

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS Inc.

EPACRIS STUDY GROUP

Group Leader: Gwen Elliot, P.O. Box 655 Heathmont Vic. 3135

NEWSLETTER

No. 8

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October 1999

Greetings to all EPACRIS STUDY GROUP members. Many have visited Queensland this year to attend the 20th Biennial ASGAP Conference in Brisbane and I regret that I was not able to be there. Congratulations to Jan Sked of Queensland who has now taken over the task of ASGAP Study Group Co-ordinator, and thanks also to Helen Morrow, who has occupied this position in recent years.

Rodger and I have been travelling in Europe and USA and we were able to see many Australian plants, in Botanic Gardens, private gardens and in nurseries. One of the highlights of our time away was to visit the garden of Epacris Study Group member, Jeff Irons and his wife Betty, at Wirral in England. While there we attended a meeting of the Australasian Plant Society which was held at the Ness Botanic Garden where we also saw many Australian plants in cultivation. Jeff has sent two separate items for our Newsletter, which we are delighted to be able to include. He has also sent a page on Vegetative Propagation which will be held for our next Newsletter.

Special thanks to Study Group Member, Bill Gunn of Ocean Grove Vic. who has very kindly supplied several *Epacris* illustrations for our Newsletters, including the delightful *Epacris longiflora* which has been used in the Species Profile in this issue. Bill also makes mention of mycorrhizal association in regard to *Epacris* and their cultivation, which is a topic I hope we may be able to look at in one of our Newsletters next year. Any contributions from members on this aspect will be particularly welcome.

Bill has included the following item which is very much appreciated.

"WHAT DETERMINES THAT AN EPACRIS IS AN EPACRIS ?

The Epacris are erect or spreading shrubs. Most are less than 2.5 m high, but there are exceptions, eg. *E. heteronema* and *E. coriacea*.

The crowded leaves are alternate, arranged in a spiral. They are lanceolate, ovate or cordate, up to 1.5 cm long, and almost all end in a hard, sharp point. They have no stalk or a very short stalk and they have a prominent mid-rib on their under-surface.

The flowers are white, pink or red. They are single and axillary, arising in the angle between the upper surface of a leaf and the stem to which the leaf is attached. The flower stalk is short or very short.

Each flower has five (5) petals, which are fused to form a tube or a bell and shows five (5) corolla lobes. Each flower has five (5) sepals, which are free, not fused. Each flower has five (5) stamens which are separate, but become attached to their corresponding petal inside the tube or bell at its base.

Each flower has five (5) carpels, which are fused to form the single style.

The ovary is 'superior', i.e. it is above the point at which the flower parts join the flower stalk.

A transverse section, cut through the ovary, shows five (5) chambers or loculi. Each chamber of loculus contains five (5) ovules, which contain the egg-cells and, after fertilisation, become seeds. "

Members may perhaps have heard of the proposal to incorporate the Epacridaceae family within the Ericaceae family, and this is a topic which we will look at in more detail in our March 2000 Newsletter.

I trust you enjoy the contents of this issue, and will welcome all contributions to future Newsletters.

Gwen E.

NEWS AND NOTES FROM MEMBERS

We welcome to our study group TRICIA ALLEN of McCrae Vic, HELEN DUNN of Hawthorn Vic, MARGARET GUENZEL of Boronia Vic, MAX McDOWALL, from Bulleen Vic., KAREN RUSSELL of Blackburn Vic, ANNE & DAVID REES of Mirboo North Vic. Welcome also to ROSEY HAAS who is involved with the ST. KILDA INDIGENOUS NURSERY, Victoria (Ph/Fax 03) 9645 2477). This is a small co-operative nursery growing indigenous plants including the local *Epacris impressa*, which is propagated from cuttings. Rosie also tells us that the nursery has had great success growing some of their local plants from seed using the smoke germination technique.

Margaret Guenzel is interested in propagating plants of the local *Epacris impressa* for the KNOX ENVIRONMENTAL SOCIETY INDIGENOUS NURSERY. It's really great to see the current high level of interest in local plants and Indigenous Nurseries.

Special thanks to new member, JOHN EMMS, from Loch in South Gippsland who has sent in the following item -

Epacris sp. of Tasmania

Members of the Study Group with access to 'The Net' may be interested in looking at the Flora species profile - *Epacris*. This can be found at - http://www.rfa.gov.au/cra/tas/env/ai_epac.r.html It profiles 15 Tasmanian *Epacris* species giving life history and population summaries covering rarely mentioned species such as *E. graniticola*, *E. apsleyensis*, *E. curtisiae*, *E. grandis* and *E. libata*. (It is somewhat of an update on those mentioned in Briggs & Leigh 'Rare or Threatened Australian Plants', 1996).

Those persons who like coloured pictures of Epacridaceae might like to try "The Flora of Mount Field" from the University of Tasmania at - http://info/utas/edu/au/docs/plant_science/field_botany/field/index.html. Look under Dicotyledons.

DICK BURNS, former Secretary/Treasurer of the EPACRIS STUDY GROUP advises that the illustration of *Epacris navicularis* which featured in earlier Study Group Newsletters, and is included on page 3 here, was provided by Yvonne Menadue, who worked with Ron Crowden on the study of this genus.

While many members have associated the successful cultivation of *Epacris impressa* with the presence of moisture in the garden, Dick reports that in his garden at Penguin, Tas. the site becomes 'bone dry' in summer. He has several forms growing including pink, red, double-flowered and 'Bega'.

Dick also has a very old plant of *E. longiflora*, plus a form with dull-coloured flowers which originated from Earlwood in the Sydney area.

BARBARA HENDERSON from Samsonvale Qld, is leader of the WALLUM and COASTAL HEATHLAND STUDY GROUP. Barbara writes -

Our local Wallum (and montane heath) Epacris are microphylla, obtusifolia and pulchella. The first two definitely prefer moist to wet sites but the last one seems to be happy in a variety of situations. Of the three, I've so far tried growing E. obtusifolia, with little success up here in my hilly garden with its shaly loam - not enough wet for it. E. pulchella grows well, but doesn't flower anywhere near as prolifically as it does down on the coast in the Wallum areas. It will have either white or pink flowers, and last April at Beerwah it was just wonderful. My plants so far have been "rescues" from Sunshine Coast development sites.

CHERREE DENSLEY writes that *Epacris* plants have proved difficult in the dark volcanic loam soil of her garden in Killarney Vic. She plans to try to concentrate on cutting-grown plants from regions with heavier soils. Do any members have suggestions for Cherree ?

Cherree also sent the following in a recent letter - *Epacris lanuginosa* was just beautiful last year in a swampy area near Mt. Clay. It turned the area white where it grows with *Melaleuca squamea* and *M. squarrosa*, *Hakea nodosa*, *Gahnia sieberiana* and *Sprengelia incarnata*. The *Epacris* flowering is quite short, just a few weeks at the most in spring, followed by a soft pink and yellow haze over this dense swamp area, pink from the *Sprengelia* and yellow from the *Melaleuca squarrosa*. Later on in summer *M. squamea* will spot colour the area bright pink. It is a fascinating area, but I'm glad there are some tracks through there, as it is not the best place to wander and explore. Most vegetation is about head high and so dense you can't see where to put your feet - which is ankle to knee high water anyway. If you tripped and fell, you just might be lost forever! But even though I have been going through this area off and on for years it has only been in the last few that I have noticed this white flower blooming and actually found out that it was *Epacris lanuginosa*. It is almost impossible to spot when not flowering as the foliage blends in with everything else. So by my estimation it is quite a tall plant - head high anyway.

Many thanks Cherree - and I'm sorry it took a couple of issues to include this item in our Newsletter.

The following is the first of the two items included in this Newsletter from overseas member, JEFF IRONS of Wirral in England. We thank Jeff sincerely for his contributions.

In separate parts of Newsletter 7 it was stated that Epacris need soil which is moist and which is acid. I wonder whether things are as simple as that. Having lost many Epacrids in my English garden I have come to the conclusion that they are best grown in pots, and that only 'spare' plants can be risked in the garden.

My soil is acid. Ericaceae grow in it quite happily, so do a few Epacrids such as E. paludosa, Richea scoparia and Trochocarpa thymifolia. In general though, they die in late summer. A few die in winter. Though there is no proof, I've concluded that at pH 5 - 5.5 my soil is sufficiently acid, and that most (Tasmanian) Epacris demand a soil no higher than pH 4.5. An indication that this may be a correct supposition comes from the Blue Mountains of NSW. Presumably the sand there is quite acid and an Epacris grows plentifully along the Five Mile. I suspect something similar applies to Wittsteinia vacciniacea. It survived in the garden but wouldn't spread. When put into a pot containing a peat mix, and plunged in the same place, it began to thrive.

EPACRIS STUDY GROUP

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Epacris navicularis

OVERSEAS

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The Epacris Study Group Newsletter is also sent to the ASGAP Study Group Co-ordinator, to Editors of each State Newsletter of member bodies of the Australian Plants Society, to regional groups of the Australian Plants Society who affiliate with the Study Group and to Botanic Gardens and Universities where research on *Epacris* is currently being undertaken.

Growing Ericaceae & Epacridaceae plants from seed

The Ericaceae is one of the most frequently seen plant families in northern hemisphere gardens. Consequently it is not at all surprising that some British gardeners are equally enthusiastic about the Epacridaceae. However both plants and seed are almost impossible to obtain. If seed is found, it is unlikely to germinate.

I believe that, in at least some instances, the poor germination results from incorrect handling at the collection stage. Europeans know that many Ericaceae must be kept moist when collected, and stored in cool and moist conditions. Heathers, for example, are placed in a bag containing a piece of moist sponge as soon as they are collected. Their seed is stored in conditions which are both cool and moist. Epacrids often grow in cool, moist places. Their ripe seed is shed into a moist atmosphere, and stays there until germination occurs. It seems reasonable to assume that if this seed is allowed to dry out, it is either killed or becomes deeply dormant. Perhaps their germination would be improved if they are treated in the same manner as Heather seed.

I have never been able to obtain *Epacris* seed, and my experience of seed raising is limited to genera such as *Dracophyllum*, *Richea* and *Trochocarpa*, along with the related *Gaultheria*. Believing that many fine seeds need light before they will germinate I sow them on the surface of my seed compost, and cover with a thin layer of Perlite. It makes a deeper layer than sand, yet allows light through. However for Epacridaceae and Ericaceae the top 2 cm of compost is replaced by sphagnum which has been dried, rubbed and sieved. The sphagnum is available from many garden centres, which sell it for use as the lining for hanging baskets. Liverworts are a pest on peat, but they do not grow on sphagnum, which will stay clean for several years. My seed pots are placed on top of a bed of moist grit. Capillary action ensures that the compost surface is always moist. Since my pots are in a greenhouse it is sometimes necessary to cover them with a loosely laid sheet or reflective film. This prevents the compost surface from drying out under powerful sun.

Germination usually occurs after one or two years, and continues for a few more. As an example, seen recently by Gwen Elliot, *Gaultheria apressa* germinated after one year, but further germination occurred in subsequent years. In 1999, three years after the initial germination, seed was still coming up. Incidentally other genera in different families behave in the same way. What I do not know, because I do not get the opportunity to try it out, is how the seed would behave if sown immediately after collection. It could be that the seeds are programmed to germinate after a warm spell, i.e. the first winter after sowing was superfluous; and the important thing was summer, which corresponded to the short warm spell after the seed had been shed.

I believe that it is important that seed pots are kept for some time after the initial germination, and for seedlings from the whole germination period to be grown on. Selection of the first seedlings to come up, or of the largest seedlings, leads to a change in the species' systems for survival.

Recently I've tried a new technique with some success. Noticing how plants grow in mass on fallen trees or on paths, I allowed moss to grow on a pot of compost, then sowed *Drymophila cyanocarpa* (Luzuriaceae) in the moss. Previous attempts to germinate this forest floor plant had failed. I thought that in order for it to germinate the seed needs to be in what is effectively air almost saturated with water vapour. The idea worked, and I now have two pots of seedlings. The next step, if I can get seed, is to try it with *Epacris*. Incidentally *Celmisia* are easy to grow using a similar method. Just place the seeds in a mist unit at around 20°C, then when leaves show green through the seed coat remove it, and sow singly.

Epacrid seedlings grow slowly, so I do not transplant until they are two, or even three years old. Even then I may transplant them in small groups, not singly. This has two advantages. The seedlings grow away more quickly, because there has been less damage to their roots. If, as I believe is the case, Epacrids do not form mycorrhizal associations, it is extremely important to damage roots as little as possible. Secondly it means that when the plants do flower cross fertilization is probably assured. I write probably because God's law might ensure a group or clump of dioecious plants of the same sex.

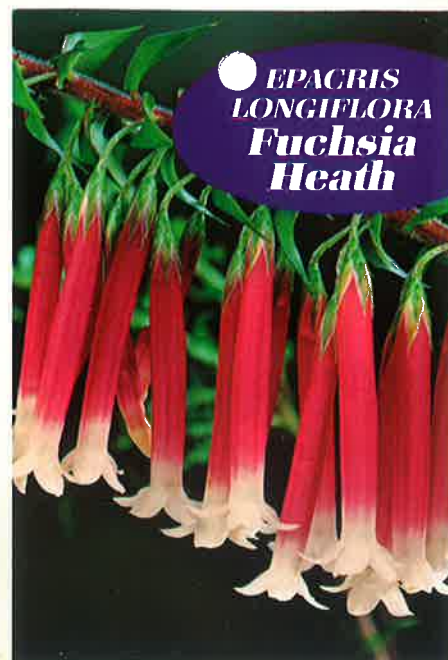
Finally, if anyone reading this has spare seed or cutting material please remember that there is a bloke on the other side of the world who would be pleased to hear from you. I'm especially keen to acquire *Epacris reclinata*, *Leucopogon lanceolatus* and *Woolisia pungens*.

Jeff Irons
Wirral, England

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EPACRIS STUDY GROUP
Plant profile

Epacris longiflora Cav.
Fuchsia Heath



Plant label produced by
Norwood Industries Pty. Ltd.

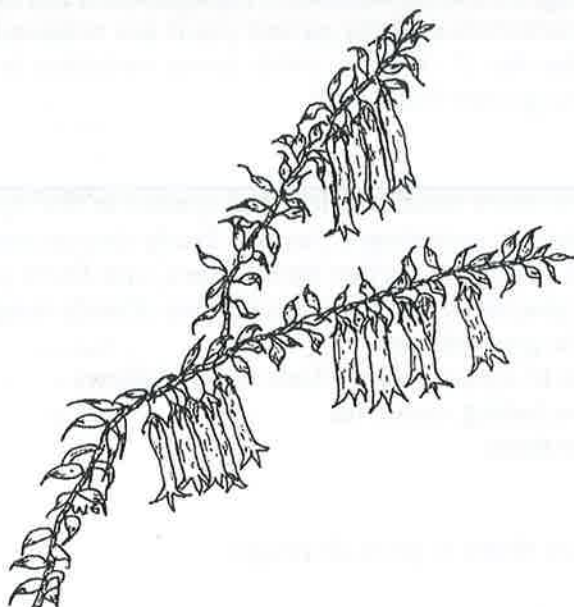


Illustration by Bill Gunn
Epacris Study Group
member

longiflora =with long flowers
Distribution - Qld, NSW
Common name - Fuchsia Heath

Epacris longiflora Cav.

Epacris longiflora is one of just two *Epacris* species named by Antonio Jose (Joseph) Cavanilles, the Spanish botanist who lived from 1745 to 1804 and also described and named the genus *Epacris*. From 1801 he was Director of the Madrid Botanical Garden.

Epacris longiflora is a small to medium shrub with an open spreading habit. Plants can grow from 50 cm tall to over 2 m in height, and have a width of 1 - 2 m. The leaves of about 15 mm long by 6 mm across are ovate, tapering to a fine point with minutely toothed margins. They are almost stalkless.

The flower-tubes of *E. longiflora* are the longest of all *Epacris* species, being up to 4 cm in length by about 5 mm wide. The most commonly cultivated form has showy red bells with white flared tips. The buds can be initially erect, but as the flowers mature they hang down from leaf axils along the branches. If plants are not regularly pruned they can form long arching branches with eye-catching rows of flowers for most of the year, with a peak in late winter and spring. Pruning will encourage more bushy growth and the development of flowers in shorter clusters.

The fruit is a 5-valved capsule of 3-4 mm long containing very fine seed.

***Epacris longiflora* Cav.**

Epacris longiflora has its main distribution in the sandstone areas of New South Wales, from the coast to nearby mountains where it occurs in typical heath country, in open forest, in rocky areas and on cliff tops. Its range extends to just over the border into southern Queensland where it has been recorded at Springbrook, Mt. Lindesay and Mt. Barney.

In addition to the widely known and grown selection of described on the reverse of this page, there is some variation within the species.

A form with all white flowers and paler green foliage is grown by specialist nurseries.

There is also a salmon-flowered form with stiffer more sharply pointed leaves.

The form from near the Qld/NSW border differs in having shorter, erect flowers produced around the stems rather than in pendent rows.

Propagation

Plants are propagated primarily from cuttings of firm young growth, as described in the special profile page on Propagation from Cuttings in this Newsletter. Propagation from cuttings will ensure that the flower colour or other characteristics of the parent plant are retained.

For propagation from seed, see Newsletter No. 7 - March, 1999. Some variation in flower colour may occur in plants of *Epacris longiflora* grown from seed.

Cultivation

This Fuchsia Heath is certainly one of the more readily cultivated species in the *Epacris* genus and responds well to cultivation in gardens or containers. Several Study Group members have mentioned their success with growing this species in earlier Newsletters, and there are also numerous references to the cultivation of this species in issues of *Australian Plants* magazines, from early volumes in the 1960s through to the present day.

Reported observations on the cultivation of *Epacris longiflora* are as follows -

- * Suitable for garden cultivation including rockeries
- * Prefers partial sun or filtered sunshine
- * Tolerant of full sun
- * Likes light or medium soils
- * Will do well in heavy soils provided there is good drainage
- * Withstands frosts down to -6°C.
- * Suitable also for container cultivation

This space is for your own comments on the Propagation and Cultivation of
Epacris longiflora - Fuchsia Heath

Special PROFILE TOPIC

PROPAGATION OF *Epacris* FROM CUTTINGS

Most *Epacris* species can be successfully propagated from cuttings, although some do prove challenging, particularly to newcomers in plant propagation.

a) When to take cuttings

The best time of the year for propagation will depend on whether you live in a warm or cool climate, and whether you are using a heated propagator or relying on nature to supply the necessary warmth for cuttings to form roots.

If you have a heated propagator you can virtually take cuttings at any time of the year. If you live in an area where there are cool winters and you are not using heated equipment it is best to put down cuttings in late spring or early summer, so that the natural atmospheric warmth and longer day-length can be used to maximum advantage in helping the cuttings to develop roots.

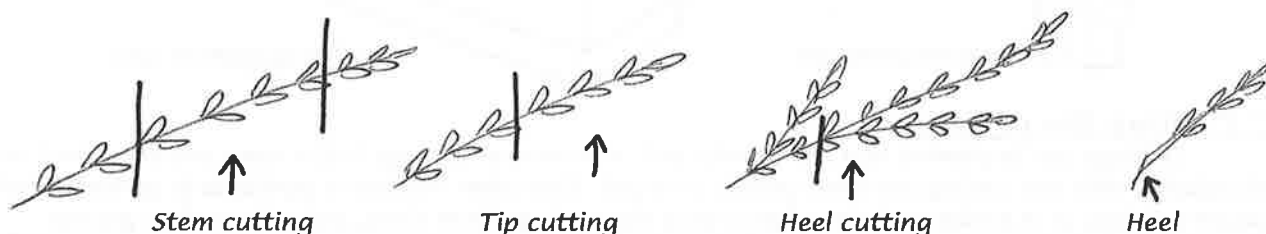
b) Suitable plant material for propagation

This aspect is closely related to (a) above, and is a vital element affecting the success or failure of propagation.

A main criteria for propagation of *Epacris* is to take your cuttings when the plant material is at the right stage of development.

Soft floppy and weak new growth will frequently wilt and die in the propagator, so should not be used for propagation. Hard woody stems certainly do not wilt, but they can remain in your propagator for months and months, without forming any roots at all.

The material which will provide the best results is inbetween these extremes. It is young but firm stem growth which is pliable but not floppy. The end tip may be weak and floppy, in which case this should be removed and a cutting of the next 5 - 8 cm of the stem used. Either stem cuttings can be used, or side shoots which have been pulled or cut from the main stem retaining the base of the side shoot, which is referred to as the heel, (see illustrations).



Garden-grown plants can be observed during growth periods until the material is at a suitable stage for cuttings to be taken, and generally this is the method which provides the best results. If a plant is lacking in recent growth and has only firm woody stems, a good course of action is to prune the plant so that a flush of new growth is produced. When this new growth becomes firm you should have a good supply of excellent cutting growth.

The opportunity to collect cutting material at the stage when it is most likely to produce good results is not always available if cuttings are being collected from gardens being visited or plants which are growing in their natural habitat. Sometimes we are only able to collect whatever material is available at a particular time and in these situations our success rate in propagation can be low.

c) Preparation of the cuttings.

Cuttings should be lightly sprayed with water at the time of collection and kept cool and moist until they can be placed in a propagator.

Remove the leaves from the lower one-third of each cutting. (Roots will form from these leaf-junctions or nodes when the cutting is placed in the propagating mixture.) The leaves can be pulled off by hand provided that the bark is not being stripped from the stem in the process. If each leaf pulls with it a small section of bark then the leaves should be removed with sharp secateurs rather than being removed by pulling. Retain several leaves on the upper section of the cutting, as it is from these upper nodes that new growth will develop.

