NEWSLETTER OF THE AUSTRALASIAN PLANT SOCIETY

PENTACHONDRA



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AUSTRALASIAN PLANT SOCIETY

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EDITORIAL

As the world knows, the British are obsessed with the weather. From the end of June until the beginning of September, the topic on everyone's mind was 'how hot it is; when is it going to cool down and rain?' Open any newspaper, switch on the television or radio, and we were confronted with news of scorching temperatures, no rain expected, and the inevitable (and still on-going here) hosepipe bans. For two months we enjoyed temperatures in the mid to high 20s celsius, although it was time-consuming work carrying watering cans from one end of the garden to the other.

According to the Meteorological Office, this August was the hottest since records began in 1659, and the driest since 1947. The average daily maximum temperature was 26.5°C, 6.5°C above the norm. Just the summer for our sub-tropical plants to perform well. Some of my Australians flowered for the first time this year (see 'A Year in the Garden'), and I'm sure some other members had similar successes. So why haven't I heard about them? Before you forget, put pen to paper and drop me a line for our next issue. Thank you.

Many thanks to all those members who submitted articles for this issue.

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SUBSCRIPTION TIME AGAIN!

Members are reminded that the 1996 subscription (£6) is due in January and should be sent to Tony Entwistle, (see inside back cover for address), except for:-

1. Members who pay by standing order :- T. Longville, S. Kohler, B. Gaylor, A. Brush, R. Senior, G. Firth, A. Jagoe, J. McGrady, N. Martin, S. Olpin, D. Rowlinson, G. Dunlop, J. Metcalf. (Any further members who wish to pay this way please ask Tony for a form).
2. Those members who have already paid in advance for 1996 :- T. Carlsson, M. Feesey, M. Rushby, J. Parker.

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AGM NEWS

As mentioned in the last issue, this year's AGM was at Wakehurst Place. Fifteen members, quite an improvement on previous years, turned up for the day. The guided walk around Wakehurst, before the AGM, took place in torrential rain - ironically the last rain for many people for several months! - but with the guidance of our gardener-guide Mr Urmison we had an enjoyable tour, concentrating mainly on the Southern Hemisphere garden. It was surprising to see so many Australians flourishing outdoors, such as Telopea spp. which had obviously flowered well, Lomatia and Leptospermum, though they did get some winter protection with conifer branches. Many of us saw for the first

time the S. American Lomatia ferruginea in flower, and outstanding was a form of Leptospermum nitidum with large dazzling white flowers.
It was decided at the 95 AGM to hold the 96 AGM in Devon (Barnstaple area), June 15/16 ie. a weekend meeting. Suggestions are invited for the 1997 AGM.

It was also decided at the AGM to increase the size of the newsletter. To do this, we need more contributions. At present, only enough articles arrive for each issue, so expansion is currently out of the question (there was only an excess in May this year due to the lengthy Propagation Notes). There must be many potential articles after the hot, dry summer, so start composing.

* * * * *

THE NORTHERN MEET

By Dennis Rowlinson

As mentioned in the previous newsletter, Dennis, a Cheshire member, was keen to organise a get-together for northern members. On September 2nd it all happened:

'Ten people arrived and after the early arrivals had had some lunch, and some of us had trotted round the garden, the proceedings started with Tony Entwistle giving a short talk on Terrestrial Orchids and the various problems with their cultivation, and handed round a fantastic Orchid book. A discussion then followed which began to bear on the various aspects of soils, lighting, damping off, composts, drainage etc. That then continued with various people putting forward their views and experiences in growing different plants and asking others if they knew of ways of overcoming certain problems. Jeff Irons gave a little talk which included the latest information on smoke-assisted germination, and the principals behind it. He then followed with advice on how to do it yourself with the aid of some wood chips and a bit of heat. There was a very good discussion on overwintering plants with extra light in the greenhouse - special 'Daylight' tubes that are sold are overpriced and not as good as standard 'Warm' ones as they reduce the total light output. Growing long rooted plants in terra-cotta drain pipes was mentioned and Jeff told us that he has had good results with Aciphylla. Tony Hayter had brought his copies of Australian field guides for us to peruse. All in all it was conducted in a very relaxed atmosphere and it was good to share similar problems. The next Northern Meet has been arranged for the first weekend in March 1996.

I would like to say how I was pleased to contact other members and get so much support. Though not many people attended the meeting, it put quite a few other members in touch to show their interest, most of these sending their best wishes. Nearly all felt that this would help to pass information within the Group, and would have liked to have joined us. All the members attending said how much it helped to discuss things in a relaxed atmosphere.'

MEMBERS ELSEWHERE MIGHT LIKE TO ARRANGE THEIR OWN AREA MEETINGS : the APS would refund expenses involved (postage, stationery).

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PROPAGATION NOTES

Changes and Additions to Article in May 95 Issue

Dark Delete "but the APS has not been able to find any information about dark requirements for germination". Replace by "Several Grevillea species have been found germinating 1-2cm deep in old ant burrows.

Specific Recommendations

Bulbine bulbosa. Needs light.

Leucochrysum albicans. Needs light.

Schoenia cassiniana. Needs high temperatures. No firm data is available. Australian literature says only "requires a long period of high temperatures to break dormancy; before becoming ready to germinate in the autumn." Schoenia cassiniana 'Gabriele' has been found to germinate poorly at low temperatures, but readily when sown on a sunny greenhouse bench in May.

Stylidium graminifolium. Needs light.

Wahlenbergia. W. stricta is known to germinate better when in the dark.

* * * * *

MORE ON SEED GERMINATION

Nearly 200 years ago British gardeners had learnt how to germinate and grow Australian and South African plants. Their methods parallel those used and recommended today. They used to germinate seeds in shallow trays, about 1cm deep, placed in cold frames in the sun. Joseph Knight, gardener to the wealthy merchant John Hibbert (cf. Hibbertia) wrote : "I believe the best time to transplant the seedlings is as soon as their cotyledons are fully grown and their future stem beginning to elongate; for they then have few or no fibres attached to the tap root, nor have I found them to be checked by this early removal; it should unquestionably never be delayed later than when they are from an inch to two inches (2 to 5cm) high, potting them singly..."

Opinions differed as to when to sow seeds. In order to get strong plants for the following winter, Knight preferred to sow between December and March. Paxton preferred April, presumably he was in Derbyshire, where winters are much colder than in London. If seeds had not germinated by May he placed the trays against a south facing wall. Seeds that germinated in summer were given as much light as possible in winter. Today some growers recommend giving seedlings and cuttings additonal light during their first winter.

When it came to taking cuttings Knight said "plant the cuttings with a small blunt dibble, just so deep, that its base may rest solid without the smallest hollow under it...". That was in 1809. In 1868 Hereman wrote "The less depth they are planted in the pot the better; better

if they only stand firm when the sand is well closed around them." Those gardeners knew that rooting takes place only in the upper, well aerated, part of the rooting medium. Today many amateurs still wonder why their deep placed cuttings rot instead of rooting.

* * * * *

THOSE QUIRKY SEEDS AGAIN

By Jeff Irons

Some work carried out recently at Ness gardens may give an insight into the peculiar germination patterns recorded with some Antipodean plants.

It was found that autumn collected Santolina seed gave immediate germination, no matter what time of year it was sown. Wild collected seed which had remained on the plant over winter, in Spain, gave only a very low germination.

The reason turned out to be that seed which has been kept cold and moist [1°C in experiments], then dried, becomes dormant, and will not germinate when returned to warm conditions.

Ness concluded that the induced dormancy is a mechanism which prevents germination in the seed head. Perhaps some of the perplexing results obtained with Antipodean plants can be explained by the differences between autumn and spring collected seed.

* * * * *

AUSTRALASIAN PLANTS UNDER SPARTAN GLASS, IN SHEFFIELD

By Sue Kohler

'Some ten years ago, I found a wonderful little shrub in a local garden centre. Even as an obviously young plant, it was covered in "apple blossom", and was sold as Leptospermum scoparium 'Chapmanii'. (From descriptions, I think it is L. scoparium 'Keatleyi'). That same plant is now a rangy, somewhat unmanageable shrub in the conservatory, still covered with apple blossom every year. It started an incurable desire to grow Australasian plants.

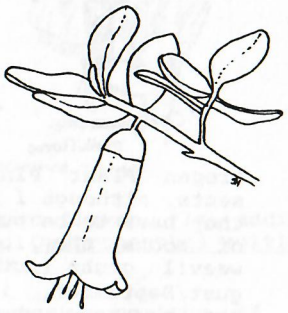
All my tender plants are grown under technically frost-free glass, in a rather shaded greenhouse with a Jempair fan heater, or in a sunny conservatory with tubular heaters; the fan heater is effective, but the tubular heaters in the (much bigger) conservatory cannot cope with very low temperatures. There have been some heart-stopping mornings when I have found the compost just starting to freeze; one of the great advantages, however, of much of the Australasian flora that I grow at any rate, is that they are remarkably tolerant and survive such treatment, if the freezing is not too severe or prolonged. (In Australia, many plants from the relatively cool temperate southeast are said to be "frost tolerant" meaning tolerant of perhaps 5-10 degrees F of frost; I have been given to understand, however, that those frosts tend not to last through the following day. Here in the

UK even the mild 1994/5 winter managed some fairly prolonged cold spells). The invaluable spun polypropylene gives excellent protection from prolonged and severe weather. (As somebody has said : "What did we do before this material was invented?" Newspapers - quality dailies, of course - were very effective, and much more informative.)

I have no greenhouse or conservatory borders, so everything is grown in pots and tubs (up to 45cm square). On the whole, this works reasonably well, and certainly the more vigorous plants cannot take over available root space as they would do in a border (although they do get spectacularly pot bound). Everything appears to grow happily in plastic pots, which are far lighter to shift in and out of the conservatory, and which do help to reduce the amount of necessary watering. I find that quite a strong potting mixture seems satisfactory for almost all plants (including all the non-Australasians). This is as follows:

by volume: 3 parts J.I. No. 3
1 part sphagnum moss peat
1 part horticultural grit or coarse grit sand.

This heavy soil-based compost does not dry out too quickly, is buffered against extreme chemical changes, and I think does not need so much feeding as organic-based composts. When feed is needed I use Phostrogen, scattered onto the surface of the pots two or three times per year, and made available to the plants through watering. This regime has proved suitable for quite a range of plants : Leptospermum scoparium forms, Callistemon linearis (I think), Melaleuca sp. - probably conothamnoides (with thanks to Jeff Irons), Anigozanthos manglesii and A. flavidus, Correa 'Dusky Bells', Metrosideros excelsa, Hebe andersonii variegata, Eremaea violacea and Sollya heterophylla. At one time when going through a green phase, I tried ground and composted bark in place of the peat; while some plants loved this mixture, (especially Pelargoniums and Streptocarpus forms) assorted Australian plants went black and died within days of potting up. As reported in an earlier APS Newsletter, composted bark can have a highish pH, but I wonder if that may not be the entire story. (Have other people used this material, and what have been the results?) The mixed response to composted bark of certainly my Australian plants has made it risky as a compost dilutant and I have returned to peat for its predictable and consistent qualities.

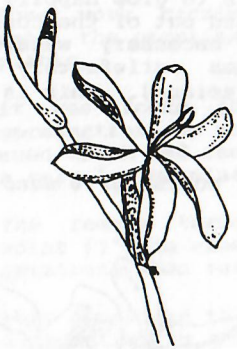


Correa 'Dusky Bells'

If there is a question about the compost requirements of new plants, then they have to go into ericaceous compost with added grit or grit sand to ensure good drainage. This mixture needs more feeding than the John Innes-based compost, and to avoid over-feeding, particularly with phosphorus, Osmocote slow-release granules are used (sparingly, at the price). Plants treated thus include Banksia speciosa and B. robur, Boronia megastigma, and will certainly include Grevilleas when acquired.

The conservatory faces south, and becomes paralysingly hot in the

summer (especially the 1995 summer). The almost immovable Leptospermum scoparium 'Keatleyi' and Callistemon linearis have not suffered from the heat, while needing at least a gallon of water per plant per day. Most of the other plants are put outside for the summer and appear to benefit from this, even though the standing area faces south and gets very hot indeed. Where possible, Correa, Asplenium bulbiferum, Boronia megastigma, Metrosideros excelsa, Sollya and any seedlings eg. of Hakea petiolaris, H. nodosa and Orthrosanthus multiflorus, are all shaded certainly in the hottest part of the day, using either other plants or the versatile spun polypropylene.



Orthrosanthus multiflorus

Without exception all the Australasian plants need heavy daily watering throughout hot weather. During the winter they are watered enough so that they never dry out - perhaps once or twice per week for the bigger shrubs, as they are in a glazed south-facing structure which can become hot in bright sun, even if the air temperature is low. Ordinary Sheffield tapwater appears to be perfectly acceptable to these plants (and even to assorted insectivorous plants). It could well be that hard tapwater is not suitable.

I have found the most serious pests to be scale insects and red spider mite, with vine weevil close behind. Aphids and whitefly are less serious, and can be controlled by systemic insecticides like Tumblebug, which I also use against the scale insects. I think and hope also that Phostrogen Plant Pins give background control to all these sucking insects, although I find them difficult to use with established plants; they have to be pushed into the compost, and when that compost is full of roots, they fold up weakly. Nemasys H gives good control of vine weevil grubs (not eggs or adults), applied in about May/June or August/September, ie. when compost temperatures are quite high. I use the nematode when I have found (and killed) a few adults. (By the way, do not be deceived by an adult lying about looking dead - they are only dead when in several pieces). I was interested to read about the "onion drench" for root aphids, which are certainly becoming a more serious and persistent pest with mild winters and hot summers. If found, and without onions, I try to wash off as much as possible of the compost, and then soak the remaining root ball and compost in a bucket of Tumblebug.

I despair over red spider, which over the years has killed a number of plants, including well-established Hardenbergia violacea, Sollya heterophylla and Clianthus puniceus. Phostrogen Plant Pins give some control but not nearly enough, and I think the best solution may be the predatory mite (Phytoseiulus persimilis) supplied by the various organisations dealing with biological control.

The following are snippets about individual plants. Callistemon linearis sets quantities of fertile seed, courtesy of the local bumble bee population. Bottlebrush time sees a continuous stream of these insects getting through a somewhat awkward ventilator and fighting their way through the stamen masses to the nectar. The conservatory reverberates with a deep hum, and the first task each morning is to

remove dozens of exhausted/doped(?) bees. The same shrub hosts scale insects, and late summer sees large numbers of sugar-hungry worker wasps feeding on the excreted honey dew, both on the plant and on the floor. The older capsules can be removed from the plant stems (with a chisel) and dried for a few weeks in a paper bag, when the fine seed is easily released. Some has even germinated in the tub of the parent plant, which I think a little ill-advised, as there is not much room... Callistemon, Leptospermum and Melaleuca are also very popular with honey bees and hover flies.

Apropos flowering of Anigozanthos manglesii - my plant is in a 30cm pot, and occupies a well-lit though not very warm part of the conservatory all winter. It never dries out. In late spring it goes outside for its summer break, where it flowers. A flowering year or two is lost when the plant has to be split (a back-breaking job requiring two large forks in the time-honoured method reserved for recalcitrant clumps of herbaceous plants).



I keep hearing that Metrosideros excelsa flowers as a young (and small) plant. My 3-4 year old is now about 1.2m high and across, uses huge quantities of water, and is the picture of health, with shining dark green leaves - and not a flower in sight. Does it need to be older, even more pot-bound, more potash? I would love to know how people get their plants to flower. In addition, how long does it take for Eremaea violacea, Orthrosanthus multiflorus and Beaufortia sparsa to flower from seed?

Lastly, my seedlings of Banksia speciosa are reasonably healthy, if a bit scorched after this summer, I think, but I cannot get them to bush out. They are tall and a bit spindly, and do not respond well when the leaders are pinched out. Are there special techniques for growing these plants, especially B. speciosa? B. robur has developed a comfortable ligno-tuber, and can be bushed up from that, if necessary. There are so many questions raised when trying to grow these fascinating plants, and the Newsletter provides a good place for airing difficulties and successes.

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THE MEDITERRANEAN GARDEN SOCIETY

If you are interested in plants and gardens of the Mediterranean region, then the Mediterranean Garden Society may be of interest.

The first newsletter (A5 style, 58 pages) includes general articles on gardening in the Med., South African plants growing in the Alpes Maritimes, Acacias by our very own Jeff Irons, Greek paeonies, and several others.

For details, contact 'The Secretary', MGS, Sparoza, Box 14, Peania, 19002, Greece.

SOPHORA HOWINSULA 'GNOME'

By Jeff Irons

Most members of the APS will be familiar with New Zealand's national emblem the Kowhai. Its yellow pea flowers hang down from the branches and are unusual in that they do not open. I liken them to a pair of scissors, with the blades just a little bit apart.

In our April 1990 Newsletter Brian Halliwell wrote about an attractive dwarf Kowhai called Sophora 'Gnome'. Unusually for such a plant nothing was known about its origin. It had been cultivated in New Zealand since 1939, but was not documented until 1970. Recent detective work in New Zealand has established that Sophora 'Gnome' is an Australian! It has been given the name Sophora howinsula 'Gnome' (W.R.B. Oliver) P.S. Green. The taxonomically inclined reader will have worked out by now that the species comes from Lord Howe Island, in the Tasman Sea, east of Sydney, and part of New South Wales.

The New Zealand botanist W.R.B. Oliver spent 10 months on Lord Howe Island in 1913, studying its flora and fauna. So it has been postulated that he sent or took seed from the island to Christchurch. The first known cultivation of Sophora 'Gnome' was at Ivory's Nursery in Rangiora; from there it went to Baxter's Nursery in Christchurch. In 1939 Jack Baxter gave two plants to the Cockayne Memorial Garden in Christchurch Botanic Gardens, and the recorded history began.

In the late 1980's I was given 12 seeds harvested from a plant growing in N.S.W.. Following Graham Hutchins' advice, the seed was nicked and planted in December - only because that is when I received it. As soon as the weather warmed up the seeds began to germinate and the following winter I had a dozen seedlings to plunge outdoors in sand. That was in 1987. I retained one and gave the others away. That one plant flowered in 1993, and is now 1.1m high, with 3 stems. The spectacular flowers appear in spring, and always attract comment. Though deciduous in a cold winter the plant is hardy, and I recommend it to all my visitors. The plant had not set seed until this year, when just one seed was produced.

* * * * *

PRUNING

by Brian Halliwell

With very few exceptions all Australasian woody plants are evergreen and will be sold or raised in containers. These should be thoroughly soaked before April planting. Avoid whenever possible putting plants which are rootbound into a garden.

Trees

Immediately these have been planted select the strongest shoot to train into a trunk. Except in exposed areas, staking should be unnecessary. Remove growing points of all side shoots. Take out entirely only those that are unduly crowded. Any shoots which challenge the leader must be removed. In successive years, prune in April keeping the main stem growing upright. Take out any shoots in their entirety

which are challenging the leader and any others which may be growing strongly from lower down. Space out side shoots/branches by judicious thinning. Remove the oldest branches from the bottom upwards only as they begin to die. Where the growing point of the main stem/trunk is killed by winter cold, it will be necessary to train in a new leader from the strongest and most upright shoot. It is best to allow only a central main stem/trunk.

Conifers

With the stronger upright growing conifers there will be the minimum of pruning. Young conifers retain a natural shape even when there are several leaders. With age though, these upright shoots become substantial and lean outward becoming prone to damage in gales so spoiling the natural shape. Pruning of these conifers consists of, apart from removing winter damage, retaining only a single leader. Those which form bushes should need no pruning whilst prostrate kinds will need reducing if they begin to encroach. All conifers should be pruned when fully dormant. Once sap has started to rise, there is, following pruning, a tendency to ooze gum.

Shrubs

All shrubs need training which will begin following planting so as to produce a well spaced framework of main branches with an open uncrowded centre. At all times take out dead, damaged and diseased shoots as well as removing crowded, thin, weak and crossing shoots.

Pruning of established shrubs is governed by the age of wood on which flowers are produced. Some flower on current season's growth with blooms in late summer and autumn. These are pruned in April before new growth begins. Cut back hard or to within a few centimetres of a trained framework. The second group flower on growth produced in the previous season, blooming in winter, spring or early summer. Prune these as soon as flowers have faded cutting back almost to the base of the previous season's growth. At the same time bushes can be trained to shape.

These rules can be ignored where foliage is considered to be more desirable than flowers. Such bushes are pruned in April, clipping back hard and to shape.

In those plants where flowers are followed by interesting fruits, pruning is minimal. Carry out some thinning in April and periodically remove one of the oldest stems.

In the following list I have picked out only those genera which have the greatest need for pruning.

BRACHYGLOTTIS [New Zealand species formerly in Senecio have been transferred to this genus]. If left unpruned these shrubs sprawl and become untidy being further spoilt by heavy snow. When pruning has been neglected or has never taken place, cut back really hard in April; this will result in no flowers for one season. Flowers are produced on previous season's growth and normal pruning should take place immediately blooms have faded when all shoots which have flowered are removed. At the same time trim bushes to shape.

CALLISTEMON. Flowers are produced just behind terminal growth of the previous season. As flowering begins or immediately after, this same shoot begins to grow and later in the summer will produce next year's flower buds. Following flowering, seed capsules are produced and although seed takes at least a year to develop fully, capsules do not open. On a ten year old bush there may be seed capsules produced in each of the previous nine years. This annual production of capsules produces a gaunt appearance and will reduce vigour. Immediately flowers have faded, carry out pruning, cutting back almost to the base of the previous season's growth. Callistemons resent hard pruning. If you decide that you should prune your overgrown bushes, cut back a quarter of the shoots to see if they will break. If they do, you can cut back the remainder in the following year. Should there be no new growth, cut out the weakest shoots completely and prune the remainder as recommended. Hopefully this will force some buds to break lower down on the bush.

CASSINIA is grown mainly for its foliage for flowers are insignificant. In April just before new growth begins, trim the bush with shears removing most of last year's growth. Neglected bushes can be cut back hard at the same time.

EUCALYPTUS. Usually what is offered for sale are tall gaunt bushed or trees in containers which are root bound. These rarely anchor properly and are liable to blow out of the ground in later years. They are best planted as seedlings when no more than 3 months old. Such plants will produce a good root system and can easily make or exceed a metre in the first growing season. If at any time there is an ugly main stem cut it back to 25cm [10"] above ground level in April. During May a group of buds at the base of the stump will come into growth to produce a thicket of shoots. One of these will eventually become dominant and the others will lose vigour and eventually die. Most species have juvenile foliage totally different in appearance from the adult. Whenever pruning of eucalypts takes place new shoots will be in their juvenile state which in time will revert to the adult. In some species eg E. perriniana where the foliage, which encircles the stem, is more attractive than the adult then hard annual pruning in April is practiced. Eucalypts are mostly far too large for small gardens. Long before they become a nuisance they will benefit from hard pruning in April. They can be kept as bushes, allowed to grow into trees with limbs regularly thinned and reduced or pollarded.

HEBE. These may flower on either current season's growth or on that produced in the previous season. The first group includes those which flower from midsummer throughout the autumn eg x andersonii, salicifolia, speciosa and most of the large flowered named hybrids. These are pruned in April before new growth begins when all shoots are cut to 25cm [10"] above ground level or side shoots are cut back to 5cm [2"] of a trained framework. The second group which flower in spring or early summer and include x fairfieldii, hulkeana, macrantha and raoulii are pruned immediately blooms have faded, cutting back all shoots almost to the base of previous season's growth or to where new shoots are appearing.

There are some kinds where foliage is considered more desirable than flowers ie. naturally striking leaves eg albicans, or variegated eg. x franciscana 'Variegata' and the whipcord group. Trim with shears or

secateurs in April before new growth begins.

All species of Hebe including hybrids and cultivars benefit from annual pruning. Neglected bushes can be cut back hard in April.

HOHERIA flowers on current season's growth. Prune in April before new growth begins back to within a few centimetres of a trained framework. All are prone to infection by the disease coral spot which in severe infections can result in death of the bush. This disease is more troublesome with bushes growing in shade or after wet summers and/or autumns. A dressing of sulphate of potash at 30 grams per square metre of root run in June will provide some protection. Any shoots showing infection should be removed as soon as seen; cut back to sound wood; burn all prunings.


Leptospermum ecoparium

HYMENANTHERA. In a pot growth is slow and pruning rarely necessary. When planted out however, bushes can begin to grow strongly and can overgrow and swamp weak neighbours. If this happens cut back in April; this can be quite hard without harming the plant. It is the fruits for which species of this genus are grown and following pruning, the display, at least in the first year, will be reduced.

LEPTOSPERMUM. All species flower on previous season's growth. In warm summers seed capsules follow flowering with seed within taking a year in most species to mature. On L. scoparium [with its forms] and most other species which are hardy enough for outdoor cultivation in this country, capsules do not open nor do those in succeeding years. When there is a decade of capsules attached to stems, bushes can appear ugly and vigour may decline. Prune immediately after flowers have faded taking off most of the growth produced in the previous growing season. At the same time remove any winter damaged growth; trim also to shape. Bushes in general dislike hard pruning so an annual trim is preferable.

OLEARIA. Flowers are produced on previous season's growth or on side shoots from this growth. Prune immediately flowers have faded and trim to shape at the same time.

CALLISTEMONS

by Jeff Irons

Apart from Eucalypts, Callistemons are probably the most popular Australian plants grown in Britain. They have showy flower heads, shaped like a bottlebrush, and a brilliance which is seen in few other flowers. Many of them have gracefully arching branches and willowy leaves. They can be grown outdoors in the garden, or in tubs under cover. The red flowered ones are more popular, but the yellow flowered ones are hardier, and more likely to succeed in really cold parts. Most flower outdoors in June and July.

Cultivation

Callistemons can be grown in all except strongly alkaline soils. In skeletal gravelly soils supplementary watering will be needed in summer, and in tubs they require plenty of water. A sunny spot encourages flowering.

Plants should be tip pruned from an early age and mature specimens should be pruned by cutting back behind the spent flower heads. Old lanky plants can be cut back hard. This is best done in the spring. An alternative, which does not entail losing a season's flowers is to cut back in stages over three years. Regular pruning helps to keep plants compact, and encourages flowering. In the garden no feeding is required, but tub grown plants should be given slow release fertilizers.

Seed takes 12 months or more to ripen, the woody seed capsules remaining on the stems, often for several years. If seed is wanted mature capsules (usually 3 or more years old) should be removed from the shrub and placed on a tray in a warm spot. A sunny part of a greenhouse bench is ideal. The capsules will then open and release their seed. Named selections and hybrids will not breed true, and must be propagated from cuttings.

Botanical Notes

There are 34 species, 30 in Australia and 4 in New Caledonia. The latter will probably be transferred out of Callistemon. Some plants which are at present regarded as cultivars are likely to be given species status. Callistemon viminalis is increasingly referred to as Melaleuca viminalis, and it is likely that it will be transferred out of Callistemon.

Callistemons always have alternate leaves. Their flowers are in a dense cylindrical spike, at the end of a shoot, and at flowering time there is always some new growth beyond the spike. Individual flowers are stalkless, with individual petals. The long brightly coloured stamens form the showy part of the insignificant flower, and they may be red, yellow, green or white. They are free at the base. This is a distinction from Melaleuca and Beaufortia, which have stamens united at the base, into five bundles.

Some species, many found in the APS seedlist.

In Australia it is found that species from the southern part of the country do not grow well in the north, which has summer rain. The Western Australian species do not grow well in the humid south east. These facts could be pointers to successful cultivation in Europe.

Callistemon citrinus. Probably the species grown most widely in Britain, but not particular hardy. Has relatively wide leaves, lanceolate in shape, and upto 8cm long by 1cm wide. Crushed leaves have a citrus smell. Bright red flower spikes can be up to 12cm long and 5cm in diameter.

C. citrinus 'White Anzac'. This is a registered selection from Anzac Cove, Sydney. It is an ideal tub plant, growing to about 1m high. The white flowers appear in late spring and early summer. It seems to be less hardy than the type and is not recommended for outdoor cultivation in Britain. Must be propagated from cuttings.

C. citrinus 'Splendens'. A selected form. Propagation should be from cuttings. Seed raised plants will not be true to type, though they should be good.

C. glaucus. From the S.W. part of Western Australia. Dark red flower spikes on a 2m x 1.5m open shrub. Found in swampy ground. Could be tried outside in the very mildest parts of the British Isles.

C. linearis. From central coastal New South Wales. Easily identified by the long narrow leaves, which can be up to 12cm x 2mm. Large dark red flower spikes to 11cm x 6cm, on a shrub to 3m x 3m. Has an AGM.

C. montanus. From the borders of NSW and Queensland, so not very hardy. Has pretty pale pink young growth and flower spikes about 5cm long by 6cm across. The ultimate size is about 2.5m x 1.5m. Not recommended outdoors in Britain, but probably suitable for southern Europe.

C. pachyphyllus. From northern coastal NSW and southern Queensland. Usually less than 1m high, with red or green flower spikes. Coming from a summer rainfall area it will need irrigation in the Mediterranean. Makes a good tub plant in Britain.

C. pallidus. Coastal parts of Eastern Australia from Tasmania to southern Queensland. Upto to 6m high, though usually less. Attractive pale yellow spikes to 7cm x 15mm, and silvery young growth. Hardiness depends on seed origin. Some provenances will flower in 3 years instead of the usual 5 or 6 years.

C. pearsonii. From the Blackdown Tableland in Queensland. A very attractive low shrub (to 1m) with prominent anthers. Pink young growth. Not recommended for outdoor cultivation in Britain. Will need irrigation in the Mediterranean.

C. phoeniceus. From Western Australia, where it occurs in a large part of the S.W. portion of the State. Although it has dwarf forms this shrub is usually up to 3m high and across. The flower spikes are a brilliant red. Recommended for Mediterranean areas.

C. pinifolius. From central coastal NSW. A shrub to 1.5m with lime green flowers. Red flowered forms do occur. Possibly hardy in the mildest parts of Britain, but otherwise a tub plant which could be put outside in summer. Will need irrigation in Mediterranean areas, for it comes from places which receive rain all the year round.

C. pityoides. From alpine and sub-alpine areas of NSW and Victoria, in peaty heaths and along water courses. A dense shrub, usually to 1m, but sometimes up to 2m. Prolific small yellow spikes 3-4cm x 2cm. Identifiable by its small needle-like leaves, 1-3cm x 1-2mm. The hardiest bottlebrush, but it does not flower well in dry soil. Not recommended for Mediterranean areas. Known formerly as C. sieberi and sometimes still offered under that name. The present C. sieberi has much larger leaves, up to 8cm x 5mm.

C. polandii. From central and northern coastal Qld. A magnificent shrub 1.5-5m high and 1-3m wide, with large leaves (to 15cm x 4cm) and dark red flowers with prominent anthers. Not possible outdoors in

Britain. Coming, as it does, from a summer rainfall area, it will need ample water in the Mediterranean.

C. recurvus. From the Atherton Tableland in N. Qld. A very variable shrub from a tropical area which receives dry season frosts. Grows well in S E Australia. The height is from 1 to 7m. Crimson flower spikes are about 5cm x 4cm. An indoor plant in Britain. In the wild it flowers in spring.

C. rigidus. From central coastal NSW in damp places and wet heaths. A shrub 1-2.5m x 2-4m, rather more slow growing than many species, and so useful in the smaller garden. Flower spikes 2-10cm x 5-6cm, dark red in colour. This species has a stiff upright habit and is one of the hardier red flowered ones. A distinguishing feature is the ridged edges of the leaves.

C. rugulosus. From damp sandy flats in western Victoria and parts of South Australia. Distinguished by its rough surfaced leaves. A smooth leaved form is sold as C. laevis in Spain, and possibly elsewhere too. A spreading shrub to 4m x 4m with large dark red spikes 10cm x 5cm and prominent dark red anthers. It is a handsome shrub, which flowers throughout most of spring, summer and autumn. It is unlikely to be hardy in Britain.

C. salignus. From NSW and southern Qld, along stream banks and in dry montane spots. Variable in size from 5 to 15m. Flower spikes are usually creamish or yellow but there are pink forms. They are 3-5cm x 2-4cm. Young growth is a bright pink. Has been awarded an AGM.

C. sieberi. S E Australia including Tasmania. Known formerly as C. paludosus. Likes moist soil and in dry areas the yellow flowers are short lived. Pink flowered forms occur. Young growth silvery pink. A very variable species and some forms are not only poor, but also shy flowering. Sometimes has a weeping habit.

C. subulatus. From the southern tablelands of NSW and adjacent parts of Victoria. Usually a small shrub 1m x 1m it can be up to 3m x 3m. An intermediate sized form is one of the hardier red flowered bottlebrushes and can be grown outdoors in the Midlands. This, the common British form, is subject to injury by prolonged spells below -10°C. The crimson-red flower spikes are 5-8cm x 5-6cm, and are borne singly or in clusters. Like C. pityoides and C. sieberi, this species will stand prolonged flooding.

C. viridiflorus. From Tasmania, in wet places especially in montane parts. Can be erect or spreading, to 3m. Greenish-yellow flower spikes. Flowering short duration in hot dry weather. One of the hardiest Callistemons, probably unsuitable for the Mediterranean. In the Plantsman, June 1993, p38, this species was incorrectly assigned as C. salignus var. viridiflorus.

C. 'Candy Pink'. A medium sized shrub with profuse very long pink flower spikes. Blooms when small. Worth trying outside in southern and western Britain. May be given species status, so should be reasonably true from seed.

C. 'Captain Cook'. A dwarf selection from C. viminalis. Light green

leaves and red spikes. In Australia this name has been abused and seed raised plants have been offered as the type. Check that the nurseryman will guarantee in writing that his stock plant is true before buying. Doubtfully hardy in Britain.

C. 'Hannah Ray'. A frost sensitive tree-sized hybrid with weeping foliage. Suitable only for protected cultivation in Britain, will probably need irrigation in Mediterranean areas.

C. 'Little John'. An excellent dwarf cultivar to 1m x 1m, which can be kept smaller by pruning. Profuse dark red spikes 5cm x 5cm in spring, (under glass). Probably hardy only in southern and western Britain. Certainly worth trying outdoors in much of France.

C. 'Mauve Mist'. A seedling from 'Reeve's Pink'. A tall cultivar with mauve flowers (67B on the RHS Colour Chart). Outdoor performance in Britain not known but it is unlikely to be hardy. Will probably perform well in Mediterranean areas.

C. 'Perth Pink'. A tall selection with pink flowers. Little is known of its origin and hardiness, but it is unlikely to be hardy in Britain.

C. 'Red Clusters'. Two cultivars are sold under this name. I have not seen the one (two?) sold in Britain, so describe both here.
1. To 3m x 3m with red clusters of flowers at the branch ends. Similar to 'Pink Clusters'. Possibly a seedling from 'Reeves Pink' or from 'Violet Clusters'. Brushes 7cm x 4cm.
2. To 3m x 2m with foliage similar to that of C. viminalis. Brushes 7cm x 4cm in clusters at branch ends, 46B on the RHS Colour Chart. Slightly later than form 1.

C. violaceus. This name has been given to 3 different plants, and C. 'Violacea' appears to be synonymous with one of them. I have not seen the plant currently sold under this name, and my memory of the one sold by Noel Kingsbury a few years ago is somewhat hazy. One cultivar has leaves similar to C. citrinus, but flowers a little later. It has prominent anthers. The other has more pointed leaves, similar to those of C. rugulosus. Its flower brushes are more open in structure.

Most authorities, including Prof. Stearn say that the name Callistemon comes from two Greek words, kalli = beautiful and stemon = stamen. However the Australian National Botanic Garden has told me that the origin is from kallistos = most beautiful. In view of the beauty of these plants I prefer to believe in the latter origin.

PROPAGATION

Callistemon seed is long lived and germinates readily. Ideally temperatures should be in the range 20-25°C and germination is poor at low temperatures. The seed mix should be acid and open. One part of peat and one or two parts of Perlite can be used. Washed coarse sand gives good results too. Seed should be surface sown on a medium which is constantly wet. This can be achieved by standing the pot in a 'flower pot tray' which is kept full or almost full of water. Seedlings can be transplanted at any size between one and 6cm, though early transplanting is to be preferred. The potting mix should be

open, water retentive and acid or slightly acid. Peat replacements are acceptable in potting mixes, though in seed mixes peat gives better results. Half ripe cuttings root well from October through to March.

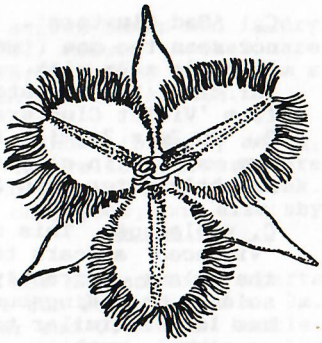
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BEYOND THE FRINGE

by Tim Longville

This is as much a plea for information as a passing of information on. Do any members of the society grow any of the species of Thysanotus, the Fringe Lilies of Australia?

I've been given seed of T. multiflorus, generally supposed to be the 'easiest' of this difficult but beautiful genus, and am trying to discover how best to go about its germination and cultivation. What follows is a resume of the book larnin' I've so far acquired : first a note about the genus' beauty and then a note about its difficulties in cultivation.



Thysanotus multiflorus

Their common name gives the clue to their beauty. The petals end in a heavy, finely cut fringe, which produces an effect both bizarre and graceful. T. multiflorus itself grows to around 45cm, has long narrow leaves springing directly from the ground, and each flowering stem carries up to 20 flowers, somewhere between violet-blue and pinky-mauve, with darker central markings and prominent whitish stamens. It, along with most of the other species, needs full sun, heat and good drainage and responds well to being treated as a pot plant (it is often treated so in Australia, because of its relatively small size and dapper, elegant appearance). In general Thysanotus are pest and disease free - but they are great delicacies to slugs and snails, particularly when plants are young. It's unlikely that any species will be hardy enough for the open garden except in the most exceptionally sheltered situations but many should be fine in a frost-free greenhouse or on a sunny window-sill.

If, that is, you can ever either get seed to germinate or, supposing you manage that feat, can get your seedlings to survive and prosper to flowering stage. Neither is likely to be easy. (Jeff Irons tells me that it's the likely difficulty of germination which has led him not to include Thysanotus seed on the APS seed list. Thanks for that encouraging bit of news, Jeff!) I'll deal separately with what I've been able to discover about possible procedures for the two stages.

Germination first. There are about as many suggestions here as there are authorities to consult, even with the 'easy' T. multiflorus.

Those who think it really is (relatively) easy say : Fill a 75mm pot to within 12mm of the top with a sandy, gritty compost. Wet thorough-

ly. Compress. Sow seeds thinly. Leave half on the surface. Cover the other half as thinly as possible with compost. Water well. Cover. Provide bottom heat and a temperature of around 21°C. 'Remove cover when germination commences - usually in 2-5 weeks.' Believe it if you will.

Another suggestion (which its advocate reckons has worked with several species, including T. tuberosus and T. dichotomus) is to use sterile moist sand as a medium, surface sowing in a tray covered with a glass sheet and kept in a 'cool spot'. (The advocate is Australian so you'll have to interpret his notion of cool for yourself). Transplant seedlings 'when' (note the confidence) they have developed their first true leaf. Where and how you transplant them I'll deal with in my section on growing on.

Then there is a variety of suggestions all of which centre on the notion that the key to successful germination is contained either in fire or in smoke.

Until fairly recently the received wisdom was that the magic perhaps lay in the ash from the fire. The procedure therefore ran as follows (and is still advocated by some) : Fill your pot to about 25mm from the top with the usual sandy, gritty compost. Sow the seeds as in method one. Heap as thick a level of dry leaves or crumpled newspaper above them as you can. Set fire to it. When the fire goes out, remove any unburnt bits but leave the ash. Proceed as in method one.

The faith of the moment, though, is smoke, chemicals in which are reckoned to act as triggers to germination. I can offer you two ways to con your seeds into believing that they are in the cool-smoke-laden, competition-less aftermath of a bush fire, with maximum opportunities for successful germination. The first comes from Doug Wilson of the West Australian Wildflower Seed Co. It sounds like a joke but he swears it is seriously meant. First find a bee-keeper. Borrow his smoker. Place your seed-pot, treated as in method one, in a largish plastic bag. Smoke it, vigorously, using the plastic bag to keep the smoke around the pot as long as possible. The second method comes from one of the study groups of the Society for Growing Australian Plants. Take a piece of filter paper or a thickish layer of several sheets of kitchen towel. Move the paper to and fro over a fire until the paper is smoked to a mushroom colour. Leave the paper to cool. Moisten it. Place the paper in a propagtor and sow the seeds directly onto the moist paper. As soon as germination occurs ('rapidly' is the throwaway adverb used by the study group), remove the infant seedlings to standard compost as for method one.

I should add that it may be that the particular kind of smoke you use may have a bearing on your results. This could be why the kind friend in Ireland who sent me my seed had no success in her own attempts to germinate it by the method of shoving the seed-pot on a ledge halfway up the chimney above her West of Ireland turf fire (a true story, I swear). That it, the smoke from a turf fire would contain different chemicals from those in a fire made out of Australian bush plants such as Acacia or Eucalyptus. Indeed, I'm told by Jeff Irons that examinations of 'typical Australian smoke' are now taking place, to try to find out which particular compounds in it help to break dormancy. (Ed : as mentioned in a previous newsletter, keen growers of South African

plants can already buy South African smoke - sheets of paper impregnated with the smoke from burning fynbos vegetation.) Most of us, lacking a spare eucalypt or two to bung on the bonfire, will just have to do the best we can with the smoke of whatever's to hand.

Supposing you do actually get to the stage of having a seedling or two, what happens next is : they die. This is probably nothing to do with climate. Even in Australia it has often proved difficult if not impossible to grow Thysanotus successfully under garden conditions. For a long time no one knew why. Now there is at least a (fairly convincing) theory. It goes like this.

The culprits are mycorrhizas. Or rather the lack of them. Who are they? I quote: 'associations between soil borne fungi and the roots of plants.' In the wild, there are lots of mycorrhizas in the soil, connected to other plants or, even in the absence of other plants, 'free' in the soil. The notion is that Thysanotus obtain their mineral nutrients through their 'infection' by mycorrhizas. No mycorrhizas, no mineral nutrients, no life. Simple. So, what's the solution? In Australia the solution is to get your seedlings into the open mycorrhiza-full ground as soon as they develop their first true leaf, but that's hardly a solution available to us in the UK. What follows is my own (tentative, technically uninformed) suggestion, based on Australian methods for dealing with actual tubers collected in the wild. To wit : either incorporate some ordinary garden soil in the compost in which you pot on your seedlings (unsterilised, it should contain its own micorrhizas) or provide 'companion plants' for your seedlings as soon as they have germinated (the Australian suggestion is small daisies or clover), the roots of the companion plants in that case providing the mycorrhizas. (Once the soil in the pot is 'micorrhiza-rich', the companion plants can be removed.) Security-conscious paranoids could combine both methods; I probably shall. If I ever get to that stage.

To quote Peter McGee, the cheery Australian whose research I have gratefully made use of in the previous paragraph, 'For those who have not been discouraged by the previous information (I knew I could rely on you, mum)', I should now add that I know no source in the UK either for plants or seeds of any Thysanotus species. Was that a sigh of relief? Not so fast. Doug Wilson, The West Australian Wildflower Seed Co., 11 Bertram Street, Darlington, W. Australia 8070, will do the trick, for a price.

A final quotation from Peter McGee, to send you off with a song in your heart : 'When they flower, the trouble seems well worthwhile.'

To end in my beginning : does anyone already grow them? And if so would they tell the rest of us how?

* * * * *

SNIPPET

According to a well-known gardening expert on a local radio phone-in, moles can be deterred by pushing eucalypt leaves down their tunnels.

TWO SOUTHERN FERNS

Sometimes our present Botanical Name for a plant is a direct Latinization of an old Greek one. A familiar example is Lilium, which comes from lirion - the Greek word for a lily. The Greek word for fern is blechnon, and it has given us the genus Blechnum and the plant family Blechnaceae. Two members of this family are small ferns, ideal for the alpine garden and they are readily available.

DOODIA MEDIA By Jeff Irons

Doodias differ from Blechnums by having fertile fronds with networked veins. They have been named after Samuel Doody, who was Curator of the Chelsea Physic garden in the late 1600s.

You have a choice of common names with Doodia media. Australians call it Common Rasp Fern, and New Zealanders call it Pukupuku. This is a fern which can be grown in both light shade and sunny places. The latter is preferable, for the pinkish tinge of the young fronds is much more pronounced when the plants are given some sun. In the wild fronds can be up to 60cm long and 10cm wide but I have never seen them more than half that in a British garden. There is one row of sori (the clusters of spore bearing bodies seen on the underside of fertile fronds) on each side of the mid-rib.

This is a highly decorative fern which deserves to be grown more widely. There seem to be two clones in cultivation. I found that a plant bought from Rickard's Hardy Ferns would survive winter only in a cold frame. Ausferns supplied me with a plant from Gippsland, in eastern Victoria, which has proved hardy in the garden. Its only vice is that it is intolerant of winter wet.

SEA PEN or ALPINE WATER FERN By Brian Halliwell

Blechnum penna marina occurs in Victoria, New South Wales, Tasmania, New Zealand, Falkland Islands and the southern tip of South America. It can be found in open positions from sea level to alpine regions but it also grows in shade in woodland or under evergreen forest. Mostly it grows in a moist lime free soil, but it is tolerant of waterlogging and once established dryness. In a garden it is an easy fern for full sun or shade. If, in fact, conditions suit, it can be invasive and swamp, even kill weaker neighbours. When it is happy in your garden watch it and curb its exuberance. It seems fully hardy in the British Isles for I have seen it thriving in gardens from southern England to northern Scotland as well as in Ireland.

There are slender wiry branched rhizomes which creep below soil surface or leaf litter. Of the tufts of fronds which develop, the outer sterile ones ranging in length from 5-15cm or even longer in shade can be ascending or horizontal. Triangular alternate pinnae are dark green but are often reddish or brownish when young. Central erect fertile fronds which barely exceed 10cm have narrow pinnae covered with fawn sori.

Propagation is by division just before new growth begins in March or April. Lift a clump, pull apart and replant rooted pieces.

TWO BORONIAS

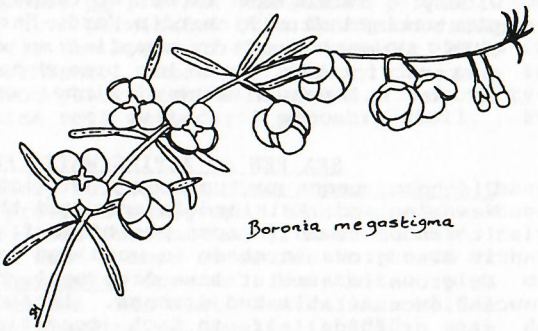
by Jeff Irons

Boronia is one of the most strongly scented plants in the world, yet many people (of whom my wife is one) cannot smell it. Those who can, think that the light flowery scent is delightful. It is not emitted without warmth, and I find that for the scent to drift out of my greenhouse door, the temperature inside has to be at least 25°C. At lower temperatures the blooms do not smell strongly unless the sun is on them.

Although it can make a shrub up to 1.5m high, cultivated plants of Boronia megastigma will rarely be more than half that size. Usually brown in colour, the rounded bell shaped flowers can be as much as 1cm across, and they appear in April and May. The species does have a reputation for being short-lived, and plants live longer if they are cut back after flowering. Several cultivars are available in Australia, but in England we are limited to two:

Chelsea Pink pale pink. Not currently listed by Burncoose and Southdown, but exhibited by them at the 1994 Harrogate Show.
Heaven Scent simply a compact form, has the typical brown flowers.

People who do not appreciate its requirements often say that Boronia megastigma is tricky, even impossible to grow. All Boronias have a compact root system and must not be allowed to dry out. They will show their intense dislike of fluctuating moisture levels by dying. Grow them in a largish pot, in a good heavy loam based mix, and you should not have any trouble. I am not aware of any studies of their pH tolerance, so suggest that the mix should be on the acid side of neutral.



The western Boronias, of which B. megastigma is one, grow easily from seed. Pour boiling water over the seeds and leave them overnight. Sow the next day, and transplant the seedlings while they are still small.

The other 'common' Boronia in Britain is B. heterophylla. The dark red flowers fade to white, and the species can be grown outside in mild areas. Indoors it needs the same conditions as B. megastigma.

B. heterophylla has been sold as B. 'Chandleri'. That is a double error, for "Chandleri" is a synonym of the form of B. megastigma which is registered as 'Jack Maguire's Red". Any plant bought as "Chandleri" which fades to white must be B. heterophylla.

Francesco Borone, after whom the genus is named was an Italian botanical enthusiast. As a young man he helped the English botanist John Sibthorp (cf. Primula vulgaris sibthorpii). He died in 1794, at the early age of 25, after falling from a window in Athens.

BORONIA MEGASTIGMA IN NEW ZEALAND

By Brian Halliwell

Boronia megastigma is a popular garden plant in the South Island of New Zealand. It is grown in almost every garden in the Christchurch area where winter frosts are frequent but although sharp are of short duration and the ground never freezes. They require a moist peaty soil which does not dry out and are often grown with Ericaceae, eg dwarf rhododendrons. As South African heaths are as common as those from Europe, B. megastigma is often grown in heather gardens. Flowering takes place in late spring and after blooms have faded, bushes are trimmed with garden shears which takes away old flower stems and some new growth. This annual treatment is essential for it keeps bushes low, tidy, prolongs life and results in better flowering.

Jeff Irons in his article says: 'I am not aware of any studies of their (Boronia megastigma) pH tolerance'. In my experience and from observation, boronias are calcifuges. The soil in which they are growing needs to be lime-free, well drained and peaty; an occasional light mulch with peat is beneficial. When raising plants from seed or cuttings, they need a lime-free soil. If a peat based compost is to be used, it must be one prepared for Ericaceae which contains no lime. Plants in containers should be watered with rain water. If they are watered with mains water where the pH is 7 or above, plants become chlorotic.

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GARDENERS' QUESTION TIME

Q. My plants of Grevillea banksii var. forsteri are very unhealthy. Only the newest leaf is green, all the others turn brown progressively from the tip. The plants are in a peat:perlite mix and are fed with Vitax 1:1:1 fertiliser.

A. The symptoms you describe are those of phosphate poisoning. It has arisen because you are using a soil-less compost and a high phosphate fertiliser.

Treatment is not easy and the plants may die. Try washing out the phosphate with several lots of water. Then do not feed until next spring, and even then only with slow release fertilisers - see the May 1995 Pentachondra. On no account add calcium (lime) which enhances the effects of phosphate poisoning.

It is good practice to follow a low input regime with all your ornamental plants.

Grow potted Banksias, Dryandras and Grevilleas in a soil-based compost.

TASMANIAN VIGNETTES

By Tony Entwistle

1. Cradle Lake and Mountain

A bitterly cold September day, the antarctic wind blowing scurries of rain and sleet across the lake, the snowline only 100m above.

Surely, I think to myself, anything here would be hardy in the U.K.. Just below the lake, in a copse of Eucalyptus vernicosa, the shallow ditches are bright red with the dock-like fruits of Bellendena montana. The lakeside itself is low scrub, nothing in flower, mostly Pimeleas, but rising above to 60-90cm are domes of Richea scoparia in full bloom, every one a different shade, from white through yellow, orange to an attractive coppery pinky-red. Why, I wonder, do we only have the white ones at home?

By the side of the lake is a coppice of Nothofagus cunninghamii, its myriads of tiny leaves dripping incessantly onto the moss below. Clumps of Telopea truncata are by the track; lots of seed but no flowers.

We shelter in a lakeside hut and light a log fire. Outside are trees, probably planted, of Nothofagus gunnii, still bare, the only truly deciduous Australian, and a large Dracophyllum milliganii in flower, just like a large Draceana. When the rain eases we go across scrub to get a closer look at a fine clump of the Pencil Pine (Athrotaxis cupressoides). On the way back a sudden cry of alarm leads us all to roll up our trousers and slacks; we are well covered with black leeches already fat on our blood!

Their infra-red detection system is far better than a security lamp!

2. Hobart

A fine spring day, splendid view of the town and bay as we come in from the north, Mt. Wellington rising abruptly on the right, still heavily snow-capped. I realise that I am now as far south as I ever will be in my lifetime. We go to the Domaine Botanic Garden; my time-clock gets another shock; I am in England in April; the flower-beds are full of magnificent tulips and polyanthus, the magnolias are like Cornwall, the oaks just coming into leaf. Some differences, of course; there are lovely Cantua species (S. American) in cascades of flower which I have never seen before, the shrubberies are Australian Myrtaceae; that double white heather I looked at turned out to be a double Epacris, but nevertheless essentially an English garden.

3. West Tamar

Staying in a house on the lovely Tamar estuary, the garden created by an Essex lady over the past 10 years in some 8 hectares of bush.

The bush itself is largely a stand of huge Eucalyptus amygdalina with She-Oaks (Allocasuarina monilifera) still in their winter russet.

In the damp gullies there are tree-ferns (Dicksonia) and there are

clumps of Banksia marginata showing flower. The clearings are bright with rose-red Epacris impressa and scrambling up the wattles is Comesperma volubile with profuse lilac-blue flowers.

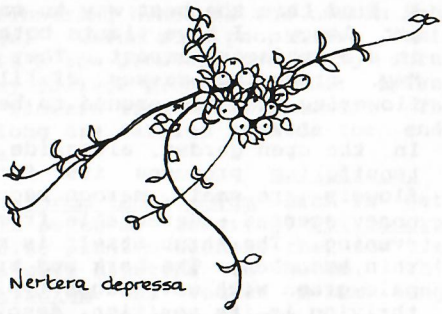
The garden itself is an extraordinary mixture of north and south. Banksias line the entrance drive then suddenly there are magnolias rising above a scrambling mass of Protea barbigera full of large white black-bearded blooms. Leptospermum 'Pink Cascade' jostles with Cytisus praecox and the mini-red 'roses' of Darwinia citriodora. There are Correas in shades I have not seen before. Aubretia flowers next to the red Lechenaultia formosa; exquisite blue wrens flutter amongst the Buddleias and a kookaburra calls from a flowering cherry. I am very envious!

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NERTERA DEPRESSA

In New Zealand Nertera depressa is found in coastal and lowland to low alpine areas throughout the North, South and Stewart Islands. Its favourite habitats are the forest floor and other moist areas. In Australia it is found in Victoria, the Snowy Mountains of south eastern NSW as well as moist rock faces in the Blue Mountains, and on the mountains of the west coast of Tasmania.

It is commonly known as the Cushion Nertera and belongs to the family Rubiaceae.



Nertera depressa is probably best known in the UK as the bead plant, grown either as a houseplant or in the conservatory.

Nerteras are very decorative creeping plants with pea-sized orange-coloured berries. The thin closely matted stems of this plant run along the surface of the potting mixture, rooting into the mixture at the nodes. The stems, which can grow up to 25cm long, carry medium green, broadly oval, fleshy, short-stalked leaves 5-8mm x 3.5mm. A fully mature plant is likely to form a low mound upto 70mm high. Insignificant stalkless flowers which are produced in early summer appear from leaf axils. The flowers are tiny and greenish yellow and they give way to shiny orange-red berries 4mm in diameter. These berries are fully developed by late summer, and they remain on the plant for several months. They are often so numerous that they almost hide the foliage.

Cultivation

Grow nerteras in bright light, making sure that they get at least three hours of direct sunlight every day. Optimum temperature 10-16°C. To bear flowers and berries successfully they require high humidity. Spray plants lightly with water once flowers appear until all berries have fully developed.

A YEAR IN THE GARDEN

By Sue Hyams

January - March

Fairly mild winter, not much snow, but plenty of rain. Less siskins and bramblings visiting the bird table this year - sign of the mildness. First butterfly, a small tortoiseshell, is seen in mid March, although there are snow showers two weeks later. MARCH - flowering in the greenhouse - Hovea elliptica. Sown in 1991, it flowered the first spring after germination, producing blue-purple pea flowers in the leaf axils. Resembling an open shrub with narrow leaves, it has flowered each spring since, usually starting in March and continuing throughout April.

Also in flower in the greenhouse - Indigofera australis : Each March to May, sprays of pink/mauve pea flowers, approximately 1cm long, are produced. It forms an upright shrub with chestnut coloured stems with feathery blue/green foliage. The leaves are divided into 5-21 oval leaflets.

Prostanthera rotundifolia. The round-leaved mint bushes that I currently have are all cuttings from the original plant obtained in 1989. I find this the best way to maintain a bushy specimen - older plants get leggy. I have plants both in the greenhouse and the open garden in a southfacing aspect. They all flower about the same time, March - May, producing masses of lilac/purple blooms. Immediately after flowering they are pruned to help keep the plants bushy.

In the open garden, alongside a southfacing house wall, Pittosporum tenuifolium produces its first blooms of the year. The solitary flowers are small, maroon becoming black, five petalled and strongly honey scented - detectable from several metres away, especially in the evening. The shrub itself is multi-stemmed with spreading erect and thin branches. The bark and branchlets are black, the thin leaves are pale green with wavy edges typically 3cm long and oval-shaped. It is thriving in its position, despite the fact that it receives every east and west wind which it is not supposed to like.

April

Frog spawn, obtained from a local garden centre (donation to the Blue Cross Animal Charity), is introduced to pond, but the combination of the following cold snap and the number of dragonfly larvae in the pond meant few spawn were to reach adulthood. Late April, house martins and swallows arrive to take over their nests from the previous summer.

Sown in Spring 1993, Kennedya rubicunda (the dusky coral pea) germinated readily in a heated propagator and one seedling was planted into the greenhouse bed the same summer. It is a vigorous climbing/scrambling plant with large, dark green leaflets. In May 1994 it produced a handful of 4cm long flowers as it twined its way up a ladder I constructed out of bamboo canes stretching to the roof. In April 1995 the whole of the ladder was covered in red pea-shaped flowers, 25-40mm long - a wonderful sight. Fruits, produced in the summer months, are hairy flat brownish-black linear pods 5-10cm long.

Also flowering in the greenhouse - Grevillea 'Canberra Gem'. This plant was bought as a young plant in June 1989. Currently containerised, it produced its first red spider flowers in Spring 1991 and each March/April it regularly blooms continuing throughout the year producing the odd flower up until late autumn. I regularly prune it to maintain its form of a round shrub of fine needle-like leaves.

The cut-leaf dryandra, Dryandra praemorsa also puts on a good annual display. I have two plants, sown in 1990 and grown on for the first 3 years in pots graduating to 45cm diameter tubs. In 1993 they were transplanted into the greenhouse bed. Currently they form spreading bushy shrubs upto 80cm x 80cm. The prickly leaves which are deep green above and white beneath look very much like holly leaves with blunt ends. In late February buds start forming which start opening in April. The flowers are large, upto 7cm across, bright yellow with prominent stamens. Each of my plants in 1995 had approximately 40 blooms.

Prostanthera rotundifolia, Indigofera australis, and Hovea elliptica continue to provide spring colour.

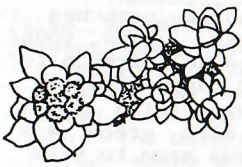
In the open garden several plants of Olearia phlogopappa provide a splash of white. Each April/May, this dusty daisy bush regularly flowers. The grey-green leaves are topped with small white daisies with yellow centres.



Celmisia ramulosa

One of earliest flowering hebes is the common Hebe pinguifolia 'Pagei', which most people are familiar with. It is a low growing, carpeting shrub with glaucous grey foliage producing short spikes of pearly white flowers from April onwards. The spikes, 2-2.5cm long are carried towards the ends of the branchlets.

As well as Pittosporum tenuifolium which is getting into the full swing of flowering, Pittosporum 'Silver Queen', also planted against the southfacing wall, is itself starting to bloom. This attractive Pittosporum has leaves 3-5cm long, oval, pale green with a whitish margin.



Leucogenes leontopodium

April is the month when the scree beds start coming back to life. Celmisia ramulosa, one of the New Zealand mountain daisies, planted in summer 1993 starts to produce its daisy flowers. Its stiff branches are covered with overlapping leaves approximately 1cm long. From the main stem, six branches have formed, each of which has also produced six to eight branches. The young leaves and stems are covered in tiny hairs giving a downy appearance. At the tip of the branches are produced the white daisies, 2-2.5cm in diameter.

Another alpine plant, Leucogenes leontopodium the North Island edelweiss, also begins to produce its first flowers towards the end of the month. I grow the plant in a terracotta pot in a gritty compost.

This pot is sunk into another larger terracotta pot with the space between with pots filled with gritty sand. This helps prevent drastic temperature fluctuations. It is a fairly erect species, about 5-8cm tall, the leaves usually covered with a slightly golden tomentum and the compound flowerheads are up to 3cm or more in diameter. I will overwinter the plant in the greenhouse.

May

Orange tip butterflies, small tortoiseshells, lots of ladybirds. The frogs from last year's spawn make an appearance. Cool wet spring. Garden heavily mulched with rotted compost.

This was the summer when plants which had never so far bloomed, produced their first flowers. One of them was Kunzea baxteri, sown in 1988. Two seedlings were subsequently planted into pots and grown on, repotting as necessary. One is now growing in the greenhouse bed. The other is in a 45cm diameter tub. The single scarlet flower spike, produced this May on the tub-grown plant, resembles a mini bottle-brush. Kunzea baxteri is an attractive open, spreading shrub with drooping branches, crowded with 15mm long narrow leaves.

Another first this year was Acradenia frankliniae, a Tasmanian shrub. White star-like flowers 1.5cm in diameter, with conspicuous stamens are produced in May. This bushy plant has dark green glossy trifoliolate leaves, dotted with prominent oil glands on the underside.



Acradenia frankliniae

Still producing flowers in May are Kennedya rubicunda, Hovea elliptica, Grevillea 'Canberra Gem', Dryandra praemorsa, Indigofera australis, and Prostanthera rotundifolia.

In the open garden, in the bright sun, sunglasses are needed to look at the dazzling white of the daisies on Olearia scilloniensis. Along with Olearia phlogopappa there are large eye-catching areas of white daisy bushes.

In an island bed in my front garden, Corokia x virgata, the wire-netting shrub, so-called because its thin spreading branches zigzag slightly, produces its first flowers of the year. When young the branchlets are covered with white down. The leaves are alternate, variable in shape : lance, oval or spoon-shaped, approximately 2.5cm long. The upper surface may be sparsely covered with hairs when young, but at maturity is glabrous and dull, dark green sometimes tinged with brown. During the winter the leaves seem to take on a bronzy-grey colour giving the impression that the plant has died, but as soon as the spring warmth arrives, the plant starts to green up. The undersurface is white felted. Bought in 1993 it has survived several very cold nights in February 1994 when the temperature dropped to -11°C. 1995 saw a wonderful display of 12mm diameter bright yellow star-like flowers, slightly fragrant, starting in May and lasting through June. October 1995 - added bonus of orange berries.

The screes and rockery continue to provide a patchwork of colour.

Parahebe catarractae alba, bought in 1993 provides evergreen foliage and whitish flowers. In description the main stems and flowering stems are browny-red in colour. The buds which are densely packed together to form the flower spike are mid pink. The sepals of the buds are a reddish green. The flowers are white with pale purple veining and a deeper purple ring at the base of the petals. The leaves are in pairs, opposite each other. There are 4 or 5 crenations each side of the leaf which is almost rounded in shape (long heart-shaped). Celmisia ramulosa and Leucogenes leontopodium continue to bloom. Among the several bidi-bids that I grow, Acaena 'Blue Haze' provides a carpet of interest. It is one of the more garden-worthy, with its blue-green evergreen foliage and spherical brownish-red flower heads, which later develop to pinkish red-spined, dark red burrs (clinging to the skirt or trouser leg if you happen to walk too near). Leptinella squalida (syn Cotula squalida) is, I suspect, one of those plants not many people would want on their scree, but I like the dense mats it forms. The brownish/green finely cut leaves, resembling ferny foliage, make very good ground cover. The rather insignificant flowerheads are carried on 1-6cm stalks.

Colour stills continues to be produced by Prostanthera rotundifolia, Hebe 'Pagei', Olearia scilloniensis, Pittosporum tenuifolium, and Pittosporum 'Silver Queen'.

June

Young blue tits leave nest box. Hedgehogs take evening strolls and drink from shallow end of pond. Second half of June, at least two dozen dragonflies emerge from the larval stage in which they have spent the last two years. Towards the end of June, summer finally arrives with sudden temperatures in the high 20°C. The beginning of two months of hot sun and even longer time of no rain.

In the greenhouse, Melaleuca armillaris flowers for the first time. Commonly known as the Bracelet Honey Myrtle, this fast growing bushy shrub has fine, crowded dark green leaves. The flowers resemble white bottlebrushes. The Hillock Bush, Melaleuca hypericifolia has oval foliage on slightly drooping branches. Its brushes are orange-red in colour. The seed for both these honey myrtles was sown in May 1988. In July 1991, the first Hillock Bush flowered and has continued to do so every year since.

Spider flowers are still being produced on Grevillea 'Canberra Gem'.

Correa decumbens, obtained in 1989, and currently growing in a 30cm diameter tub in the greenhouse, makes a prostrate, spreading shrub, with narrow, dark green leaves. It flowered for the first time in June 1990. The small red and green, cigar-shaped flowers stand in an upturned position. Flowers will continue to be produced up until late autumn. The main problem that I have with this plant is scale insect and the sooty mould on the branches. This year the problem seemed particularly bad - wasps were attracted to the honeydew. As soon as I see the first sign of trouble I brush the branches with an old toothbrush and soapy water to remove the mould and then spray with malathion. This seems to keep the pest at bay.

In the open garden, another common dwarf hebe, Hebe 'Youngii', provides splashes of violet, contrasting well with the still flowering

greyish foliage and white flowers of 'Pagei'.

Adding colour in the blue/grey border in the front garden is Derwentia perfoliata. This is an evergreen perennial, growing upto 0.6m high, with grey perfoliate leaves. From the upper axils develop racemes up to 15cm in length of small four petalled flowers, sky blue in colour. It is commonly known as Diggers Speedwell because of its occurrence on the Victorian goldfields.

Adding interest to the scree is Craspedia incana. This is a plant of alpine screes and rock crevices above 1200m in South Island of New Zealand, and consequently should be grown in loose, stony soil or a scree mixture. The basal leaves are oval in shape and are 5-10cm in length. The flower stem, approximately 15cm long, is topped by a yellow flower head, 2-3cm in diameter. The leaves, stems and flower buds are all covered with a thick white woolly tomentum.

Other interest on the scree beds is provided by Wahlenbergia gloriosa and Parahebe 'Porlock Purple'. Wahlenbergia gloriosa is commonly known as the Royal Bluebell; it is the floral emblem of the Australian Capital Territory. The violet-blue bell shaped flowers, upto 2-3cm in diameter, are borne singly on 15cm long slender stems. The flowers are usually erect, looking into the sun, and will be produced throughout July, August and September. The oblong leaves about 2.5cm long, are dark green with wavy leaf margins. The plant readily produces creeping rhizomes which can be potted up and planted elsewhere.

Parahebe 'Porlock Purple' has a lovely pale purple flower with beetroot purple veining and a beetroot purple ring at the base of the petals. Acaena 'Blue Haze' continues to bloom, as does A. anserinifolia. Pratia pedunculata produces masses of pale-blue star-like flowers on mats of green foliage. It prefers a moist slightly shaded position. Leptospermum humifusum, a prostrate alpine produces white apple-blossom flowers. Adding contrast to the small-leaved alpines, is Celmisia spectabilis with its rosette of thick and leathery leaves, green above, felt-like below. The woolly flower stem supports a white daisy flower upto 5cm in diameter with a yellow centre.

Corokia x virgata, Olearia nummularifolia, Olearia scilloniensis, Parahebe catarractae alba, and Hebe 'Midsummer Beauty' continue to provide flowering interest.

July

July sees the very first flowers produced on Acmena smithii. This Australian plant is grown from seed sown in May 1988. I currently have two plants, one in the greenhouse and the other planted outdoors in autumn 1994 against a southfacing housewall. The latter suffered some wind scorch during the winter but during the spring it put on new leaves. The adult leaves are shining and ovate upto 5cm long. They are bronze in colour when young. The flowers on the greenhouse plant are small and white, and have only been produced at the top of the plant which is approximately 1m tall.

The honey myrtles, Melaleuca armillaris and Melaleuca hypericifolia continue to produce their white and red flowers respectively, and are now joined by the pink-purple pompoms of Melaleuca nesophila. This, the Showy Honey Myrtle, has elliptical leathery leaves and I find has

a rather upright habit, unlike the other two honey myrtles which have drooping stems.

Throughout July, Correa decumbens and Grevillea 'Canberra Gem' continue to produce greenhouse colour.

In the open garden, one of the several eucalypts I grow, flowers for the first time since moving to this house two years ago. Eucalyptus perriniana, commonly known as the Spinning Gum, because the paired juvenile leaves are joined to form a disc with the stems growing through the middle; when the leaves loosen their hold they spin round the stem in the wind. The glaucous adult leaves are long and pendulous. The creamy flowers are produced in clusters of three and there are many flowering buds developing for next year.

Hebe 'Wingletye' adds colour to the border with 2.5cm spikes of amethyst-coloured flowers. This is a dwarf prostrate hebe with grey foliage. The well-known Hebe 'Autumn Glory' produces its first spikes of violet flowers and will continue to do so upto Christmas. Derwentia perfoliata continues to produce pale-blue flowers.

Against the southfacing house wall, Bursaria spinosa, known as the native blackthorn in Australia, produces panicles of cream sweetly-scented flowers, 6-12mm across with 5 spreading, rounded petals and 5 yellow-tipped protruding stamens. This blackthorn is a densely branched, evergreen shrub about 1m high, covered with thorns. The mature leaves are alternate, obovate, 1-4cm long and 3-15mm wide, glossy green above with a prominent midrib. I have several plants of this species, one in the greenhouse the others in the garden, but only one has so far flowered. All were raised from seed sown in May 1988, germinating in November of the same year.

Various parahebes continue to flower on the scree beds. Parahebe decora 'Kea' joins them this month. P. 'Kea' was bought as a small plant in April 1994. It is named after the mischievous alpine parrot of New Zealand's South Island mountains. The kea's home is a vast wasteland of scrub, tussock and bare shingle screes between forest and snowline. Its extrovert personality and its fondness for human beings makes it a real pest. They can shred a camper's tent to ribbons while he is off walking, or pull the windscreen wipers from a car while it is parked. In some parts of the South Island there are road signs warning travellers of the kea's presence. Unlike the bird, the plant is completely controllable and good natured. It is a prostrate and spreading plant, with rounded shiny leaves, with two crenations, about 4mm in length x 3mm in width. The speedwell-like flowers, produced on slender racemes, are white/mauve with mauve veining marks.

August

The beginning of August brings a hosepipe ban. Having sandy, free-draining soil, meant that after several days of hot temperatures, many plants were wilting. Not just newly planted ones, but established shrubs. Hebes planted two years ago were among several that required a full watering can each day. The fact that I haven't had too many losses is probably due to the heavy spring mulching and the hour spent every night for about two months, walking from the outdoor tap to those plants in need with my watering cans.

For at least six months each year my greenhouse plants are watered with tap water, since there is usually very little rainfall from April to October. My tap water has a very high lime content and used straight soon has an adverse effect on many of my plants - the foliage yellows and the plants look sickly. This year I've resorted to Miracid and I'm very pleased with the result.

In the garden Hebe 'Great Orme' begins producing its familiar spikes of bright pink, upto 10cm long. The flowers fade to white to give a two colour effect. This is one of my favourite larger hebes, although I find it more tender than 'Autumn Glory' and 'Midsummer Beauty'.

September - December

SEPTEMBER - The house martins and swallows fly south. Cooler weather has arrived but no rain. From September to December, odd flowers continue to be produced on Grevillea 'Canberra Gem', Correa decumbens, Hebe 'Autumn Glory', Wahlenbergia gloriosa and the parahebes.

Failures?

Why didn't my bottlebrush (species unknown, but red brushes in previous years) bloom? The one plant that I did lose, was Ourisia caespitosa alba, a newly acquired alpine this spring, requiring cool, moist conditions, and which obviously could not get established in the warm dry air.

* * * * *

GARDENING NOTES FROM LEEDS

By Thomas Naylor

There were about 45 frosts over winter; mostly slight and nothing below -7°C. Snowfall in January produced a depth of 38cm. My only loss in the open ground was Indigofera australis in its first year planted out. This happened early in the winter. My other three new outdoor plantings - Acacia melanoxylon, A. riceana and Telopea oreades - all came through unscathed.

An unprotected Correa reflexa produced at least one flower during every month of the winter and gave a good show of flowers in Spring. It began to flower again in mid-October 1995. There were over a hundred flowers on Eucalyptus globulus in July but my Australasian plants have in general been reluctant to flower.

Most Australasians in the open ground survived the drought without extra water. My losses were Telopea oreades and Eucalyptus paliformis in August and Telopea truncata in September. The eucalypt and T. oreades were small plants and T. oreades was less well established than T. truncata. None of them had been given protection in the form of a mulch. I started to water them when they began to show signs of distress but, with hindsight, it was already too late.

Germination notes from A.P.S. seed - Banksia conferta ssp. penicillata and Petrophile canescens began to germinate within a month on a sunny windowsill. Acacia kybeanensis responded well to hot water treatment but Celmisia spectabilis var. magnifica produced only one seedling and I didn't manage to keep it alive beyond this very early stage. Jeff Irons' home-produced Acacia mucronata seeds have germinated.

TWO NEW ZEALAND FORGET-ME-NOTS

Myosotis australis. This biennial forget-me-not makes an interesting addition to the rockery or front of the herbaceous border. It is easily grown from seed, preferring a well-drained soil in a sunny or partially shaded situation. In description, bright yellow flowers (occasionally white forms crop up), 5-7mm in diameter are produced on stems upto 30cm rising from rosettes of bronzy-coloured leaves. The flowers develop in a tight head which gradually unrolls becoming erect as the flowers progressively open.

Myosotis pulvinaris. This cushion-forming forget-me-not is one for the alpine house enthusiast since it dislikes winter wet weather : in fact care must be taken when watering it during the winter, since any wet foliage is liable to die and the cushion shape will be spoilt. Cultivate it in a well drained gritty soil, and keep on the dry side over the cooler winter months. Give it full light to keep the cushion compact which has a hoary appearance due to the leaves being densely covered with hairs. The flowers, 6-8mm in diameter, are solitary and white with yellow eyes, and they stud the cushion.

* * * * *

FLATWORM SURVEY

Have you seen either of the Antipodean flatworms locally? Both the New Zealand flatworm Artioposthia triangulata and the Australian flatworm Australoplana sanguinea var. alba are on the move, preying on the common garden earthworm. The Australian flatworm is slowly spreading from the south west of England northwards, with sightings in the Midlands, North Wales, Lancashire and the Isle of Man. The New Zealand species is travelling in the opposite direction. Mainly found in Scotland, others have been recorded in Cumbria, parts of North East England and Yorkshire, as well as in the Manchester area. There have also been several sightings on the south coast.

There were probably not many sightings during the hot summer since they do not like dry conditions. They prefer the cooler autumnal conditions we are now familiar with and their favourite haunts are dark, moist places, ie. under pots or stones. An adult New Zealand flatworm measures upto 17cm in length, is purplish brown with creamy coloured flanks and underside. Its whole body is covered in a thick mucus. Its eggs measure about 1cm in diameter and are black. The Australian flatworm is chestnut brown in colour.

Although there is no foolproof way to avoid the flatworms, there are precautions that can be taken. Any newly purchased plants should be checked, especially between the compost and the pot where flatworms love to hide. If a flatworm is found place in a jam jar full of strongly salted water. Any creature you believe may be a flatworm should be sent to the experts for positive identification. Put the specimen in a sturdy box, together with some moistened kitchen paper and send it by first class post to Dr Brian Boag, Scottish Crops Research Institute, Invergowrie, Dundee, Scotland, DD2 5DA. Include details of where it was found and any other relevant information.

NUYTSIA FLORIBUNDA

By Tony Entwistle

Named after Peter Nuyts, the Dutch explorer who found it on the south coast and was amazed to find the countryside ablaze with orange, this tree is not only one of the most beautiful flowering Australian trees but an extraordinary botanical curiosity.

It has a wide distribution in Western Australia and as its popular name - the West Australian Christmas Tree - implies, flowers in November - December, though on the warmer south coast near Esperance it can be seen in full bloom by the end of September.

It is not a very large tree, and most specimens are 4-8m, with a single trunk and a rather mop-headed outline. They usually occur in clumps of 3-4, probably because they can sucker quite some distance away. I suppose that from a distance they resemble a giant standard lilac covered in brilliant orange flowers.

Nuytsia is the only 'free-standing' member of the mistletoe family (Loranthaceae), all the others growing parasitically on the branches of trees and shrubs. It is semi-parasitic, its roots attaching by suckes to the surrounding grasses (or any neighbouring plant; it even will attach itself to submerged telephone cables!). But there are even more oddities; the seeds produce up to six cotyledons and the trunk is composed of alternate concentric rings of xylem and phloem, so that it can shoot from what appears to be 'heart-wood'. This also makes it very brittle.

I am not aware that it has been cultivated (under glass) in this country. Fresh seed germinates readily enough; one is told to plant it with couch-grass as a host, but incredible as it may seem I have found that couch-grass just dies in a pot! I have kept a seedling alive for three years, with foliar feeds, but it never grew above a few centimetres. The Australians say it will also root from cuttings.

* * * * *

SNIPPET

A visitor to the RHS stand at Southport Flower Show wanted to know the name of a plant. Thirty years ago he had called it Leucophyta brownii and used it for summer bedding. That name is not to be found in any of the current books, and someone had told him that it is now Calocephalus brownii. Could the RHS staff help? He was told that 'his' name is now in use again, and went away contented.

What happened was that the botanist Cassini named the plant Leucophyta. Later on he changed his mind and called it Calocephalus. Using the rule that the earliest name is the one to be used present day botanists have re-instated Leucophyta.

The species is described in the APS Newsletter for November 1994.

CONTACTS

Chairman	James Harris
Honorary Secretary	Jeff Irons 'Stonecourt' 74 Brimstage Road Heswall Wirral L60 1XQ Telephone 0151 342 1703
Treasurer	Dr. A. J. Entwistle 'Ophrys' 113 Station Road Delamere Cheshire CW8 2HZ Telephone 01606 882306
Newsletter Editor and Producer	Sue Hyams 'Applegarth' Knayton Thirsk North Yorkshire YO7 4AS Telephone 01845 537407

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