

EPACRIS STUDY GROUP

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

NEWSLETTER

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SPRING

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No. 6

Greetings to all *Epacris* enthusiasts, researchers and growers, with of course many readers coming into all three categories.

After some years of Study Group leadership by Ron Crowden, assisted by Secretary/Treasurer Dick Burns they have now stepped down from these positions and we thank them for the time they have contributed to the furthering of knowledge regarding this fascinating group of plants. I have undertaken the task of now co-ordinating the *Epacris* Study Group and trust that we can together continue down the path of learning more about the genus *Epacris* and its successful cultivation.

Gwen Elliot.

PLANT PROFILES

An aspect which I hope to continue in our Study Group Newsletter is that of the *Epacris* species PROFILES, where one particular species is covered in some detail in each issue. In this way I feel that each member can be accumulating a worthwhile reference collection on the genus, and adding to the information on different species as it is received.

You may already store your newsletters in some sort of binder. With the new format you can if you wish devote a plastic insert sleeve to each individual species, so that extra information can be added as it comes to hand. For this reason, each species profile will be provided on a double sided page, separate from other Newsletter items.

THIS NEWSLETTER'S SPECIES PROFILE is *Epacris impressa*

Epacris impressa has been selected as the profile species for this issue because of the ready availability of a colour photograph (I hope to be able to use a photo in each species profile), line illustration and considerable other information. It is also a species which has been widely cultivated, with plants obtainable via nurseries throughout Australia.

FUTURE PROFILES

Contributions from members for future species profiles will be important for the series to continue. It may be in the form of line drawings, colour photographs, or information on your own experiences in the propagation or cultivation of plants.

The order in which the *Epacris* species are profiled will depend to a large extent on the available of the above material, so please, put pen to paper, and we will hopefully be on the way to each of us having a very worthwhile information bank as the series continues.

NEWS & NOTES

A BRIEF INTRODUCTION

As a few words of introduction, my husband Rodger and I have been involved in S.G.A.P (Vic) through the regional group of Maroondah (Inc.) since the 1960s. About that time we established the retail native plant nursery 'Austraflora', then in 1972 sold that business and set up a wholesale propagation nursery specialising again in Australian plants and concentrating on some of the more difficult to propagate species. *Epacris* and other Epacridaceae genera have certainly been among the many plants we have propagated and grown over these years.

Both Rodger and I have been involved in writing on Australian plants over the years, in magazines and journals as well as a few books along the way. His major task has been *The Encyclopaedia of Australian Plants Suitable for Cultivation*, written in conjunction with David Jones and illustrator Trevor Blake, which has been mentioned before in this Newsletter, and to which I am certain I will be referring for information on a regular basis. I know that I will also be seeking Rodger's assistance regularly in regard to all sorts of *Epacris* queries for the study group, so in many ways the leadership will be a joint effort.

In 1992 we moved to Heathmont, an outer-suburb to the east of Melbourne, which was named because of the *Epacris impressa* which grows naturally here. We have since endeavoured to replant this species and others into our established half-acre garden, and look forward to continuing along this line in the future.

Epacris Cav.

Many members will be familiar with seeing Cav. written in botanical books and journals after the name *Epacris*, but are we all aware of just who it was who initially described and named this genus.

The Epacridaceae family was named in 1810 by Robert Brown, who also named several species of *Epacris*, but it was actually the Spanish botanist, Antonio Jose (Joseph) Cavanilles, (1745 - 1804) who described and named the genus *Epacris*.

Cavanilles was a Spanish clergyman and botanist who lived in Paris in the late 18th century, then from 1801 became the Director of the Madrid botanical garden.

Cavanilles named two species of *Epacris*, in *E. longiflora* and *E. pulchella*.

Maybe in future Newsletters we can include more information about the botanists associated with *Epacris* over the years. Let me know if it's an aspect you would be interested in!

NECTAR ROBBING in *Epacris impressa*

BY THE RECENTLY INTRODUCED BUMBLEBEE *Bombus terrestris* IN TASMANIA

This is the title of a Research Report included in the August 1998 issue of THE VICTORIAN NATURALIST, published by the Field Naturalists Club of Victoria.

The article is by Andrew Hingston and Peter McQuillan and the Abstract of the research states:

"The frequency of nectar robbing by *Bombus terrestris* (L.) was compared between two populations of Common Heath *Epacris impressa* Labill. in southern Tasmania. Robbing was more frequent in the population with longer corollas, resulting in most open flowers being pierced. As these corolla tubes were shorter than most Victorian flowers of the same species, it is likely that *B. terrestris* would also rob flowers of *E. impressa* in Victoria if it crosses Bass Strait."

If you would like to be able to see this 3-page Report in full, the Field Naturalists Club of Vic. can be contacted at 1 Gardenia St. Blackburn 3130. Phone 03) 9877 9860. Membership of FNCV is \$40 per year.

ASSOCIATION OF
SOCIETIES FOR GROWING
AUSTRALIAN PLANTS Inc.

EPACRIS STUDY GROUP
Plant profile

Epacris impressa
Common Heath

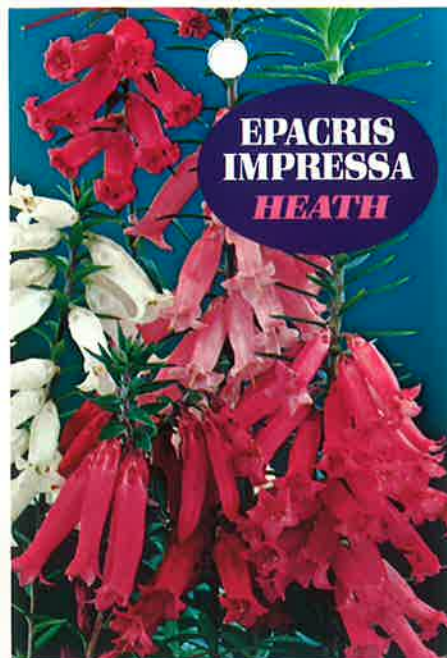
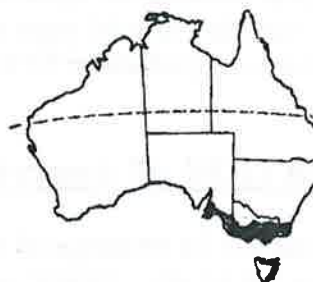


Illustration
by
Beverley
Graham
for
SGAP (Vic.) Inc.

Plant label produced by
Norwood Industries Pty. Ltd.



impressa = with impressions

Distribution - NSW, Vic, Tas, SA

Common names - Heath, Native Heath, Common Heath

Epacris impressa is a small to medium, usually upright shrub, growing from about 30 cm to 2 m tall, with a width of about 20 cm to 1 m.

The alternate leaves are to 1.5 cm X 0.6 cm and linear-lanceolate to ovate-lanceolate, narrowing to a stiff point. They are without leaf-stalks and can be hairy or glabrous.

Flowering is mainly during Winter to early spring, but sporadic flowering can occur from late summer through to late spring.

The flowers are tubular, to 2.5 cm long by 0.5 cm wide with a 5-lobed corolla and 5 distinct indentations (or impressions - hence the species name) at the base of the tube. The flowers are produced singly from the leaf axils but can be profuse, to form a leafy spike. They can be white or in various shades of pink through to red.

The fruit is a 5-valved capsule of about 3.5 mm long containing very fine seed.

***Epacris impressa* Labill.**

Common Heath was officially proclaimed as the floral emblem of Victoria on 11th November, 1958.

In the booklet *Floral Emblems of Australia* by the Australian National Botanic Gardens, Canberra, we find the following interesting information. "Common heath was collected in Tasmania in 1793 by the French botanist, Jacques-Julien Houton de Labillardiere during his voyage with Bruny D'Entrecasteaux on the unsuccessful search for the missing explorer, La Perouse. Following Bruny's death in July 1793, royalist officers of *La Recherche* and *L'Esperance* handed the ships to the Dutch in Java, where Labillardiere, a republican, was imprisoned from October 1793 to March 1795. When he returned to France he found that his plant collection of more than 4000 specimens had been sent to England as a prize of war. Through the diplomacy of Sir Joseph Banks the specimens were eventually returned to their collector. *Epacris impressa* was described by Labillardiere in 1805."

Other species of *Epacris* described by the French botanist, Labillardiere include *E. heteronema*, *E. lanuginosa* and *E. myrtifolia*,

Plants of *Epacris impressa* were introduced to horticulture in England in 1825, but proved frost-tender outdoors. They were therefore grown primarily in cool greenhouses, and were particularly popular due to their flowering at around Christmas time. During the mid to late 19th-century numerous named cultivars were being grown, but unfortunately most of these are now no longer known.

Several cultivars of *Epacris impressa* are in cultivation at the present time and we plan to include a special page on these in a forthcoming newsletter. Information from members on particular forms being grown will be very welcome.

PROPAGATION of *Epacris impressa*

SEED

Plants can be propagated from seed, although germination and initial growth of seedlings can be slow. Flower colour and other variation can occur in plants propagated from seed. Seed usually ripens during Dec. to Feb.

A separate page on the propagation of *Epacris* from seed will be included in a future Newsletter.

CUTTINGS

Cuttings of *Epacris impressa* strike fairly readily provided firm young growth is used. Cuttings of older stems with harder bark can be extremely slow to form roots. *Epacris* roots are very fine so young rooted cuttings must be handled with care when transplanting, to avoid damage. If propagation is carried out by placing just one cutting in each small pot, transplant damage can be avoided.

Propagation can be undertaken throughout the year, provided suitable cutting material is available, however if a cool frame or other non-heated propagator is used then the most favourable time in temperate regions will be during spring to early autumn. The production of roots is usually assisted by the use of a root-promoting hormone.

MORE ABOUT *Epacris impressa*

In our next Newsletter we hopefully will be able to include a further page on *Epacris impressa*, including information on Cultivation in Gardens or Containers.

If you have comments on either successes or failures, please drop me a line, so that our information can come from as wide a range of experiences as possible.

A RECENT NEW BOOK FOR YOUR SHELVES

Many *Epacris Study Group* members already know of the prolific writing ability of fellow-member Jeff Irons from England. It is great to now see the release of AUSTRALIAN PLANTS - A GUIDE TO THEIR CULTIVATION IN EUROPE, written jointly by Jeff and Thomas Ross from Germany.

Unfortunately Thomas died at a relatively young age, shortly after having completed the manuscript of the book, which has now been privately published in a 306-page, hard-cover volume, priced at £25.00 UK, plus postage.

Aspects such as soils and climates are covered, plus detailed profiles of about 140 Australian plants containing a wealth of valuable information for gardeners in Australia as well as in Europe. Also included are line drawings & colour photographs.

In view of the limited printing of this volume it is not likely to be seen in many bookstores in Australia. If you would like a copy we suggest you act promptly, by writing to Jeff Irons, at 74 Brimstage Road, Heswall, Wirral L60 1XQ England.

GETTING GOOD INFORMATION ON PLANT LABELS

Plant label companies go to a great deal of effort to endeavour to provide accurate information on their labels, but nevertheless we still find misleading information from time to time, and one thing I feel we should do in the very near future is to write to Norwood Industries, regarding the information on the reverse side of the *Epacris impressa* label included on our Plant Profile sheet.

The label states that plants like sun, well-drained soil and are frost tolerant, but the height given of "to 40 cm" can be a considerable under-estimation for some of the selections widely grown.

The description also states that Common Heath is "*A pretty plant that is both native to the alpine country and which is the floral emblem of Victoria. Ideal for the rockery or garden bed towards the front. Pretty tubular flowers are borne throughout the year but the main flowering period is in spring. Plant in a well-drained position for best results and ensure that the plant is kept moist in drier weather. Mulch to assist in keeping the plant moist and improve the soil.*"

There are certainly several aspects of that description with which I have some difficulty. Firstly while the species is certainly native to alpine country, it is not confined to these areas as the label could be seen as indicating. I also feel some growers may be disappointed if they find their plant does not flower throughout the year; and here in Melbourne the main flowering period is in winter-spring. Maybe you have other concerns, and would like to have a go at composing a more appropriate description which we can then forward to Norwood Industries.

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Gardening is about sharing the problems as well as the remedies.

from THE GARDENER'S LITTLE INSTRUCTION BOOK by Violet Wood
published by Thorsons, London.

SMOKING IS A HEALTH HAZARD

Undoubtedly this is correct in regard to the effect of cigarette smoking on the human body, but when it comes to the propagation of *Epacris* seed it could well be that treatment of the seed by smoke can help us to achieve much more successful results that would otherwise be the case.

WHERE THERE'S SMOKE . . .

The Elliots have just returned from attending the *Fifth International Botanic Gardens Conservation Congress*, which was held at the Kirstenbosch Botanic Garden in Cape Town, South Africa, where we were pleased to be able to spend some time with Dr. Neville Brown, a leader in world research on smoke treatment as an aid to seed germination. The Congress was also attended by Dr. Kingsley Dixon from Kings Park & Botanic Garden in Perth, who has similarly been a key researcher in this field.

Smoke treatment has proved significantly effective in obtaining good germination of South African *Erica* species, and it is certainly well worth further trials with Australian *Epacris*.

For those not familiar with the use of smoke in seed germination, the following are extracts from work by Dr. Neville Brown and his co-researchers.

The dominant vegetation of the Cape Floral Region is the *fynbos* (pronounced fain-bos), a community of small shrubs, evergreen and herbaceous plants and bulbs and home to the South African *Protea*, *Leucospermum*, *Leucadendron* and *Erica*.

A recent discovery based on the natural regeneration of fynbos has made it possible to reliably germinate an extensive range of plants which have previously been difficult to cultivate. Seeds of many species are already dormant when shed and they then require specific environmental 'messages' or 'cues' before they will germinate.

Seeds of many species are adapted to germinate in response to the cues provided by fire. Flames may burn and fracture the seed coat of hard-seeded species, and the coats become permeable to water. The dry heat of fire might reduce the effects of dormancy by giving a heat-pulse, which stimulates the seed embryo directly and results in germination.

In addition to heat, fire provides chemical 'messages' such as ethylene and ammonia gas, which stimulate germination in some species.

Recently researchers at Kirstenbosch, Cape Town, were the first to discover that, in addition to the more obvious cues provided by heat, smoke from fynbos fires provides a (yet unidentified) chemical message which, on its own, is responsible for stimulating the germination of seed of many fynbos species. The discovery of this long-overlooked germination cue is an important finding which promises to be of major importance... not only for professionals but home gardeners too.

Practical application.

In the Kirstenbosch nursery the procedure for smoking seed was relatively simple. Seed was sown in conventional plastic trays and covered with a thin layer of soil or finely-milled bark. The trays were then placed in a polythene tent and smoke was pumped into the tent by means of a plastic pipe from a large metal drum. The smoke was generated in the drum by burning a mixture of dry and green leaves and stems. The trays were left in the smoke for 1 - 2 hours, when they were removed and the seeds carefully watered to wash the smoke deposit into the soil. The seed trays were then placed under cover in a shade-house until the seeds had germinated.

WHERE THERE'S SMOKE . . . (Continued)

Very promising results were obtained with many species showing significantly improved seed germination following treatment with smoke. (The *Erica* species provided encouraging results, with significant results also in daisies of the Asteraceae family and the Restionaceae or rushes.) Of 40 species of *Erica* studied more than half showed a significant improvement in germination. The most outstanding result was from *Erica glauca* var. *glauca* which showed an increase of from 14 seedlings per gram for untreated seed to 1,000 seedlings per gram of smoke-treated seed.

HOW WE CAN USE THIS RESEARCH - AND CONTINUE WITH OUR OWN !

If just one of our difficult-to-germinate Australian *Epacris* species could provide results such as those of the above *Erica*, any research we are able to undertake would be well worthwhile.

You can set up your own smoking treatment unit, along the lines of the one used at Kirstenbosch, detailed above. If however you are planning to do quite a bit of experimenting it is a good idea to keep a pair of overalls or other clothing to be worn during 'smoking sessions', as apparently they can absorb more smoke than being too long around an Aussie bush campfire.

Researchers at Kirstenbosch have developed a seed primer incorporating aqueous smoke extracts. The seed primers are dehydrated and is available in packets. They can be used by gardeners to break dormancy in seed samples without having to actually light a fire. Absorbent paper is impregnated with smoke solution, to which a mixture of natural germination stimulators has been added. These are known to overcome other forms of seed dormancy found in wild species. The dehydrated germination stimulators have been patented and are now marketed as Kirstenbosch Instant Smoke-plus Seed Primers by the National Botanic Institute in Cape Town, In order to activate the primer, water is added to the paper and seeds are soaked in the resultant solution.

Another product "*Seed Starter - Australian Smoky Water*" for germinating seeds is available from the Friends of King's Park and Botanic Garden in Perth WA. One part "*Seed Starter*" is diluted in 10 parts of water. Seeds are soaked for 24 hours at room temperature. They are then removed and sown in a seed raising mix.

A commercial product, *Smoked Water*, produced by Richgro Garden Products of Western Australia, is also available from some nurseries throughout Australia.

FOR EPACRIS STUDY GROUP MEMBERS

During our visit to Kirstenbosch we obtained some of the "*Seed Primer*" smoke impregnated paper discs as referred to above, and the first 25 members who write enclosing a stamped-addressed envelope can receive one of these - free of charge, for use in your *Epacris* seed-raising efforts during spring-summer.

If you have already been experimenting with different methods of *Epacris* seed-raising please write, so that the results can be shared with other members through the Newsletter.

IN CONCLUSION

I trust you have enjoyed reading through this Newsletter, but it is the STUDY GROUP Newsletter, not the Study Leader's.

So all contributions to our next Newsletter - in autumn 1999 will be very very welcome.

In the meantime I hope that your seeds germinate, your cuttings form roots and your gardens flourish.