions, but the general principle remains. Not many commonly grown Australian trees are 'small'.

So I then looked at a wide range of plants with a maximum height of 6m and discovered that most were described as large shrubs, or large shrub/small tree. I began to wonder whether there was a need for a change in attitude towards these plants. In a large garden (country or suburban) with lots of space they are probably excellent as large shrubs, but in a small suburban garden? Should we 'down scale' the whole range of plants we consider for small suburban gardens? Should 'large' trees be a 'no-no'; medium trees be treated with caution; and a new look be taken at possibilities for small trees, as Roger Stone did in his talk? A large 'shrub' may be much more appropriate as a 'tree' in a small garden; low branches can be removed (if necessary) to show the trunk, or multiple trunks, more clearly. They can be thought of and treated as trees, in where they are placed in the garden, how they are used in garden design. The lists of eucalypts, acacias and other genera included below can be approached with this in mind. I'd love to hear your thoughts on this topic.

A selection of small and medium acacias

(N = from NSW, V = from Vic, etc.; height range in metres; S = shrub, S/T = large shrub or small tree, T = tree)

small acacias

acuminata W3-6m T	boormanii NV 3-5m S/T	calamifolia NSV 2-5m S	decora NQV 2-5m S
gracilifolia S 2-5m S	iteaphylla S 3-5m S	pentadenia W 3-4m S	podalyriifolia NQ 3-5m S/T
spectabilis NQ 3-5m S/T	terminalis NTV 2-6m S/T	verniciiflua NQSTV 3-5m S/T	vestita N 3-6m S

medium acacias

adunca NQ 4-8m S/T	aneura NQSWnt4-10mS/T	cognata NV4-10mS/T	concurrans NQ 3-8m S/T
doratoxylon NV 5-10m S/T	elongata N 2-7m S/T	farnesiana NQSWnt 3-7m S/T	fimbriata NQ 5-8m T
floribunda NQV 4-7m S/I	howittii V 4-8m S/T	leprosa NV 3-12m S/T	pendula NQV 6-12m T
pravissima NV 4-8m S/T	pycnantha NSV 3-10m S/T	retinodes STV 4-8m S/T	rubida NQSV 3-12m S/T

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A selection of other small and medium trees or shrub/trees

small

Baekia virgata NQVnt 0.2-6m S/T Banksia aemula (serratifolia) NQ 2-6m S/T speciosa W 3-6m S/T
 Callistemon pinifolius N 0.5-4m S C. cultivars
 Callitris canescens SW 3-6m T rhomboidea NQSW 3-6m SFT Dodonaea viscosa all states 1-5m S
 Grevillea endlicheriana W 2-4m S leucopertis W 2.5-5m S longistyla Q 2-5m S venusta Q 2-4m S
 Hakea elliptica W 2.5-6 S Jacksonia scoparla NQ 3-5m S
 Leptospermum polygalifolium N 1-6m S/T Melaleuca incana W 0.3-5m S nesophila W 2-6m S/T
 Myoporum floribundum NV 1.5-3m S Persoonia pinifolia N 3-4m S/T
 Telopea speciosissima N 3-4m S/T Viminaria juncea all states 3-6m S/T

medium

Angophora hispida (cordifolia) N 3-1 Om S/T Backhousia myrtifolia NQ 3-7m S/T
 Banksia ericifolia NQ 2-7m S marginata NSTV1 -1 Om SFT
 Bursaria spinosa NV 3-1 Om S/T Callicoma serratifolia NQ 3-1 Om S/T
 Callistemon citrinus NV 2-8m SFT paludosus NSTV 3-10m S/T viminaiis NQ 1-12m S/T C. cultivars
 Casuarina stricta NSTV 4-11 m T Ceratopetalum gummiferum N 3-1 Om SFT
 Codonocarpus cotonifolius NQSVWnt 5-7m T Davidsonia pruriens NQ 6-1 Om SFT
 Eremophila longifolia NQSVWnt 2-8m SFT Ficus hispida QWnt 6-8m T platypoda NQWnt 6-8m SFT
 Geigeria parviflora NQV 4-9m S/T
 Grevillea banksii Q 1-9m S/T barklyana V 3-10m S/T nematophylla NSW 2-1 Om S/T
 pteridifolia QWnt P-8m S/T shiressii N 3-8m SFT whiteana Q 3-7m SFT
 Hakea eriantha NQV 2-8m SFT laurina W 3.5-8 SFT petiolaris W 2-10S/T
 Kunzea ericoides (syn Leptospermum phylicoides) NQS?V 2-8m SFT
 Lagunaria patersonii Q (Norfolk Is. Lord Howe Is.) 6-12m SFT
 Leptospermum brevipes NQV 2-7m S/T laevigatum NSTV 3-8m S/T petersonii NQ 3-7 S
 Melaleuca alternifolia NQ 4-7m S/T armillaris NTV 4-10m S/T cuticularis SW 1.5-12m SFT
 halmaturorum SV 2-10m SFT lanceolata NQSVW 6-10m SFT linariifolia NQ 6-10m S/T
 squarrosa NSTV 4-12m S/T
 Myoporum insulare NSVW 1-7m S/T
 Pittosporum phillyreoides NQSVWnt 5-8m T undulatum NQSTV 5-12m T
 Prostanthera lasianthos NQVT 2-1 Om S/T Tieghemopanax sambucifolius NV 3-8m T

These are examples, mostly ones I know, of large shrubs/small trees currently in cultivation but there are, of course, many others (e.g. the list includes very few rainforest species). I'm sorry the selection is biased towards S.E. Australia. Please write and tell us which small or medium trees you would recommend for garden design.

Last, but definitely not least - SMALL EUCALYPTS

Trunk, bark, branches, stems; mature and juvenile foliage; buds, flowers and fruit - some or all of these features are ornamental in all small eucalypts. As well, their leaves have typical eucalyptus fragrance and the nectar from their flowers attracts birds and insects. Here are lists of recommended small eucalypts from Rodger Elliot ('Your Garden' September 1994) and Kevin Rule (SGAP Waverley Group Newsletter 1983). Such lists always have their own constraints but provide useful assistance in making a choice, rather than trying to select from much larger numbers. It's interesting to note that almost all the small eucalypts in both lists are mallees or mallee ashes.

Top 20 Backyard Eucalypts 'Your Garden' Sept '94

Rodger Elliot Vic

Rodger must have found it difficult to get his list down to 20 species! (I've put them in the three groups.) Most of these eucalypts do best with good drainage and plenty of sunshine. Rodger advises not to force growth of small eucalypts with fertilizer and frequent watering - it's better in the long run if they establish more slowly. If staking can't be avoided, trunks must still be able to move a little so roots will strengthen. For descriptions and details of cultivation please refer to 'Your Garden' Sept '94 and the *Encyclopaedia of Australian Plants* Vol. 4.

<u>Name</u>	<u>Common name</u>	<u>States of origin</u>	<u>Height in metres</u>
<u>Small</u> (< 6 metres or 20 feet in height)			
E. kruseana	Book-leaf Mallee	W	2-6
E. lehmannii	Lehmann's Mallee	W	3-5
E. macrocarpa	Mottlecah, Blue Bush	W	2-4
E. moorei	Little Sally, Narrow-leafed Sally	N	3-6
E. orbifolia	Disc-leaf Mallee	W	3-6
E. preissiana	Bell-fruited Mallee	W	2-5
<u>Medium</u> (between 6 and 12 metres)			
E. caesia 'Silver Princess'		W	4-10
E. calycogona	Goosebery Mallee, Square-fruited Mallee	NSVW	3-8
E. curtisii	Plunkett Mallee	Q	4-10
E. dives 'Little Honey'	Broad-leafed Peppermint	NV	5-10

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E. gregsoniana	Wokjan Snow Gum	N	4-7
E. kitsoniana	Bog Gum, Gippsland Maliee	V	5-10
E. leucoxyton ssp. megalocarpa	Large-fruited Blue Gum, Yellow Gum	S	4-9
E. macrandra	Long-flowered Marlock	W	5-8
E. pulverulenta	Silver-leafed Mountain Gum	N	6-10
E. tetragona	Tallerack, White Marlock	W	3-8
<u>Potentially large</u>			
E. cinerea	Argyle Apple, Mealy Stringybark	NV	8-18
E. crenulata	Victorian Silver Gum, Box Gum	V	5-15
E. eximia	Yellow Bloodwood	N	8-15
E. ficifolia	Red-flowering Gum	W	6-15

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Small eucalypts of eastern Australia suitable for Melbourne suburban gardens

(SGAP Waverley Group Newsletters 1983, provided by Joan Barrett)

Kevin Rule Vic

Kevin's list of 30 eucalypts was aimed at a different audience and included a number of rare and/or endangered species which I think he was probably trying to encourage SGAP members to grow. Some of these are listed separately here, for interest; most may not be easy to obtain and are likely to be more experimental, so their usefulness in garden design is restricted. Several others have apparently not been widely cultivated yet.

The second height range for each eucalypt is that given in the *Encyclopaedia*, to highlight the problem of predicting with any accuracy how tall a eucalypt is going to be in the garden. (I haven't included indications of width or spread, which also vary considerably.) Darren Wallace, in his talk at the Karwarra Seminar on propagating, growing and establishing Australian plants for public areas, stressed the desirability of knowing just how a eucalypt is going to grow in a particular environment. Knowing its provenance may be very important. DS

* means also on Rodger's list (above)

means also particularly recommended by Rodger in the *Encyclopaedia*

<u>Name</u>	<u>Common name</u>	<u>States of origin</u>	<u>Height in metres</u>
<u>Small</u>			
E. approximans	Barren Mountain Maliee	NQ	3-4, 2-5
E. cyanophylla	Blue-leaved Maliee, Murraylands Maliee	NSV	5, 2-6
E. moorei*	Little Sally, Narrow-leaved Sally	N	5, 3-6
E. rupicola*	Cliff Maltee Ash	N	2-4, 1-6
E. vemicosa#	Varnished Gum	T	1, 1-6
<u>Medium</u>			
E. barberi	Barber's Gum	T	5-8, 3-10
E. diversifolia*	Soap Maliee, Coastal White Maltee	SWW	2-8, 3-10
E. foecunda/ E. leptophylla*	Narrow-leaved Red Maliee	W/NSWV	3, 3-8
E. gregsoniana*	Wolgan Snow Gum	N	3, 2-7
E. lansdowneana#	Crimson Maliee, Purple-flowered Maliee Box	S	3, 3-10
E. multicaulis*	Whitstick Maltee Ash	N	3-12
E. polybractea#	Blue-leaved Maliee	NV	4-10
E. saxatilis	Suggan Buggan Maltee	V	8, 6-10
E. viridis#	Green Maliee	NQSV	6, 5-12
E. yalataensis#	Yalata Maltee	SW	2-3, 2-8
<u>Potentially large</u>			
E. flocktoniae*	Merrit	SW	5, 6-15
E. leucoxyton* ssp. petblaris	Yellow Gum, Blue Gum, White Ironbark	S	12, 8-20

Recommended rare and/or endangered species (seven species have been omitted.)

small

E. apiculata#	Narrow-leaved Maliee Ash	N	3, 3-6
E. luehmannianaf	Yellow-top Maliee Ash	N	4, 2-6
E. pumila#	Pokolbin Maltee	N	3, 2-6
E. sturgissiana#	Ettrema Maliee	N	3, 3-5

medium

E. camfieldM	Camfield's Stringybark	N	3, 4-10
E. curtisii*	Plunkett Maltee	Q	2-8, 2-10

I'd like to conclude by adding four of my own favourites (editor's prerogative). They've all been 'small' in our garden. DS

medium

E. behriana	Bull Maltee, Broad-leaved Box	NSV	2-10m
E. forrestiana #	Fuschia Gum, Fuschia Maltee	W	3-7m
E. gardneri #	Blue Mallet, Blue-leaved Mallet	W	6-9m
E. torquata#	Coral Gum, Coolgardie Gum	W	6-12m

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Although new species of hibiscus and hibiscus-like plants are still being found and recorded⁽¹⁾, the beauty of at least one species was recognised as long ago as 1828. The Colonial Botanist of New South Wales, Charles Fraser described *Hibiscus splendens* as the King of all the Australian plants he had seen. He described the flowers as being the most delicate pink and crimson and literally covering the plant. *Hibiscus splendens* is just one member of the Hibiscus family. Australian-representatives may be herbs, shrubs or trees and include *Abelmoschus*, *Abutilon*, *Alyogyne*, *Gossypium*, *Lagunaria*, *Pavonia* and *Radyera*.

These plants vary in size from a ground cover, *Abelmoschus moschatus*, to small plants such as *Hibiscus trionum* and *H. geranioides* (0.5 m), to medium shrubs such as *Alyogyne huegelii* (1 -2.5m) and tall trees such as *Lagunaria patersonii* (to 13 m). Not only is there a range of sizes but members of this family can be found growing in tropical areas, *Abelmoschus manihot*, in swamps and crater lakes, *Hibiscus diversifolius*, along the beach, *H. tiliaceus*, in inland Australia, *Gossypium sturtianum*, *Alyogyne hakeifolia*, in fissures in sandstone in open forest or along rainforest margins, *H. splendens* and along the margins of light rain forests on soils ranging from loam to granitic or poor and gravelly, *H. hetemphyllus*. While most species occur in subtropical and tropical regions, some species can be grown in temperate climates, e.g. *Hibiscus splendens*⁽²⁾ and *H. diversifolius* if kept well watered⁽³⁾. Other species can be grown in warm temperate zones, e.g. *Alyogyne hakeifolia*, *A. huegelii*, *Hibiscus hetemphyllus* and *H. tiliaceus*⁽²⁾. Hibiscus plants grow even under tough conditions, e.g. remnant stands of *Hibiscus hetemphyllus* growing on hillsides near Brisbane show no adverse effects from the current prolonged drought and in the Wide Bay district, roadside plants of *H. divaricatus* are re-growing after being burnt. One species, *Alyogyne huegelii*, has been described as thriving in the most desolate of places⁽⁴⁾.

Depending on the species, flowers may be white, various shades of yellow, pink, purple, or red. Most plants are perennials, even though plants such as *Abelmoschus moschatus* die back for part of the year. *Hibiscus trionum* is usually treated as an annual species. Flowering times vary according to the species but in a subtropical climate such as Brisbane, by planting a range of species, it is possible to have plants flowering throughout the year. This prolonged flowering and the production of nectar contributes to the value that Hibiscus species have for "faunascaping"⁽⁵⁾. Not only will blooms which produce nectar feed nectar-eating birds and predators but they will also attract insects for insect eaters, provided there are protected water sources and nesting places for birds. In addition, the seed capsules of species such as *H. hetemphyllus* can provide for seed-eaters. Thus, apart from any aesthetic appeal of birds and insects, plants such as hibiscus species which attract birds and predators encourage natural pest control as the insects use the plant as a food source and are themselves controlled by a wide range of predators⁽⁶⁾. Honeyeaters take advantage of the large nectar-rich flowers of species such as *Alyogyne huegelii*, *Hibiscus diversifolius*, *H. heterophyllus*⁽⁷⁾ and *H. splendens*⁽⁸⁾. Birds such as lorikeets are attracted to species like *H. heterophyllus*⁽⁹⁾ and the sight and sound of a *Hibiscus heterophyllus* literally covered with lorikeets bowing down the branches as they feast upon the seed capsules more than compensates for any damage sustained. Insects seek out the flowers of *H. diversifolius*, *H. heterophyllus*, *H. splendens* and *H. tiliaceus*⁽¹⁰⁾ and *H. tiliaceus* is a butterfly food source⁽¹¹⁾.



Cp|py HIBISCUS AND GARDEN STYLES

Given the range of sizes, variety of habitats, range of soil types, widespread distribution and potential for "faunascaping", Hibiscus and Hibiscus-like plants could enhance most garden styles.

In a Naturalistic garden, hibiscus could be considered for a **Natural Plant Community** garden. For example, in a wetland garden, *H. diversifolius*, both the lemon and the maroon form could be used as could *H. tiliaceus*. In a Woodland garden, *H. heterophyllus*, *H. splendens* and hybrids between the two could be used. In a Rainforest garden, *H. geranioides* could be included and *H. heterophyllus* and/or *H. splendens* could be used on the margins. For a **Formal** garden, plants which have distinctive foliage could be considered, for example, *Alyogyne huegelii*. Plants which respond well to pruning could also be included, particularly species such as *H. heterophyllus* and *H. splendens* which can be trained on clean trunks⁽¹⁰⁾. Plants which naturally grow into particular shapes may have a role e.g. *Lagunaria patersonii* grows into an attractive pyramidal shape and *Hibiscus insularis* requires only light pruning to keep a rounded shape⁽¹¹⁾.

The **Theme** garden provides many possibilities for incorporating hibiscus and hibiscus-like plants:

The **Collector** who decides to focus on these plants will find the experience rewarding and yet frustrating given the limited availability of most species.

The **Colour** gardener has a range of colours available as already noted, in fact, every colour except blue.

The **Productive** Gardener will enjoy exploring the many advantages of Hibiscus and Hibiscus-like plants e.g. flowers of species such as *Pavonia hastata* make an attractive, edible garnish for salads, and finely-chopped young leaves of *H. heterophyllus* enhance cucumber sandwiches. As well, no hibiscus is known to be poisonous and it is probably safe to eat any that taste acceptable⁽¹⁴⁾ with flowers, leaves and even the roots being edible w/w. one species, *Abelmoschus manihot* has leaves that are high in protein⁽¹²⁾ and is an important vegetable in countries such as Papua New Guinea. Fibre can be produced from the bark of species such as *Hibiscus heterophyllus* and *H. tiliaceus*, *H. tiliaceus* provides wood for a variety of purposes⁽¹³⁾, and a number of species have medicinal uses⁽¹⁵⁾.

In a **Wildflower** garden, species such as *Pavonia hastata* and *Hibiscus geranioides* blend well together and flower throughout the hottest months. *H. trionum* offers the advantages of an annual display and blends well with *Abelmoschus manihot* or with *Hibiscus diversifolius*. *Alyogyne huegelii* offers interesting foliage and a range of flower colours.

Almost all species can be potted for the **Portable** garden. If a seedling is grown, not only might the flowers be a long time coming, but it will be difficult to maintain the plant in a pot. If cuttings are taken, instead of the tap root system of a seedling, the plant has fibrous roots and is then much more amenable to being contained in a pot, particularly if the plant is tip-pruned from the earliest stages. The result is a bushy plant that flowers freely and much earlier than it would as a seedling⁽¹³⁾. Plants can be potted on until the desired size is reached and then maintained at that size by pruning. Species such as *Hibiscus heterophyllus*, *H. divaricatus* and *H. splendens* can be maintained as small plants in small pots or allowed by potting on to reach a height and/or width of 1.5-2m depending on the way they are pruned.

The **Eclectic** garden will benefit from the inclusion of at least ONE hibiscus or hibiscus-like plant from the approximately eighteen⁽¹⁶⁾ Australian genera.



MoS HIBISCUS IN GARDEN DESIGN

Four ways of incorporating Hibiscus plants as a means of enhancing the various garden styles will be described. The suggestions, whatever the style, are as a **screen**, as a **feature**, as part of a **mixed planting** or as a **container** plant.

HIBISCUS AS A SCREEN

Two rapidly-growing species, *Hibiscus heterophyllus* and *H. splendens*, occur on the coastal strip north from Kiama with *H. heterophyllus* being found as far north as Cooktown and *H. splendens* to Bundaberg as well as in central Queensland^m. Both grow as shrubs or small trees and form a screen that would suit a **Naturalistic** garden. The prickles that are usually found on the branches become a plus when used this way, although if they are a problem, or if a salt resistant plant is required, *Hibiscus insularis* could be grown. If allowed to grow without pruning, the bushes will not retain foliage to the ground but will provide a dense screen from about 1.5 metres tip. For a screen of *H. heterophyllus*, *H. divaricatus* or *H. insularis*, the lemon form of *H. diversifolius* is useful between the taller plants. When the screen is the pink form of *H. splendens*, the pink form of *H. diversifolius* provides a low-level screen. If an apricot form of *H. splendens* is planted, both the foliage and flowers of *Abutilon auritum* blend. From the New South Wales border north, *H. tiliaceus* grows as a spreading tree that can grow as tall as 9 m and spread as wide as 16 m. *H. diversifolius* grows well underneath and the flowers go well together. For inland gardens, *Gossypium* species such as *G. sturtianum* can provide a screen approximately 1.5 m (see Australian Plants, June 1985, Vol. 13, No 183, p.109f). For a **Formal** garden, the pyramidal shape of *Lagunaria patersonii* could be used in Sydney and areas north of there for a tall screen and *H. insularis* makes a good hedge plant and windbreak^{13>} where a lower screen is required. In a Theme garden, depending on the habitat, an appropriate species could be chosen from those already described.

HIBISCUS AS A FEATURE

Most styles of garden could accommodate Hibiscus and Hibiscus-like plants as features. In Brisbane, *Hibiscus heterophyllus* makes an attractive specimen plant^m and plants of *H. tiliaceus* which have been developed as a standard, are used to provide shade in car parks such as at the airport and in some shopping centres. In Sydney beach side suburbs²⁹⁾, and in parts of Brisbane, *Lagunaria* is used as a street tree, although care should be taken as hairs on the fruits cause skin irritation. However, almost any species could be used, in almost any style of garden, as a feature plant, particularly if there is repetition of the same species. All species flower prolifically and many have unusual foliage, e.g. *Alyogyne huegelii*, *Hibiscus splendens*. Where the foliage is not distinctive, the flowers usually show up well against the foliage, e.g. *H. heterophyllus*, *H. diversifolius*.

HIBISCUS IN A MIXED PLANTING

This is where interesting results can be achieved. The combinations are endless. The following are some possibilities: *Hibiscus heterophyllus* (yellow form) and *H. divaricatus* blended with *Acacia fimbriata* and *Hymenospermum flavum*; *H. heterophyllus* (white), with purple-flowered *Hovea* and purple and white *Viola hederacea* as ground cover beneath a stand of *Eucalyptus curtisii* with clumps of *Crinum pedunculatum* for foliage contrast; *H. splendens*, both rose pink and pale pink forms with *Hakea sericea* (pink), *Grevillea "Pink Parfait"*, *Sollya heterophylla* (pink), *Thryptome saxicola* (pink) and *Pelargonium sp.* (pink).

HIBISCUS AS A CONTAINER PLANT

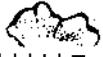
As noted, even larger species such as *H. heterophyllus*, *H. divaricatus* and *H. splendens* perform well in pots if grown from cuttings and tip-pruned. If allowed to become straggly and then pruned heavily, flowering may be reduced for that season but the plant will soon produce new growth. This new growth should be tip-pruned. Smaller species do not require any pruning. *Abelmoschus moschatus* "Mischief" flowers heavily in a pot without pruning as does *Hibiscus trionum* "Sunny Days". *Pavonia hastata* makes an ideal container plant but does benefit from a heavy pruning at the end of winter. By having a range of species in containers, e.g. *Abelmoschus manihot* and *A. moschatus*, *Hibiscus panduriformis*, *H. heterophyllus*, white and yellow forms, *H. divaricatus*, *H. splendens* with varying shapes of foliage and in various shades of pink, *H. diversifolius*, lemon and maroon forms, *Hibiscus insularis*, *Pavonia hastata*, *Alyogyne huegelii* and *Gossypium sturtianum*, it becomes possible to move plants to provide a feature, e.g. *Abelmoschus moschatus* "Mischief" produces bright red flowers at Christmas.



S |||| 7 CHALLENGES ASSOCIATED WITH HIBISCUS IN GARDEN DESIGN

Although Hibiscus can enhance the 'native' garden, Hibiscus species are not without problems. Susceptibility to frosts has to be considered, although most are hardy plants in areas where only light frosts are experienced²⁹⁾. Species such as *Gossypium australe* and *G. sturtianum* are frost resistant[^] but species such as *Hibiscus heterophyllus* and *H. splendens* will need extra protection in frost-prone areas^w but do grow well in frost prone areas against a wall or fence^{P1}. It appears to be possible to overcome frost susceptibility by careful selection of hybrids, for example several of a number of hybrids between *H. heterophyllus* and *H. splendens* have recently survived -7 degrees even though the naturally occurring species growing on the same site were either damaged or destroyed. Another difficulty is that in some species such as *Hibiscus diversifolius*, *H. heterophyllus* and *H. splendens* and *Abelmoschus manihot*, the seed pod is covered in hairs that may cause severe skin irritation. Sticky tape stuck onto the skin and then pulled off appears to be the easiest and most effective way to remove these irritant hairs as well as using tweezers when extracting seed. Then there are a variety of sucking or chewing creatures that enjoy the flavour of both buds and leaves, although well grown plants are less likely to be attacked by either pests or diseases⁽¹³⁾ and control is usually not warranted, especially if it is appreciated that many pests represent an important food for birds and predators and if the garden already has birds and other predators present to clean up most pests^{P1)}. Hibiscus beetles mostly feed on the pollen of the hibiscus flower and may chew holes in the petals^m but there is no need to kill them^{P1)}. Even though Harlequin bugs depend on the sap they suck from species such as hibiscus, the damage is rarely serious^B and their colours are so spectacular that they can even be considered desirable⁽¹¹⁾. Scale insects can become a problem but can be easily managed either by removing by hand or even by cutting off affected parts. Any other damage that may occur can also be pruned off. Regrowth is so fast after pruning the plant may actually be improved. Pruning to maintain a desired size or shape may be seen as a chore. However pruning is unnecessary for plants used for screening, or as understory plants or in the rainforest, but tip-pruning and pruning after flowering is recommended for container plants or they soon outgrow the container. The plant repays the effort as the result is a more compact plant with a much greater number of flowers.

Probably the major obstacle to incorporating Hibiscus and Hibiscus-like plants is availability of plants. Few nurseries regularly carry Australian species. Currently, seed of some species can be obtained either through the SGAP seed bank or through commercial suppliers of wildflower seeds. Charles Fraser recognised the merit of the Australian species he so admired as he sent seeds of *H. splendens* to the Royal Botanic Garden, Edinburgh. However, over 150 years later, despite their adaptability and ready flowering, this same plant and many of its close relations are not yet readily available in nurseries or if available may be incorrectly or inadequately identified. The difficulty with obtaining plants is likely to continue until the landscaping potential of this long ignored family of plants finally begins to be recognised.



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Grow What Where computer programreviewed by **Bev Courtney Vic**

The book *Grow What Where*, by the Australian Plant Study Group, has been around for some years now. It is not a gardening book in the sense of giving information on how to grow Australian plants but it is nevertheless a very useful tool for the gardener and the garden designer. The book consists of over 2300 plants grouped into 100 numbered lists. By starting with a particular situation or criterion, eg rockery plants; plants with blue flowers; fence screeners, etc. it is possible to find a list of suitable plants, in various height categories, for that situation. By starting with a named plant, the index can be consulted to give all the possible lists (ie situations) in which the plant will occur.

The book has now been released as a computer program and version 2 appeared in December 1994. It contains several new features not found in version 1. The program covers 3115 plants in 183 numbered lists. All the lists covered in the book are included as well as many new categories. The lists can be viewed in alphabetical or numerical order. A particular list can be selected by highlighting it and pressing the + (plus) key. Any number of lists can be selected at once. This feature makes the program much more versatile than the book, where a great deal of searching would be needed to find a selection of plants common to more than one list. A list can be deliberately deselected by highlighting it and pressing the - (minus) key.

For instance if you wanted a plant with **red flowers** for **dry sandy soil** in **full sun**, you would highlight these three lists for your selection. If you wanted to exclude prickly plants from the selection, you would deselect **prickly plants**. Pressing the search function key will result in a complete listing of all red-flowered plants suitable for dry, sandy soil in full sun, and none of these would be prickly species. The search range normally covers all plants from A to Z, however it is possible to narrow the search range to cover only one particular genus. This would be useful, for instance, if a design project was to feature plants from one large genus, such as *Grewia*.

In addition to the 183 lists available, five user defined lists can be prepared and plants from the main list added to any of these. A user defined list might include plants in your own garden, plants on a nursery stock list, or plants being used in a specific landscaping project. User defined lists can be cancelled and re-used at any time. If it is desired to find a situation for a particular plant, its name can be entered and all the lists in which it occurs will be displayed.

Much additional, useful information has been included in the new version. This includes:

- current plant name changes listed alphabetically, under both the new and the old name.
- two family/genus listings. The first gives an alphabetical list of genera and the family in which each genus occurs. The second gives an alphabetical list of families and the genera belonging to each family.
- lists of plants which are rare, endangered or vulnerable.
- lists of plants protected by Plant Variety/Plant Breeders' Rights.

The program works from DOS and occupies 284 kB of hard disk space. It costs \$100 and is available on either 3.5" or 5.25" floppy disk from the Australian Plant Study Group, PO Box 70, Park Orchards 3114. No written information is supplied with the program, other than instructions on how to copy the files from floppy to hard disk, but the program is very simple to use and there is ample information available at the press of a key. I can highly recommend it for professional landscapers or for gardeners simply interested in making garden design easier.

Plants for a low hedge to replace *Buxus sempervirens*

Bev Courtney Vic

I would try the dwarf form of *Darwinia citriodora*. its larger brother clips well and I'm a sucker for blue green foliage, as you know.

Just for interest, I ran a search through *Grow What Where*, for hedges, in full sun all day, 30 - 60 cm tall, and this is the printout list of 15 matching plants. (# dwarf or low forms)

<i>Baeckea virgata</i> #;	<i>Bauera rukimdes</i> ,	<i>Caiothamnus quadrifidus</i> ;
<i>Correa</i> 'Dusky Bells';	<i>GreviHea baueri</i> ,	<i>G. diminuta</i> ,
<i>G. juniperina</i> #,	<i>G. lanigera</i> ,	<i>GreviHea baueri</i> ,
<i>G. lavandulacea</i> ,	<i>G. linearifolia</i> ,	<i>G. rosmarinifolia</i> #;
<i>Kunzea parvifolia</i> ;	<i>Leptospermum myrsinoides</i> ,	<i>L. polygalifolium</i> #;
<i>Melaleuca hypericifolia</i> #		

Penny Munro NSW suggests *GreviHea buxifolia* as an alternative to *Buxus sempervirens*.

A GARDEN DESIGN WITH A DIFFERENCE

Reflections on a visit to the garden of **Geoff Simmons**

Colleen Keena Qld

Geoff has designed and constructed a large garden with a difference or, more accurately, a number of differences. White I could not do justice to a description of Geoff's design concept, my husband and I not only enjoyed the time spent in his garden but were left with some lasting impressions in spite of the fact that large sections as well as collections had just been destroyed by the bushfire that had devastated large tracts of the Sunshine Coast.

Firstly, no lawn. I personally have never been able to understand the reasoning behind using scarce and expensive resources such as water and fertilizer only to have to expend yet more scarce and expensive resources in the form of fuel to remove what the water and fuel have nurtured. My emotional aversion has been heightened by having several family members with strong allergic reactions to even the slightest contact with grass. While I usually try to refrain from expressing such heretical thoughts, it was great to find someone else who had consciously excluded green swathes. Moreover, the fires had traversed neither the large brick patio in front of the house nor the gravelled areas surrounding the rest of the house. While it was incredible that Geoff still has a house, his use of large gravelled areas as an integral part of his garden design must have been a contributing factor and will be a feature of any future garden we design, given our own recent close encounter with bushfires.

Secondly, local species were featured in the sections of the garden closest to the natural vegetation left by Geoff on his block. Two impressions remain. One, the rapid recovery from the fire of these truly indigenous species. Secondly, the variety of species growing naturally in that area. Again, this struck a sympathetic chord. We too had left a section of our land as "bush", now the only bushland remnant in our immediate vicinity. While I believe that at least corridors of remnant vegetation should be retained wherever possible, I do not advocate that only local species should be used when designing a garden. However, our experience has shown that locally occurring species are hardy and I regret that I did not have the knowledge from the beginning to include even more in the planting around our house and dam, and that I was unaware of just how great is the diversity in our locality. Recent publications advocating the use of local plant species for the Brisbane area have extended our knowledge but until similar publications become available for other regions we may be neglecting the very plants that have much to contribute to garden design.

Geoff's incorporation of his local species has not only provided a link to the areas he has left as "bush" but has also ensured that this section will need no replanting in spite of being directly in the path of the fire. I believe garden designs that do incorporate local varieties of vegetation offer a challenge to all involved in garden design, namely, how "native" should "native" be? My initial response to recent demands for only "local" species to be used was not exactly favourable. While I do not (yet anyway) propose to discard collections such as my collection of grafted greviteas, I am now aware that if a local species will perform the function required, then it will cope with local conditions, even drought and fire, most efficiently, but that can only happen if I have the knowledge of the local species to make an informed choice. My current thinking is that decisions about what plant species to include in a garden design should be based on a sound understanding of the local vegetation as only then can the decision truly be an informed one.

Probably the other strong impression arising from a visit to Geoff's garden came from his usage of plants in "different" ways, as well as the effect derived from repetition of species. Miniature clipped hedges link areas of the garden; however Geoff has not used the exotic species normally associated with such a design but instead has used *Graptophyllum excelsum* extensively to outline beds and this results in a feeling of continuity. The plantings in a number of beds was kept low with a single plant of a tree species, such as *Cassia* or *Bauhinia*, providing a focal point in the centre of these garden beds. The same tree was then repeated in the centre of adjacent areas. As well as repetition of the same species, related plants were placed in close proximity, e.g. two varieties of *Jasminium* sp. covered the ground on either side of the steps leading up to the patio and so the impact was greater than would have been achieved had not such closely related

plants been used. Interesting effects were also obtained nearby by continuing the white of the *Jasminium* sp. through the inclusion of *Pandorea jasminoides* 'Lady Di' as a ground cover interspersed with the large red flowers of the trailing *Abelmoschus moschatus*. These large hibiscus-like flowers not only provided an attractive contrast to the smaller white flowers of the pandorea and jasminium species but harmonised with the red-brick backdrop of the low patio wall.

To sum up: Geoff's garden design challenges some of the features exemplified in so much of the garden design prevalent in south-east Queensland, particularly the mandatory inclusion of lawned areas and the total exclusion of "scrub". He also includes species used in different ways, such as his use of *Graptophyllum excelsum* and *Cassia marksiana*. Truly a design with a difference. Thank you, Geoff.

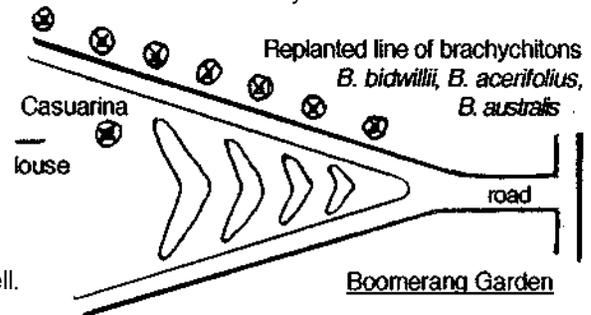
Recovering after bushfire (an extract from Geoff's letter)

Geoff Simmons Qld

"If you were to visit now, you would not notice much has changed in the immediate vicinity of the house but further away affected trees and shrubs become more noticeable. In the hibiscus garden close behind the house, several plants were killed but three are showing regrowth. Colleen Keena brought me a magnificent batch of hibiscuses and several allied species so that garden is truly a malvaceous area. Except for an attempt to link colours, there is not much design so it remains to be seen how effective it will be.

About one third of the plants in the tree garden were burnt and most have some damage.... The row of *Pittosporum rhombifolium* on the northern side was completely destroyed just when they were starting to serve their purpose of delineating the edge. I have replaced them with 5 *Austromyrtus hillii*. The Flindersias were badly burnt but I notice that one of them is shooting from ground level 14 weeks after the fire. The Doryanthes were badly affected but all except three are slowly coming back to shape.

While almost all of the self sown small casuarinas were killed, one larger male casuarina was hardly affected. I have now converted the area into one called the boomerang garden as I have carved four boomerang shaped beds there. Within the beds I am leaving regrowth and germinating self sown native species. These include goodenias, hibbertias, lomandras and tricorynes but I am trying to control grasses and weeds. Whether this is successful, time will tell.



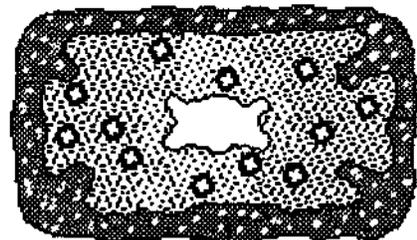
As one would expect there has been a tremendous burst of seed germination. Not unexpectedly wattle seedlings are appearing in thousands reflecting the effect of heat on dormant seeds. The tree ferns and cycads grew new fronds very quickly even though all the old ones were burnt off. I think the most depressing aspect is the failure of good rains since the fire in September."

Design Ideas

A low daisy garden in a 6 x 3.5 metre rectangle

How about *Brachyscome seamentosa* (Lord Howe Island daisy) as the border. It's deep green, reliable, spreads and flowers with a yellow centre and white petals. Let it encroach from the four corner border areas and run towards the centre on each diagonal. (Visualising all this so far?) Next a thick planting of *Brachyscome multifida* alba and radiating from the centre some *Rhodanthe Paper Baby*. And finally a dozen Common Everlastings (*Chrysocephalum apiculatum*) scattered randomly throughout. Basically a formal shape, with three formal plantings, one informal and random planting.

Grahame Durbidge NSW

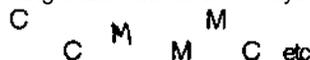


Street planting of callistemons

Picture red flowering *Callistemon* 'Hannah Ray' with *Callistemon salignus* (red or white flowers) and *Callistemon* 'Captain Cook' planted together about 2 metres between centres to get good intermingling. Their trunks and foliage are all different but complementary.

It would be great to have a living groundcover underplanted but it would have to be tough, out there in the street. Maybe *Myoporum parvifolium*, broad leaf form. What about a climber or two - *Clematis aristata* and Wonga Vine (*Pandorea pandorana*)!

Penny Munro NSW says: I would like to see red flowering callistemons with maybe a *Myoporum floribundum* in groups of 2:1, with merging into the next group, eg



Getting the edge: garden borders and mulches

Grahame Durbidge NSW

One of the most important considerations with garden design is the nature of the edging. The material and form of the defining boundary between the garden and the rest of the universe seems to set the mood and intent of this place of 'sensual indulgence'. A well chosen material and a well constructed garden edge will lift the planting design. Even a completely random planting seems to have a sense of being 'a garden' when tastefully bordered.

The same can probably be said about the type of surface mulch material used. Border options might include rocks, bricks,

tiles, sleepers, logs, plastic or spaded earth. Mulching options include bark (various milled sizes available), woodchip, leaf mould or lucerne hay. My choice is rock set in concrete with only very small mortar joints between and mulched with a nice gravel. What do you like?

ASGAP Conference at Ballarat

The 18th ASGAP Conference will this year be held at Ballarat, Victoria, from 23rd to 29th September. The overall theme is 'The Brilliance of Australian Plants'. Each of the three seminar days has a theme too: on Monday 23rd it's 'In the Australian Garden'; on Wednesday 'The Local Environment' and on Friday 29th 'People Power/ Your Society'. On Tuesday and Thursday there are tours of nearby areas such as the wonderful Grampians. A number of GDSG members are speaking at the Conference - in order of appearance Tony Cavanagh, John Knight, Diana Snape, Gwen Elliot, Neil Marriott, Jan Hall, Marilyn Gray, Doris Gunn, Rodger Elliot; plus many other excellent speakers. There are also a range of pre- and post-Conference tours available.

September seems a long way away but now is the time, if you possibly can, to plan ahead to attend the ASGAP Conference. Registration is required by July (June for the tours). Enquiries /payments to Paul Kennedy (another hard working GDSG member), ASGAP Biennial Seminar, 17 Craig Court, Heathmont Vic 3135 or (03) 729 4292 (until May 95).

Melbourne meetings -1995 dates and venues *Please mark in your calendar now!*

~~First Sundays~~ at 1.30 pm (business part), 2.30 pm (garden design part); all members are welcome for either or both parts.

Sunday ~~5th February~~ at Rodger and Gwen Elliotts' place,

Sunday ~~5th March~~ at Diana Snape's place,

Sunday ~~2nd April~~ at Nicole Lenffer's place, ;

~~Thursday 30th March 8 pm~~ - our first evening meeting

Jane Shepherd, Head of RMIT School of Landscape, will be our first evening guest speaker, at the Municipal Horticultural Centre, Jolimont Road, Forest Hill. Jane will speak on the influences acting on Australian garden design today. The cost is \$2 per person. Do come if you possibly can (friends and family welcome too) - we're hoping for a really good attendance. *It is important that you let John Armstrong or Diana Snape know if you're coming, so we have an idea of numbers.*

There'll be supper afterwards and keen cooks can win hearts by bringing 'a plate'.

Sydney meetings - 1995 dates and venues

For further information: Gordon Rowland

~~Sunday 12 February~~: 3 pm at Gordon Rowland's place, Unfortunately the planned speaker for this meeting has just now had to cancel, so please contact Gordon to find out new details.

~~Sunday 14 May~~: Mount Annan Botanic Gardens

~~26 or 27 August~~: Mount Annan Botanic Gardens

~~Saturday 18 November~~: Royal National Park, Wallumarra Track.

The 1995 **Wildflower** Festival is to be held on Sat. and Sun. 12 and 13 August at the Nursery Industry Association, 344 Annangrove Road, Rouse Hill. Further information: Dulcie Buddee,

New members A warm welcome to:

Helen Allen

Lindsay Campbell

Alison Dredge

Florence King

Belinda Wallis

Louste Gore on behalf of Wesley College University of Sydney NSW 2006

All members - please let Peter Garnham know of any changes in address, telephone number etc. (Peter's address is on the frontpage.) He will keep me up-to-date with changes too.

Next newsletter (due May 95)

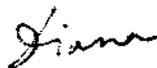
Use of water in the garden - *please send in a sentence, a paragraph, or a page or two on this topic by early April.*

Dtyandras in garden design - Tony Cavanagh and Margaret Pieroni

Another look at classification - Diana Snape

Thank you once again to all those who have contributed to this newsletter. Do let me know if you found this issue's theme of small trees in garden design helpful, and also if you think it's worthwhile trying to concentrate on a theme. Formal gardens and wildflower/cottage gardens have been suggested, but don't feel restricted to these themes - all articles and all ideas are welcome!

Best wishes



Diana Snape