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YEAR BOOK OF THE HEATHER SOCIETY

1974

ROYAL BOTANIC GARDENS
KEW

THE HEATHER SOCIETY

ROYAL BOTANIC GARDENS
29 MAR 1974
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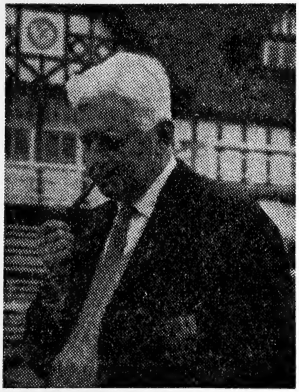


In Memoriam

Hugh C. Prew

Slide Librarian of the Heather Society

With deep sorrow we learned of the death of Hugh C. Prew on January 29th, 1974. One of our founder-members, he contributed to our Society his scientific knowledge and his meticulous attention to detail. With these qualities, together with his skill as a photographer, he brought our Slide Library to a high standard of quality together with a most efficiently organised loan service.

As a good gardener and plantsman he welcomed to his plot many fellow enthusiasts who responded to his 'star' in the Year Book and, in turn, he visited many members up and down the country and so helped to strengthen the ties of our membership.

He was one of the pillars of the Northern Group and gave of his talents to the Harlow Car project. Most of all, so many of us are grateful for his warm friendliness; we shall cherish his memory and extend to Mrs Prew and family our sincere sympathy.

J.P.A.

The Treasurer's Report

Mr E. R. Turner

Local Groups.

The Council wishes to encourage the formation of local groups within but not necessarily confined to zone areas.

This has already proved very successful in the Northern Zone under Mr Ardron, and in the West of Scotland under Mrs Bezzant, supplementing the benefits of the Society and bringing them within easier access to members. Mr London has formed a Group in Norfolk and others are being set up in the Midlands, part of the South-West and in the Weald.

Group development must be extended to provide complete cover if we are to bring the benefits of the Society within reach of all members. It is intended that Groups shall have as complete freedom as is possible under the Society's Rules. However, certain points must be borne in mind, e.g. the Society's accounts have to be submitted both to the Inland Revenue and the Charity Commissioners, also membership covers Trade as well as private growers.

The Council have therefore decided that some guide lines should be laid down for guidance in the formation of local groups.

1. Objects. To facilitate the meeting of members for exchange of information, to arrange visits to gardens, exhibitions, etc., and in any way to further the objects of the Society, feeding back information which may be of interest to other members.

2. Finance. The Society is authorised to advance £5 to assist in initial expenses. Money raised by donations or other means for Group purposes to be in the Group's name and entirely independent of the Society's funds in order to comply with Rule No. 18.

Subscriptions. Every endeavour is being made to keep expenses within the subscription income. I estimate that this coming year the total cost of postage alone will be at least £25 up on last year.

Subscriptions are due on March 31st; 25% are paid by

Banker's Order but only 60% of the remainder are paid by the end of June. By this time my garden is much in arrear but still the subscriptions come trickling in every day. By November the Secretary and I have the task of checking up to find those still outstanding. Reminders are expensive in time and postage. Year Books are ordered and sent out on the assumption that subscriptions will be paid, so it would be a great help if those not intending to renew their membership would advise us before the end of the year. Finally, a reminder that Banker's Order and Covenant Forms are the last page in the Year Book.

The President Writes

Sir John Charrington, Aston Rowant, Oxfordshire

If, Mr Editor, you can find room in the next Year Book for a few notes from me, as President of the Society, I should be grateful.

The growth and spread of the Heather Society is a matter of great pleasure to me. It reflects the keenness of some of the Society's most loyal members, and especially those who show the enterprise to form and care for local groups. To my mind, too, the increase in members overseas is very gratifying, and we are surely an international society.

The week-end gatherings of members with talks on various subjects of interest are clearly a success, and for those and many other matters we owe so much to Mrs MacLeod. Her bulletins, too, are splendid. I once thought that the bulletins might undermine the influence of the Year Book; but not at all, and members must surely feel that in the Heather Society they do get a remarkable amount through the year to keep up their interest.

I have long had a feeling that heathers do not have the reputation they should for floral decoration. Not only are they so effective when well arranged, but with a very little care will last for months. For this purpose I expect the callunas are the best, but nearly all can be attractive.

It is a matter of deep regret to me that we felt we should

leave our home at Crockham Hill in Kent, for the house and garden had become too big for us. But it was a splendid part in which to grow heathers and it was sad to have to leave some thousands of plants behind when we moved nine months ago. However, it was a consolation to learn that my successor at High Quarry, Crockham Hill, was already a lover of heathers.

I now live in a much smaller house and very much smaller garden, with a soil not happy for heathers—although I expect I could make carneas do.

St Kilda Heathers

R. J. Brien, Perth

Many heather growers will by now have heard some reference to the 'St Kilda' heathers.

I wish therefore to put on record their story for the information of those heather growers who may be interested, not only in their potential as cultivars, but also for their botanical and biological difference: The dwarf and spreading habit of this strain can only have been built into them as a result of thousands of years of isolation and selective breeding in the very small group of islands known as the St Kilda Group, lying far out in the Atlantic Ocean, west of the Scottish Hebrides, 50 miles from any other island and about 100 from the Scottish mainland.

My story began 15 years ago on a headland near Cape Wrath in north-west Scotland. On this cliff top, near Sandwood, I found a large number of small white heather plants, perhaps thirty in an area 30 yards square. All over this headland white callunas were common. I put one plant in my fishing basket and in due course planted it at my home in Pitcairngreen, Perthshire. My daughter was then building up a two-acre field of white heather for cut bloom, hence my greater interest in white heather.

This plant collected from near Sandwood, like many brought in from the wild, was not, however, suitable for

cut bloom. It was dwarf and conical in growth with a slightly spreading characteristic As a student of Darwin in my youth I felt that this plant typified what could happen to plants exposed for centuries to the Atlantic gales. Its growth would be quite different from those in the sheltered valleys of the mainland area.

Have our dwarf cultivars been obtained from such exposed situations? In such places cross-breeding with plants from more sheltered habitats was almost inevitable and would tend to obscure the picture in most areas. Work done by Gordon and Shepherd on heather types suggested that height of ground level encouraged dwarfing, but samples obtained by them from the Shetland Islands near sea level belied this. Was exposure not the proper criterion?

Some years later from the Slieve Donard nursery in Ireland, I got the cultivar, 'Calf of Man'. It was very, very like the plant from Sandwood.

Where could one find a remote island sufficiently exposed so that cross-fertilisation by wind or insects was virtually impossible? The remote St Kilda group of islands appeared the ideal place to test out my theory.

The only way to get to St Kilda, which is owned by the Scottish National Trust and leased to the Nature Conservancy, was to volunteer as a member of a Scottish National Trust 'Working Party'. Some three or four parties of Trust members annually spend a fortnight on Hirta, the main St Kilda island, restoring the deserted houses, abandoned by their inhabitants in 1950 in a mass evacuation.

I was lucky in 1966 to be selected as a Trust Group member and sailed from Mallaig in a rather old lobster fishing boat across the Minch, making the night-long dash to St Kilda after waiting two days for calm seas at Lochmaddy. When we arrived at Hirta Bay the wind rose and after landing only half the party, our lobster boat had to run the 50 miles back to Harris before the gale. Eventually we were all landed on the islands. It was early June.

Bleak and windswept, the islands are relatively uninteresting botanically. Alpines could have survived on the 1,000 ft high cliffs, but didn't. The heather, mainly *Calluna*, is old, very old, stunted to an extreme by violent gales and salt spray, and desperately cropped by the starving sheep in

winter. With no burning to encourage regrowth, there is little regeneration. There was literally no young growth that I could select as material for propagation.

On my second to last day a special search over the Hill of Conachair, armed with a pocketful of small plastic bags, ended with specimens, wiry twigs off sixteen clones which I hoped might be white. Three days later the tips of the twigs were torn into 1 in. tufts, probably two- or three-year-old at their base and inserted into the cutting boxes. I was lucky despite the earliness of the season and the totally unsuitable material. Next spring I had 16 'varieties', off 16 individual plants, potted up, 12 white and four pink, rather than purple. They grew well and early demonstrated a spreading growth. They were, indeed, akin to my early 'Sandwood' specimen! To prove my point, however, I required more specimens.

To my grateful surprise I was offered the leadership of the July National Trust Party and in due course I found myself on Hirta again. This time I scoured not Conachair but Aisoval, the smaller of its twin peaks. There I collected over 60 specimens, almost all white, and to my great regret now, I took only two coloured foliage clones, a wee brown specimen the colour of the St Kilda sheep and a little golden dwarf which I would like to call 'Soay' and 'Hirta' respectively. I have been able to root a few specimens of these wiry little characters which are difficult to propagate. None are so easy as mainland heathers to propagate, but I now had over 70 specimens guaranteed to have had no chance of cross-fertilisation with plants from the mainland, their characteristics genetically built in.

In due course two long beds were planted in the heather field, all carefully tallied and noted on a plan. They took to mainland field conditions perfectly and their dwarfing spreading habit was soon evident. All were dwarf but some were dwarfer than others! A surprise was the varying dates of flowering and particularly the earliness of some clones: two flowered a fortnight before the earliest white cultivar on my heather farm.

A characteristic of most of the 'St Kilda' strain is their trailing habit. A leading shoot will run out over the ground quite flat, then branch fanwise or at right-angles like the

cross-pieces on a schooner's mast to form most interesting 'trails' as these leading shoots in turn curve left or right to give a flat 'picture effect' on the ground surface.

But what was the next step? My efforts to enlist the help of a specialist botanist have so far been unsuccessful. Many botanists have seen them but none were so deeply interested as to take from me, a complete amateur, the responsibility of proving whether the St Kilda heathers are as unique as the St Kilda wren or the St Kilda mouse, both of which are so distinct from the mainland specimens.

The plants belong to St Kilda: did I not get these plants by courtesy of the National Trust for Scotland from their island? For this reason I decided to hand over their distribution to the Scottish National Trust, so that any profit from their unique characteristics would accrue to the St Kilda Fund, administered by the members of the St Kilda Club, dedicated to maintaining and restoring the island as a permanent memorial to a life that is past.

The plants now on sale at certain National Trust Centres are cuttings off the original clones and are thus properly known as 'St Kilda Heathers'. To introduce the plants to the public, specimens were exhibited on the Heather Society stand at the Highland Agricultural Show at Edinburgh in 1971.

I have been fortunate in enlisting the interest and help of Mr J. K. Hulme, Director of the Botanic Garden (Liverpool University) at Ness, Cheshire, where trials of genetic dwarfing plant material are being conducted. Other specimens were sent to Boskoop, Holland, for evaluation.

May I add that anyone, botanist or gardener, will be most welcome to view or study these heathers at Pitcairngreen, and a particular welcome to those who are members of the Heather Society, the Scottish Rock Garden Club or the National Trust for Scotland.

Growing Cape Heaths in Japan

Satoshi Miwa, Gotemba, Japan

The only erica grown popularly in Japan is a Cape Heath, *E. canaliculata.* Very little is known not only about other Cape Heaths, but about European Heaths. Since introduced about 1912, *E. canaliculata* has been grown outdoors mainly for the cut flower market in the milder part of the country. Unfortunately it has been misnamed and regarded commonly as *E. melanthera* until now.

It is a very floriferous heath, continues blooming for a long period from November to March, and is comparatively easy to grow. Besides the original type, a form named 'Red Queen' having deeper coloured flowers was selected about 40 years ago. This form is more popular nowadays than the original type.

I do not consider *E. canaliculata* to be as beautiful as other Cape Heaths which I began to grow several years ago from seeds introduced mainly from South Africa.

Autumn is the most suitable season in our country to sow them. If sown in spring, seeds of certain species do not germinate until autumn or winter when the weather is becoming cool. I use the 10 x 16 x 5 cm thin polyethylene container for packing strawberries as the sowing box, making drainage holes at the base. The seed compost consists of one part fine peat and one part vermiculite, and a little slow-releasing fertiliser is added. After sowing, the box is kept in the shallow water pool (about 0.5 cm deep) in the greenhouse, and shaded from the direct sunlight by a single layer of black lawn. The box is removed from the pool on to the bench without shade when the seedlings reach a height of 0.5 to 1cm. The seedlings are potted individually when they are 3 to 4 cm high. The potting compost contains equal parts of peat (imported from USSR), coarse volcanic sand of Mt Fuji, and Kanuma-clay (a kind of aggregated clay of volcanic origin, commonly used as a medium for growing Ericaceous plants in Japan). The base fertilisers mixed into the compost are as follows:

Slow-releasing CDU nitrogen	60 grms
Sulphate of potash	15 grms
Single super phosphate	200 grms
Fritted trace elements	3 grms

per 100 litres of compost. A black polyethylene pot of 7.5 cm diameter is used for the first potting. It is important to handle young seedlings carefully as the fine roots are very susceptible to damage. Certain species such as *EE. chloroloma*, *patersonia*, *perspicua* and *peziza* are especially apt to die off after potting. Potted seedlings are put under shade for a month or so. The majority of species bloom within two or three years from sowing.

To propagate Cape Heaths from cuttings is thought to be rather difficult though I have not found it so. Heel cuttings are stated to be the best method, but I have never tried it. I have succeeded with *EE. canaliculata*, *chamissonis*, *formosa*, *gracilis*, *hirtiflora*, *mauritanica*, *speciosa* and *verticillata*. Tip cuttings are made in May-June or September-October in the ordinary manner and kept in the shaded propagating case with a minimum temperature of 20°C.

In our district (about 450 m above sea level), it is fairly cold in winter and we have considerable frost from November to early April. Cape Heaths therefore require some winter protection but very little heating. I am now growing them all in pots in the slightly heated plastic greenhouse to hasten growth.

In the coastal region of our prefecture most Cape Heaths can grow outdoors. Actually *EE. canaliculata*, *glandulosa*, *gracilis*, *formosa*, *hirtiflora*, *mauritanica* and *perspicua* are growing well in Shizuoka where I lived until two years ago.

I consider that many Cape Heaths are worth growing and deserve more popularity as pot plants, cut flowers or garden decoration. I should like to keep company with more of them hereafter.

The Old Age of Heather

Ian M. Emberson, Huddersfield

As heathers on the moors are periodically burnt, and those in cultivation usually destroyed when they become leggy, one seldom sees a heather in its extreme old age. However, I came across one such specimen on a walk last August—my eyes no doubt sharpened by having just returned from the Heather Society weekend at Dartington. It was the oldest-looking heather I ever remember seeing, and I thought it worthy of a description.

I came across it whilst crossing Wessenden Head Moor near Huddersfield on a hot sultry afternoon. This is an area of the Pennines rather lacking in heather, but just east of the Pennine Way I discovered a large patch entirely composed of callunas. Part of it had been burnt—I would guess some time last year judging by the size of the fresh little seedlings that were springing up from the scorched peat and the charred remains of the former crop. The rest was older, but I should think it had probably all been burnt within the last six years. This one solitary plant owed its survival to an isolated position. It was growing from the apex of a mound in the dip made from a small stream. On one side was the stream itself: on the other an area of bare sloping peat. It had thus escaped the fire, and grown undisturbed for many years.

There was no real main stem since it had branched out into about 30 side stems at ground level. For a radius of about a foot from the centre there wasn't a single piece of green. The gnarled grey stems followed the contours of the mound downwards, and then in a rough circle there were a number of apparently separate plants .Some of these were, in fact, separate, with their own individual root systems and with bits of broken dead stem lying between them and the centre of the old plant. It was difficult to be certain, but it looked as if they had self-layered, and then the intervening branch had withered, become brittle and broken up. However, when I gently lifted up some of the separate plants I found they were really still part of the original heather—the sustenance continuing to flow along those grey and apparently dead-looking stems.

I wondered how old such a plant would be. I have heard 30 years given as the life expectancy of an undisturbed heather. This certainly looked at least that. Perhaps some expert could tell me how to find out; heathers seem to produce nothing comparable to annual rings.

Although in a garden it would have been pulled up long ago as unsightly, the plant had a beauty of something that had struggled on proudly through many seasons.

Heathers and Football Studs

Mrs Anne Parris, USK, Monmouthshire

(*Reprinted by kind permission of 'Popular Gardening' from the issue dated June 16th, 1973*)

Our garden is on a steep and lonely hillside, infertile but beautiful. A steep bank above the lane must have been cut many years ago to make the road and so consists largely of subsoil clay, supporting originally a rough wilderness of ash saplings with bracken, bramble, elder and stinging nettles all over.

The rural hedge bordering the lane failed to keep out the sheep and was a source of more brambles and stinging nettles. The only nice plant in it was the yellow deadnettle which peeped out from the base in early spring, which we have used since for ground cover.

For 25 years we kept chickens on the bank. Apart from adding a little fertility and scratching soil down from top to bottom they did little to clear the ground since neither brambles nor stinging nettles were to their taste. (Also, I am convinced the gradient did much to toughen their drumsticks!)

My husband remarked one day, 'That bank would look nice under heathers'. As the gardener, this gave me permission to go ahead and do something about it.

Luckily I was able to put the winnings from a premium bond to hire a bulldozer to 'out' that hedge, substituting a light fence to keep out the sheep. The hedge site was treated with sodium chlorate and I watered the remainder of the

bank with a mixture of paraquat and diquat weedkillers.

Seven weeks later, returning from a summer holiday, I set light to the dead foliage and this burning was largely successful. Just a few bramble knots had to be cut out and a couple of ash saplings hacked down.

I planted the line of the old hedge with 100 hybrid *Erica* ×*darleyensis*, a winter-flowering heath of vigour which starts flowering in December and may even go on until May. This now grows through the fence and arches over the road verge.

Contrary to awful warnings, I did not find the chlorate had 'killed' the soil. Or perhaps the heath plants brought their own organisms and mycorrhiza with them to re-populate it. It makes a lovely hedge of purple along the lane, which is most satisfying at a time of year when garden colour is scarce.

The books told me I could not grow heaths and heathers on pure clay but I persisted. A big problem was to keep my feet on this slippery slope, so I hammered football studs on to my boots and these saved me. I could not cultivate the slope, not only because of the stiff clay, but because trying to do so would cause soil to slide from top to bottom.

The Usk College advisory service suggested pegging logs into the bank wherever possible and this prevented much loss of soil as well as making little terraces of good soil which accumulated as the bank was planted. Most of these logs are now draped with heaths and hidden.

Planting has proceeded steadily over the years and still goes on, using much peat and a little of various fertilisers. The bank is now a colourful sight. All-season heaths and patches of dwarf shrubs such as *Hebe pageii* and *H. armstrongii* with their blue-green and bronze foliage make the bank colourful.

Calluna 'Robert Chapman' may not be much to look at when flowering, but its foliage is a patch of scarlet and orange which is much admired. There are also azaleas and rhododendrons and a lovely *pieris* 'Forest Flame'.

Now that the plants have filled in there is little or no weeding to do. In the early stages this consisted largely of annual meadow grass and pearlwort, but it doesn't seem to matter in the long run, as it is choked out by the heathers.

Now I'm planting another bank of subsoil clay thrown out when the house was extended. Had I known of it at the time, planting the original bank would have been much helped by improving the soil with Claycure. On this second bank, which is equally steep, I still had to use football studs to keep my feet.

I woggled my fork to make holes and then scattered about £3 worth of Claycure. Seven weeks later I was able to cultivate the clay to a depth of 6 in.

Here, too, the heaths and heathers are being planted. An apparent trace element deficiency was solved by using Sustanum on the callunas.

There is not much traffic down this lane, so it is an even greater satisfaction nowadays to see the cars stop to admire the bank as they pass. It has been great fun and well worth while and my neighbours compliment me. Nor have I had to use football studs again after the first two years.

Erica Scoparia

Lionel R. Woolner, Holsworthy, Devon

'The small, green flowers have no claim to distinction and hardly any to beauty.'

'This Southern European heath is of no use to our heather garden. The numerous flowers *** are green in colour and hardly noticeable.'

'This is of little use to the heather garden, the tiny flowers are of a greenish-brown colour.'

'This Southern European heath can be dismissed as being more useful in the servile domestic spheres suggested by its English name than as having any claim to a place in a heath garden.'

Poor old *Erica scoparia*, otherwise known as the Besom Heath! Having regard to these opinions, all taken from well-known books on heathers, it is, perhaps, not surprising that it is seldom grown, although some nurserymen do

catalogue the dwarf form, *pumila* or *nana*, which is grown, not for its greenish flowers, but for the light-green foliage and conifer-like habit.

Yet it would seem that justice may not have been done to this much-maligned heath. In 1969, whilst my wife and I were on holiday in Tenerife, we visited the Mercedes Mountains and there, at a height of 4,000 ft, we found *E. scoparia* more or less taking over from *E. arborea*, which grows profusely lower down. The *scoparia* was not in flower but, at one point, I noticed a few small golden-leaved seedlings which I brought home, although suspecting that they would soon revert to green.

For two or three years I paid the plants little attention until, in 1972, I noticed that, of the three survivors, two had indeed reverted to dark-green but the other was still an attractive golden-green. I moved all three to better positions and early in 1973 I was intrigued to see that the shoots of one of the reverted plants were packed with buds. As these developed there was no suggestion of green about them and when fully opened at the end of May the by no means insignificant clusters of flower were coloured a rich cedarwood-red, ultimately dying to a warm rust. The second dark-green plant, although making more growth, had only a few similar blooms. The other form, with foliage of a sunny golden-green, is making a nice upright and shapely plant but has not yet flowered.

As a result of correspondence which I have had with Mr R. Ross, Keeper of Botany at the Natural History Museum, to whom I sent sprigs of both forms, it appears that these Canary Islands plants are *E. scoparia var. platycodon Webb*, the characteristics of which are a larger leaf and corolla than mainland plants and flowers more or less tinged with red. The flowers on my plants are, in fact, entirely deep reddish-brown with no trace of green. Mr Ross is of the opinion that it is green-flowered plants from Spain and other parts of the mainland which have been brought to this country previously and have given rise to the plant's poor reputation. He has also expressed the view that if these forms from Tenerife prove hardy they would seem to be garden-worthy. According to the books *E. scoparia* is quite hardy and certainly my plants, after four winters at 500 ft in the

cold uplands of west Devon, have not even been tipped.

I have now supplied one nursery with cuttings of both forms and, if all goes well, we may have a useful addition to the heather garden.

The Disappearing Heaths

Hans Hornung, Germany

For many years heather has been the sign of a wild and barren landscape and, however beautiful, has been an annoyance to both farmer and forester alike. They do not view the moorlands with the same enthusiasm like the hunter, wanderer or poet. It is usual to refer to the English, Scottish and Irish Heaths and moorlands for they are well known. Worthy of mention however is the homeland's Lüneburger Heath of which Herman Löns (1866-1914) wrote:

The red of evening spreads over the moor,
The twilight covers the heathers,
From dark blue evening skies
I hear the wandering cranes cry.

Since the industrialisation of the land over the past 100 years, more and more of the moorlands disappear and with them the growing heathers. The Danish heather landscape with its position in Viborg/Jutland, for many years a vast and beautiful moorland, has now become valuable agricultural and grazing land. Also in Germany many great heaths are disappearing. The heather lover, Hermann Löns, wrote this poem.

There goes a man through the homeland;
With machete in his hand,

He looked before and he looked around
'Here is everything crooked and round!'

He measured well here and he measured well there
'Here is everything across and square!'

He looks to the river in the valley away;
'That shrubland there has no say!'

The way was made agony for the eye;
'It must be forwards, straight as a die!'

The hedges made him stand and shiver;
'The rodents will naturally come hither!'

The wild trees are to him too bent;
'They will first be felled at any event!'

And so on and on with so much ploy
The countryside to completely destroy.

After the Second World War, due to the settling of farmers from East Germany, the rest of the large and undisturbed heath and moorland in North-west Germany fell as an offering to the land industry. In this day and age of disappearing moorlands it is essential for all naturalists and garden lovers to cultivate heather growing either in their own gardens or persuading local authorities to introduce them in their parks.

For about seven years English heathers have spread themselves slowly but surely across the Continent. This has been mainly due to the pioneering article in the 1967 Year Book of the German Rhododendron Society in respect of the use of heather growing.

On the Continent, as in England, one seeks garden cultivars which are as easy as possible to grow. Usual cultivars of *Calluna* grown in Germany are 'Alba Plena' which originated in Germany and found its way over to England, 'Alportii', 'Heidzwerg', 'Heidberg' and 'Rica'. *Erica tetralix*, cultivars 'Alba' and 'Rosea' are also grown together with numerous cultivars of *Erica carnea* which correspond closely with those grown in England. However, *Erica ciliaris*, *cinerea*, the tree heath *arborea* and the hybrids 'Stuartii' and 'Williamsii' are seldom grown owing to the severity of the German winters. *Erica vagans* do well, though, namely 'Mrs D. F. Maxwell', 'St Keverne' and Lyonesse'.

The *calluna* 'Carl Roder' was discovered by Hermann Westermann, of the English Heather Society, at the beginning of a hunt in which he collected the plant and brought it back home. After a search of nearly three years I found the origin of this heather on Luneberg Heath.

Interest is also being shown in East Germany following the publication of an article by Eckart Miessner entitled 'Das Heidegarten buch' ('The Heather Garden Bush') in the VEB Agricultural report, Berlin, 1970, the only account in the German language which encompasses the cultivation and reproduction of heather plants.

One can see that garden heather cultivation started in England and has spread across Europe. In particular the Dutch are very keen enthusiasts and now have their own society 'Ericultura'.

For the nature and plant lover it is a comforting thought that, with the fast-disappearing moorlands of middle Europe and elsewhere, compensation can be found in the fact that more and more people are growing the plants we love so much.

Hans Hornung also mentioned in his article various nurseries specialising in heathers together with lists of various cultivars. It has not been thought necessary to repeat them here, but if any member is interested I will gladly forward a copy of the original text (in German) to them.—Editor.

Heathers in a Semi-Formal Garden

Mrs F. B. Kitchen, Sevenoaks, Kent

Our first venture with heathers was unusual to say the least. A formal iris garden, near a garden pool, on shallow sandy soil 550 ft above sea level and exposed to north-east winds was never successful, so we decided to try heathers there. We visited a local specialist nurseryman and were most grateful for his advice, but caused him great consternation

when we told him that we intended to plant them around a sundial, but we did and they have been a great success.

Perhaps at this stage I should tell you about our garden. We have a little over two acres at 'Northdown' exposed as already stated to winds but saved from the worst frosts. It is on the greensand ridge so is well drained and thankfully easy to work, the soil being slightly acid. Our long straight lines of yew hedging and many fine Japanese maples date we think from the 1920's when the house was built.

Changes have, of course, taken place in the past 24 years. During these years the time and interest that we have been able to give to the garden has escalated and heathers have played a big part in the more recent developments. After the success of the original heather bed we were converted. Surrounding this bed and the pool were formal rose beds with old hybrid tea roses far from thriving in the sandy soil. As our heathers increased in size and beauty so cuttings and layers became available to take over the next bed where we have mainly low-growing varieties.

I hope to avoid giving a catalogue list of the heathers we grow, but I think that two *Erica carneas* deserve special mention. *E.c.* 'Praecox Rubra' makes a glowing early sweep of colour during December, and *E.c.* 'Aurea', a year-round one with its winter flowers and continuing golden foliage. We get great joy from our foliage heathers as we are lucky enough ot look at our heather beds from the sunny side and see their best colour. We have a rarely reverting form of 'Ruth Sparkes' which we were fortunate to obtain. *C.v.* 'Multicolor' has seeded in the lawn and survived regular mowing.

Soon another bed and a start with *Daboecias*, in pure sand here. Some cuttings from Mr Frank Waley included one of a very pink form that he had found in Spain. With us this is healthy, hardy and still low growing, a bright pink and something to be treasured. We have had much pleasure also from *Daboecia* 'William Buchanan', but little success with Seedling No. 3, or else we are too impatient. Ours is very small. In this very sandy bed is a pretty pink *Erica tetralix*, brought back with many other cuttings from Hebridean holidays. In this hot rather dry summer of 1973 it has grown and flowered remarkably well, as have also the *E. cinerea* cultivars. This surprises me.

Our newest bed has a youthful group of *E. vagans* 'Valerie Proudley', shining gold at all times, with *Callunas* 'Sunset', 'John Letts' and 'Sir John Charrington' interspersed with 'Silver Queen' and offset with darker green heathers.

These heather beds are, I imagine, most unorthodox but our yew hedges, a large terrace, the small pool overhung with wisteria, impose a certain formality on this part of the garden. We clip the heathers regularly each March and April with those wonderful battery-powered shears and the result is very pleasing.

To add height we of course use dwarf conifers and find *Pinus sylvestris* 'Aurea' (though not truly dwarf) is beautiful in winter while *Erica mediterranea* 'W. T. Rackliff' is as good as a conifer for shape and other plants that we find most effective are *Acer griseum* and the seemingly little-known *Rhododendron semibarbatum*.

Drought is our big enemy in all parts of the garden. Once established, and I must emphasise these words, it is amazing what heathers will tolerate. Our second enemy is sorrel, which presumably seeds in the damp peat as there was none there originally. We don't feed our heathers but we do try to give them a mulch of peat or a basket of pine needles after weeding. This encourages layering and the mulch makes the sorrel easier to eradicate.

We use heathers quite successfully as edging or low hedging—*E.c.* 'Springwood Pink', *C.v.* 'Gold Haze' and *E.x.* darleyensis, twenty years old, come to mind here. Our main effort, however, has been to provide a garden full of interest throughout the year. The heathers, with *E.c.* 'King George' flowering under the *Hamamelis mollis* and the *Rhododendron mucronulatum* in January, contribute splendidly towards this end.

Edinburgh Botanic Garden

With acknowledgments to Mr A. Evans, of the Royal Botanic Garden

The Heath Garden at the Royal Botanic Garden, Edinburgh, lies in an undulating piece of ground on the east side of the Rock Garden. It is open to the north and west but lies in a hollow protected from the south and east by a perimeter hedge of holly, rhododendrons and conifers. It was first created many years ago, 1936 to be exact, and was planted with a wide range of the then known varieties of heather. At that time a large beech tree, quite the wrong type of arboreal neighbour, dominated the centre of the area and, apart from a collection of small trees and larger shrubs surrounding the site, a number of other trees were dispersed throughout the area. In the autumn of 1958 the beech shed a large lower branch, badly disfiguring its bole, and on inspection the tree was then considered to be unsafe. It was subsequently removed and a small local redesigning of the area was carried out. In other years a few timely replanting schemes were put into effect to replace plants which had become old or which were becoming overcrowded, but in the winter of 1972-73 a major attempt was made to renovate approximately three-quarters of the site. The area is in the region of half an acre. Being well aware that heather must have full light, many of the overshadowing trees and spreading shrubs were removed. The result is that the whole area is now much more open and more in the vein of a natural heath.

The soil in the vicinity is extremely light and sandy, with a pH of 5.5, ideal for some heaths but, on the whole, it is rather dry. It contained virtually no humus and to rectify this large quantities of granulated peat, a sphagnum peat from a local supplier, were applied and worked into the soil. Deep cultivation was carried out and this was aided by the fact that a number of running perennial weeds, examples being couch grass, *Linaria hepaticiifolia*, thistle and vetch had to be eradicated. In addition to this general upheaval, undulations or folds were formed and some outcrops of

rock were constructed in an attempt to remove the overall flat appearance where the ground was level and, in other parts, where it sloped, to dispel the bank effect. All these operations meant that the soil was pulverised to a great extent and was well broken down so that the incorporating of peat into the topmost layers of soil was much easier.

Naturally, in old-established heath gardens, there are some plants that must be retained, and in a botanic garden, where a large variety of plants are grown, not all of these can be considered as ideal inhabitants in a heath-land association. Apart from these, some tree heaths, *Erica arborea alpina*, *Erica scoparia azorica* and *Erica australis* were worth retaining. In the case of *Erica arborea alpina*, rather too many had thriven too well and a number of these were removed. In other instances where they had become leggy they were cut back to almost ground level and since then, in less than a year, have sent up long, well-furnished young shoots. These should grow quickly, however, when one considers the extent of the feeding roots that are providing the food. *Erica x veitchii* and *Erica terminalis* are also included among the more shrubby heaths in addition to a few cultivars of *Erica mediterranea*. It might be worth mentioning that *Erica australis* has, in fact, been cut down to ground level by frost on two occasions since 1946, but both times shoots developed from the base and very soon attained 6 to 8 ft, the original height of the killed back shoots.

Apart from one or two small plantings of species closely related to heathers or associated with heathland in nature, the whole site is carpeted with *ericas* and *callunas*. Most hardy species are present although, naturally, only a representative selection of the various flower and foliage colour forms have been included. The planting is done in informal drifts, each usually comprising 100 plants or more, while the distance left between the plants varies from 15 in-24 in. depending on the spreading potential of the species being planted. After planting, the whole area was top dressed with granulated peat, an operation which not only helped conserve moisture but reduced the time spent weeding to a very small amount. The plants have responded well to this treatment and are growing rapidly.

At the appropriate time a form of pruning is carried out and with the summer and autumn flowering varieties this is February and March. Strong-growing shoots are cut back with secateurs to stimulate branching and to encourage large flower spikes. The use of secateurs is favoured as opposed to hand shears, as they avoid that closely clipped carpet-like effect. The natural spread and general growth patterns are thus allowed to develop more naturally and a patchwork of colour all at the same height and form is partly prevented. The winter-flowering cultivars are dealt with after the flowers fade.

Grass paths meander through the heath garden and while the mown turf may appear rather conventional some permanent yet pleasant kind of surface has to be provided where members of the public have access. A less than formal edge helps blend the casualness of the heather planting with the grass verge.

To go into the subject of raising young plants seems to me to be superfluous as members of the society are no doubt well aware of how this is done. Perhaps it is sufficient to say that, apart from the adding of new cultivars to the collection, the replacements required when replanting becomes necessary are raised and supplied by our own propagation department.

In a national botanic garden where the availability of labour, time and space is governed by a number of factors it is not possible to deal in great detail with the multitude of little-differing cultivars, but on the other hand we at the Garden are always keen to learn of and are interested in any new plant which contributes a distinctly fresh facet to the plant collection.

The yardstick used to select the plants grown here is that they are different and virtually all grow satisfactorily in this cold and dry Edinburgh climate, the average rainfall over the last six years being 22.6 in., while during 1972 only 17.59 in. fell. But rather than try to evaluate the plants grown or produce a merit scheme for certain varieties I shall finish this article by saying that the Heath Garden at Edinburgh is a much-visited part of the Royal Botanic Garden.

Making a Garden in Argyll

Leslie B. Patrick, Lochgilphead, Scotland

Before retiring from the Midlands my wife and I bought a house with eight acres of rough ground in Argyll. The rock strata emerge at an angle of about 45°, often vertical on one side, with pockets of level soil between. The flora is hazel, birch and oak scrub with heathery knolls. The soil is all acid, pH 4.5-5, and deficient in phosphate, the topsoil often thin and lacking in humus. Rainfall is about 50 in. and the climate mild with little snow or frost. Fortunately in front of the house there is a gently sloping walled acre and behind, the ground rises to join a forest of conifers out of which tumbles a burn that murmurs through the garden. The site borders the sea and looks out to the islands. Beauty is all around and it seemed like sacrilege to try to improve upon it, but we decided to make a semi-formal garden in the walled acre and gradually add to the richness of the wild acres. The walled garden was 4 ft high with brambles, ragwort and nettles with ground elder below. This we cleared by clipping and burning the brambles, spraying with translocating herbicide, and repeated rotovation.

In the first two years long droughts threatened the young plants but winds are the worst enemy of the taller shrubs. Most of the ground is unfenced and almost unfenceable. In the wild garden roe deer do much damage to plants if they are not protected by wire netting until they are over 3 to 4 ft high. Fortunately, roe deer are not great lovers of heather but may nibble the tender tips. Red deer occasionally wander through. Rabbits are kept down by the Scottish wild cat, buzzards, badgers and foxes.

We had grown a few heathers for years; now they seemed the ideal basic plant to make a garden, in our retirement, that would require less labour as age increased. (No outside labour is available.) We started to propagate our heathers and to buy cultivars new to us and plants from many other families. In due time hundreds of potted plants were taken north by trailer.

We planned the walled acre so that the shape of the lawn and beds and the line of the burn, viewed from the house,

would lead the eye out over the sea to the Paps of Jura, 2,500 ft high and 19 miles away. The beds were planted closely enough to cover the ground in three to four years, using groups of six to 12 or more of the same cultivar, leaving spaces for plants of other taxa.

Erica carnea in the beds nearest the house gives winter colour. Nearly all the old favourites grow well and the newer 'Pink Spangles' and 'Foxhollow Fairy' are among the best. The brilliant 'Myretoun Ruby' which is just starting its second year shows great promise. 'King George' is not doing well. Some of the weaker plants are already in flower at the end of October, perhaps a last desperate attempt at survival. They may be on the site of an old bonfire. On the other hand 'Winter Beauty' is marvellous, which makes me wonder if it is 'Winter Beauty'. Books and catalogues state that 'Winter Beauty' has anthers of burnt sienna but none I have describes the anthers of 'King George'. I hope the Heather Society's team at Harlow Car include in their report a description of the habit, foliage and flower of each distinct cultivar.

Beyond the *carneas* many large stones lying about the ground were built into a pile, the interstices filled with soil and planted with *Erica cinerea* in variety; they do well in that well-drained position and seed lustily among the *Callunas* below. The *Callunas* thrive and there is no difference in the intensity of foliage colour between the east Midlands and west Argyll. Only a few do badly. 'Sister Anne' and 'Dainty Bess' tend to rot in the middle; I shall try a better ventilated site. 'Multicolor', besides reverting, loses whole branches and sometimes dies. 'Golden Feather' and 'Mrs Pat' are others that do not look their best. 'Spring Cream' and 'Spring Torch' are lovely in spring but for the rest of the year hardly merit a place.

Erica tetralix cultivars are all in one bed. They grow well but the effect is disappointing. There is little difference in foliage colour, 'Pink Star' being the most silvery. The colour of the darker flowered ones, 'Foxhome' and the 'Underwoods', looks much the same particularly as the season advances. Nearby *E. Mackaiana* 'Plena' this year produced double and single flowers on the same shoots; the single looked similar to the unopened double flower.

Erica ciliaris and the *Daboecias* are in a mixed bed, they are all beautiful but the colour of *Erica ciliaris* 'Corfe Castle' especially pleases me. 'Burfitt's Dwarf' is a neat little plant which grows a little more strongly here and flowers less profusely than in Dorset; perhaps because it is growing in too rich soil. Here, too, is *E. erigena* 'Brightness', greatly admired, for it is brighter than *E. erigena* 'Coccinea'.

The tree heaths flourish if well staked, and have to be protected in the wild garden for the deer love them. *E. terminalis* 'Thelma Woolner' one season old promises, as described, to be an improvement on the type. *E. canaliculata*, planted two years ago, is doing as well as any. The other Cape Heath I have sought, *E. pageana*, did not survive the week-long journey from southern England. All the hybrids and *E. vagans* grow strongly. The latter is well able to withstand the field mice or voles that fell the outer stems and collect the seed heads into piles. Bullfinches, too, feed on the vagans seed heads.

After four and a half years we still have far to go in the making of our garden, maintenance is overtaking making, it will never be finished or tidy but it is a source of joy and friends come to admire.

Dartington Hall, 1973

G. P. Vickers, Sheffield

Weekend conferences are by now an important established feature of the life of the Heather Society. Three have now taken place and each one has reflected the venue and those organising the programme.

Grantley and Westham were intimate affairs, Dartington, was expansive with sleeping quarters a walk from the communal block, the hall a car ride away and the moors a bus journey.

Terry Underhill, author of the current text-book on heathers and in charge of horticultural courses at Dartington played a major part in the arrangements. He is a preservationist, so naturally what he showed and told us, the doctrine of preserving the countryside came through. This

raises an interesting point as to whether future conferences should be completely devoted to talking about heathers, walking amongst heathers, seeing pictures of heathers or to have another theme as well.

In his opening talk Mr Underhill told us what Dartington is doing—the conferences, teaching and commercial ventures. He told us about the Devon and Cornwall landscape and how it is being changed by the visitor, the motor car and industry.

We stayed at the Old Postern, the ancient house with modern additions which is now a fee-paying sixth-form college run by the Dartington Trust. The food was good, the sleeping accommodation adequate, but the meeting hall too small for the numbers, but we managed by packing ourselves in friendly togetherness. The little licensed club was an intimate affair which served an excellent talk-provoking Scrumpy.

The programme was crowded with a fair amount of travelling about which didn't settle down into a Heather Conference until Sunday morning.

We visited Dartington Hall gardens at dusk and noticed that trees and shrubs strategically placed with rolling lawns and elegant steps can present a beautiful setting without flowers. The ancient cobbled courtyard with its many doors and windows looked peaceful in the darkness, lit only by discreet artificial lighting.

Saturday was a strenuous affair with much clambering in and out of the coach, climbing Haytor, seeing heather and gorse growing together, looking at granite railway lines, noting erosion by man, looking at *ciliaris* growing, driving past Dartmoor prison not looking a bit grim or forbidding in the hot sun. We visited Mrs Hurrell's heather garden on the edge of the moor and how welcome that cup of tea was. Afterwards Mr Hurrell, a naturalist, talked as we wandered round the garden about the abundance of wild life that he encouraged and he also showed us the reconstructed prehistoric hut with conical timber and thatch roof which he has built to illustrate life as was lived by our forebears.

We also drove past china clay spoil heaps which are being landscaped so that they can become part of the green again. I personally reflected that if we have to have china clay and

coal, and presumably we do, then Cornwall has as much right to complain about spoil heaps as South Yorkshire and at least someone is trying to preserve the landscape in Cornwall.

Sunday was also busy, but this time thankfully sitting down with six hours of talks, slides and discussion. We will all remember Mrs Boxall chattering delightfully in such an entertaining manner whilst she showed us how heathers can be used for flower arrangements. David Small, secretary of the newly formed technical committee, showed illustrations of his experiments on the rooting of heather cuttings and pointed out that the roots form not from the cut end, but from further up the cutting and from the existing leaf stems.

Because of lack of time and the size of the audience, Brian Malin's attempt to arrive at a conclusion as to what we thought were the best garden heathers failed as a serious exercise but provided an entertaining 45 minutes' relief to the programme. David McClintock in his usual learned but interesting manner spoke about the lesser well-known branch of heather gardening—*Daboecias*. These are wonderful subjects providing continuous flower for more than six months of the year.

There is growing interest amongst our members in South African heathers, 'Cape Heaths' which grow in such profusion and bear such large flowers in their natural habitat. Mrs Ronald Gray and Mrs MacLeod introduced this subject to us with good photographs and interesting discourse, but it is obvious that these are for the enthusiasts amongst us only.

Time was found during the weekend for various members to show slides of their own gardens. Jack London, never found wanting on these occasions, did not disappoint us, neither did Mrs Hayden, from Bath, or Mrs Parris, from Usk, planting heathers on a steep slope wearing football studs—great fun!

The weekend was summed up by the chairman, Mr Bowerman, and the vice-president, Mr Ardron, and their remarks provide a natural summing-up for this article.

As the Heather Society grows it is changing from a small body of scattered members administered from the south-east, to a society of a wider stature. Local groups are being

formed with their own committees. Sub-committees of the General Council discuss and recommend courses of action to the Council itself. It is retaining its friendly atmosphere, but becoming the authoritarian body that it should be.

The highlight of the conference was surely the fact that a society could combine a family picnic in the woods with a learned discussion on what the Forestry Commission should do to preserve the only known naturally occurring *ciliaris* in Devon. The fact that the Heather Society was approached for their considered opinion is an indication that we have a great future.

Observations on Rooting Cuttings

Mr David Small, Tonbridge, Kent

What happens when a cutting roots? Why do some species root easier than others? Why is it that in some years, cuttings of a species give very poor results while in other years give near 100% yields? Why do cuttings root easier at certain times of the year?

These questions often arise irrespective of what form of propagation we use (we all have our favourite methods). I certainly do not pretend to know the answers; the more I delve into the subject the more complex and fascinating it becomes. Rooting depends upon many inter-related factors and there is only space to discuss one aspect here.

If a microscopic film could be taken of a heather cutting in the process of rooting, you would see that not all heathers root in the same way.

(i) *ERICA CARNEA*

About two weeks after planting a gradual swelling of the whole stem is observed, then after three to four weeks roots always start to form above a nodule (leaf joint). This is contrary to most plants, which root around the edge of the wound (caused by the separation from the mother plant). After about ten weeks, more roots can be observed coming through the callus formed over the nodules. They appear rather weak compared

to the other roots which are well developed by this time.

(ii) *ERICA VAGANS*

This roots in a similar mode to *Erica carnea*. As in all other species examined it does not appear to matter which variety is chosen for study as all cultivars appear to root similarly. I have yet to record a *carnea* or *vagans* rooting from the base of the cutting.

(iii) *ERICA CINEREA*

This roots by producing a large swelling at the base of the cutting (it does not seem to matter whether it is a tip or heel cutting). The time it takes to do this varies considerably. Roots appear two to three weeks later. Thus *Erica cinerea* is more conventional in its rooting behaviour, it only rarely roots around nodules which may account for the increased difficulty most propagators have with this species.

(iv) *ERICA TETRALIX*

Like *Erica cinerea*, it has a distinct preference for behaving conventionally. If anything, swelling seems to be even more pronounced.

(v) *ERICA WILLIAMSII* 'P. D. Williams'

I thought it might be interesting to observe how this hybrid roots as its parents exhibit markedly different modes of rooting. The leaf attachment of 'P. D. Williams' is very similar to *vagans*, so one might expect it to root like *vagans*. On the contrary, it exhibits all the same characteristics as *Tetralix* with only a very occasional weak root appearing from above a nodule.

(vi) *CALLUNA VULGARIS*

Calluna perhaps gives us the clues we seek in establishing how and when rooting occurs. A microscopic film would see that after one to two weeks, the nodules start to swell. Days later a split starts below the nodule. The split increases in length as the nodule swells. The swelling induces splits around the nodule and in particular causes a small split directly above the nodule from which the root emerges. One layer of tissue which a root must rupture is known as the sclerenchyma and probably the root waits for this layer to be split by the swelling nodule before rooting can occur. In time, many

roots appear from the splits. Easy splitting and multiple rooting could account for why most propagators find *Callunas* easy.

There is a marked tendency for the splitting to occur first towards the base of the cutting. On occasions, it is possible to observe all these stages happening simultaneously on one cutting.

Like *Carnea* and *Vagans*, roots appear above each nodule along the length of the stem. Re-observation of the *Ericas* does suggest that 'splitting' may occur but it is by no means very obvious.

One final observation, the stem of cuttings that fail to root, seem to assume a dark colour and when observed under a microscope, appear wizened and dehydrated, the tissue being tough. There is no other visual indication why the cutting fails to root. It seems as though it is a race between the root piercing this tissue and the tissue becoming too tough.

These observations could offer some explanation to our original questions (and others).

(i) Juvenility

One of the still rather mysterious factors in plant life, and heathers are no exception, is juvenility. Cuttings from healthy young plants are found to root more readily than from healthy old plants. Hard pruning often helps to improve juvenility. The common feature here is rapid growth. One possible theory is, therefore, that if the cutting material has seen a rapid growth period the sclerenchyma is probably porous or easily split, thus making rooting easier. This fact could account for why in some years, cuttings are unusually difficult to root and probably follows a period of slow growth of the mother plant due to adverse climatic conditions.

(ii) When to take cuttings

This is rather dependent on the method of propagation employed. In non-mist methods, it is advisable to take the cuttings when the wood is semi-ripe. In this condition, the cutting is rich in stored food (and hence maximum energy can be devoted to rooting) and the sclerenchyma has yet to toughen up beyond a point

when the root cannot penetrate it. In mist propagation, however, very young shoots can be taken which have only token resistance to root formation. The danger, of course, is that the cutting is rather limited in food reserves.

Of course, cuttings prefer high light levels and a temperature gradient from the base to the tip of the cutting and these have to be considered in conjunction with the above.

Space necessitates briefness but I would be interested in any comments.

Gorse and Wild Heather

(*Reprinted with kind permission of The RSPB from the magazine, 'Birds', Volume 4, Number 11, September-October 1973*)

When Thomas Hardy was a young man, a century ago, the Dorset heathlands must have seemed endless and untameable. Then, Poole was a small town and Bournemouth a tiny village surrounded by heath and marsh, Today, these two towns form one of the biggest urban areas on the South Coast of England and the heathlands are shrinking by several hundred acres every year.

Most of today's loss is to agriculture or forestry, both of which completely alter the character of the area, drive out much or all of the typical heathland wildlife and make the land unsuitable for popular recreational use.

Unfortunately, recreation itself brings problems. The acid, sandy soils of heathland support specialised plant communities that form beautiful landscapes, but the vegetation is easily damaged by trampling and car parking, and is vulnerable to fire.

Ling is the most widespread plant of Dorset heathland, but three heaths are relatively common: bell heather grows with ling on the drier ground, while cross-leaved heath and Dorset heath are found in wetter sites.

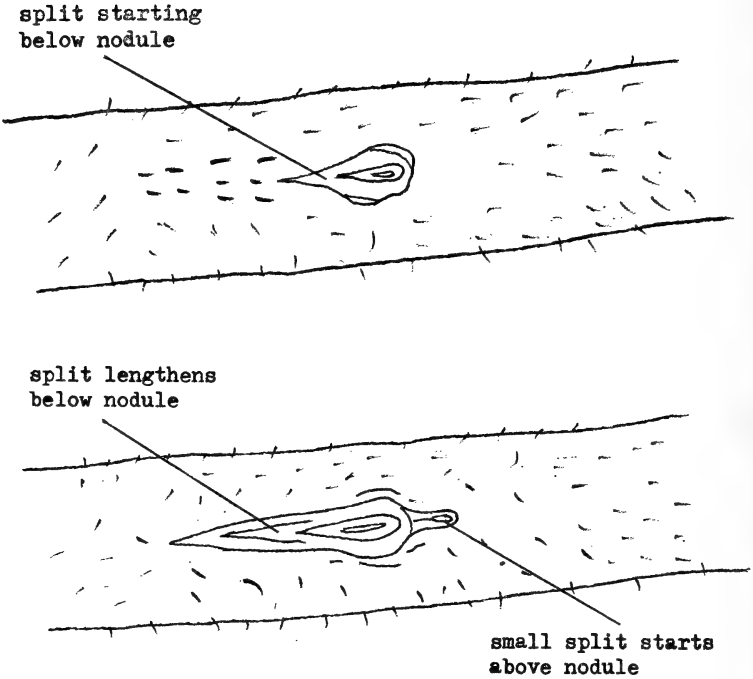
The combination of thick, old heather and scattered gorse clumps is ideal for breeding Dartford warblers, the 'special' birds of the area. In England, where they are on the edge of their geographical range, these birds are confined to a few areas of southern heathland. The only fully resident British warblers, they suffer heavy mortality in hard winters. After the prolonged cold spell of 1962-63 there were probably fewer than a dozen pairs left alive in England, but in the last few years they have considerably increased in numbers.

The heathland bird community is not large. Young heather attracts breeding meadow pipits but as the plants grow these birds are largely replaced by wrens. Whitethroats, linnets and yellow-hammers, together with the rarer stonechats, inhabit the gorse areas. Perhaps the most intriguing breeding birds are nightjars, which wait until the late dusk of summer evenings before starting their strange churring song and erratic, wing-clapping display flights. Heathland is particularly attractive to birds of prey. Hobbies, sparrowhawks, and buzzards breed, and hen harriers and merlins are regular visitors in winter.

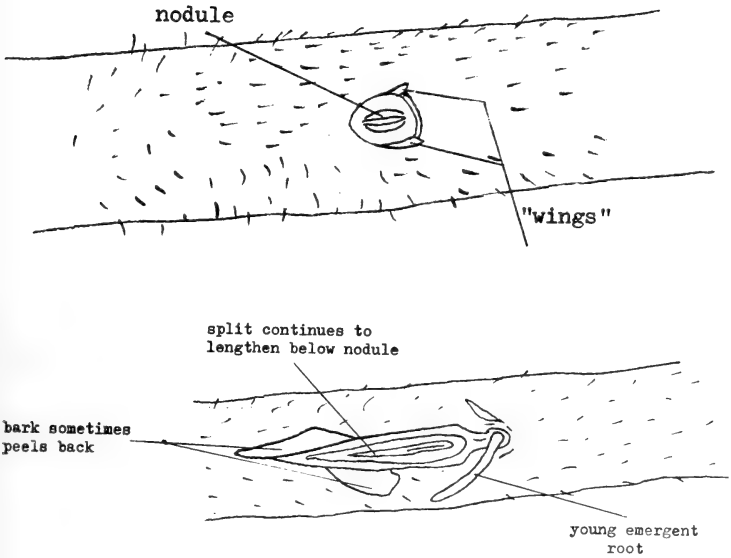
The heathlands of Dorset and Hampshire are also the main stronghold of the smooth snake. This small, delicately marked creature lives mainly on other reptiles, including lizards and slow-worms. The many insects found here include two scarce moths: the speckled footman moth and the Kent black arches, and there are numerous more widespread animals, such as harvest mice, elegant silver-studded blue butterflies and tiger beetles. The insect eating-plant, sundew, also occurs on these heaths.

There is a strong case on both scientific and amenity grounds for the conservation of much of what remains of Dorset heathland. A few key sites are fairly secure, at least in the short term, but the conservation movement needs much more money and greater statutory powers to ensure the survival of these heaths, with their special qualities of wildlife and wilderness.

On Dartmoor with Mr Terry Underhill



Rooting Cuttings (1)



Rooting Cuttings (2)

Members at The Old Postern, Dartington Hall, August 1973

Book Review

THE POCKET GUIDE TO HEATHER GARDENING, by GEOFFREY YATES. Published by *Tabramhill Gardens.* 15p post paid.

For many years the handbook *Hardy Heaths and the Heather Garden*, by John F. Letts, was the standard reference book for heather plants, their description and flowering habits. In recent years it has become out of date due to the introduction of new varieties and the change of nomenclature.

The pocket guide which had been widely distributed through the trade and by the Heather Society went a long way to replacing Lett's handbook, but this too became out of date and the small size and limp covers tended to make one treat it with less respect than it deserved.

A new addition of the *Pocket Guide* slightly larger and with stiffer covers was published in August 1973 and without doubt this is by far the most complete and up-to-date published work on descriptions of heather plants that exists in the world.

In writing this book Geoffrey Yates, who has been an enthusiastic member of the Society for many years, has obviously gone to great lengths to make sure that nomenclature and descriptions are as correct as possible. He has used the Harlow car project records and has referred to the Heather Society's archival notes kept by David McClintock and drawn from his own vast fund of knowledge and experience.

One refreshing feature of this new book is the forthright approach towards some of the doubtfully new introductions and where first-hand knowledge on a plant is not available it says so. It behoves the Heather Society Technical Committee to adopt this as the standard list and to make every effort to plant true examples so that correct recordings can be made. This is a book that no heather enthusiast should be without.

For the keen heather grower it provides a complete list of plants to add to existing collections and for the beginner details of how to grow heathers and design a garden. It also provides a well-thought-out short list of plants for particular purposes.

G.P.V.

TECHNICAL REPORTS ISSUED DURING THE PAST YEAR

(Copies obtainable from the Secretary of the Technical Committee)

Technical Report No. 1/73 Part I
This report, to be presented in several parts, investigates the rooting response of heather cuttings to various factors such as the use of hormone rooting powders, light, water, etc. Part I proposes the sampling method to be employed when measuring the rooting response of a cutting.

Price 10p.

D. J. SMALL
SECRETARY, TECHNICAL COMMITTEE.

Gazetteer of Heather Names—Part 2

D. McClintock

Eden Valley (*cinerea*). Miss Waterer's house near Ludgvan, Cornwall, A.M. 1932.
Elkstone (*Calluna*). Near Leek in North Staffs, *c*. 1953.
England (*cinerea*). Plant actually found near Ringwood, Hants, before 1956.
Exeter (x *Veitchii*). Town in South Devon, 1969.

Fiddlestone (*vagans*). Fiddlestone Lodge, Wirral, where E. Plummer lived, by 1969.
Foxhollow (*Calluna*). The Letts' house at Windlesham, Surrey, plant found in Cornwall, pre-1963.
Foxhollow (*carnea*). The Letts' house at Windlesham, Surrey, seedling by 1969.
Foxhollow Fairy (*carnea*). The Letts' house at Windlesham, Surrey, seedling, *c*. 1960.
Foxhollow Mahogany (*cinerea*). The Letts' house at Windlesham, Surrey, found in Cornwall, pre-1964.
Foxhollow Wanderer (*Calluna*). The Letts' house at Windlesham, Surrey, found in Cornwall, pre-1963.
Foxhome (*Tetralix*). Dr Fuchs' house near Whaley Bridge, Derbyshire, *c*. 1960.
Fréjus (*Calluna*). Town in the Var, S. France, by 1968.
French Grey (*Calluna*). Found pre-1966 in Scotland; the foliage is not grey.
French White (*vagans*). Named after its colour, by 1967.
Furzey (x *darleyensis*). Captain Dalrymple's house near Lyndhurst, Hants, A.M. 1968.

Galway (*Tetralix*). Plant found near Costello Lodge, 23 miles west of Galway, 1963.
Ghost Hills (x *darleyensis*). Near J. Brummage's Nursery in Norfolk, pre-1962.
Ginkels Glorie (*Calluna*). The Ginkelse Heide, Holland, pre-1972.
Glasnevin Red (*cinerea*). Botanic Gardens, Dublin, seedling pre-1966.
Glencairn (*cinerea*). Parish near Moniaive, Dumfriesshire, by 1970.
Glencoe (*Calluna*). Pass in Argyll, by 1969.
Goldsworth Crimson (*Calluna*). W. C. Slocock's Nursery near Woking, 1925.
Goldsworth Pink (*Calluna*). W. C. Slocock's Nursery near Woking, pre-1950.
Gold Turret (*Calluna*). Sport from Loch Turret, q.v.
Gotteborg (*Calluna*). Letts, by 1966.

Grampian (*Calluna*). Presumably, mountains of Central Scotland, *c.* 1964.
Grasmerensis (*Calluna*). Town of Robert Hayes & Co. Nursery in Westmorland, by 1930.
Guernsey Lime, Pink, Plum, Purple (*cinerea*). Found in the Bailiwick, 1968; introduced, 1973/4.
Gwavas (x *Williamsii*), Near Cadgwith, S. Cornwall, 1924.
Gwinear (*cinerea*). Village in W. Cornwall, by 1952.

Harpering (*Calluna*). 1937.
Heathfield (*cinerea*). Hamlet near Newton Abbot, S. Devon, pre-1966.
Heathwood (*carnea*). J. Brummage's original Nursery at Taverham, Norfolk, seedling in mid-1950's.
Hibernica (*Calluna*). Ireland, by 1933.
hibernica (*erigena*). Ireland, 1855 (for the South African hybrid *E.* x *hibernica* the name means just winter-flowering, from the Latin *hibernicus*, wintry).
Hibernica Coccinea (*erigena*). Ireland, by 1942.
Hibernica Praecox (*erigena*). Ireland, 1903.
Hidcote (*terminalis*). Presumably, Hidcote garden near Chipping Camden, Glos., 1957.
Hollandré (*Calluna*). Reversion on Long White found at Boskoop, 1968.
Hookstone (*Calluna*). G. Underwood's Hookstone Green Nurseries near Woking, Surrey, by 1945.
Hookstone Lavender (*cinerea*). G. Underwood's Hookstone Green Nurseries near Woking, Surrey, pre-1963.
Hookstone Purple (*Daboecia*). G. Underwood's Hookstone Green Nurseries near Woking, Surrey, by 1960.
Hookstone Rose (*vagans*). G. Underwood's Hookstone Green Nurseries near Woking, Surrey, seedling about 1946.
Hookstone White (*cinerea*). G. Underwood's Hookstone Green Nurseries near Woking, Surrey, *c.* 1936.

Inshriach Bronze (*Calluna*). Jack Drake's Nursery near Aviemore, Inverness-shire, by 1970.
Irish Lemon (x *Praegeri*). From L. Nacung, found 1966.
Irish Orange (x *Praegeri*). From L. Nacung, found 1966.
Irish Salmon (*erigena*). From L. Carrowmore, found 1966.

Kevernensis Alba (*vagans*). St Keverne, S. Cornwall, pre-1931.
Kinlochruel (*Calluna*). Brig. E. Montgomery's house in Argyllshire, 1970.
Kirby White (*Calluna*). J. Haigh's Kirby Nursery, I.O.M., by 1968.
Kit Hill (*Calluna*). Hill near Callington, E. Cornwall, by 1948.
Knaphill (*cinerea*). G. Waterer's Nursery near Bagshot, Surrey, pre-1924.
Knaphill Pink (*cinerea*). G. Waterer's Nursery near Bagshot, Surrey, pre-1958.
Knaphill Rosea/Rosea Knaphill Variety (*cinerea*). G. Waterer's Nursery near Bagshot, Surrey, pre-1903.

Knaphill Scarlet (*cinerea*). G. Waterer's Nursery near Bagshot, Surrey, by 1966.
Knockomie (x *darleyensis*). N. R. Webster's house at Forres, used 1959-66.
Kynance (*Calluna*). Village in S. Cornwall, 1923.

Lammerburn (*Calluna*). Mrs I. Simpson's house in Napier Road, Edinburgh, 1970.
Lankidden (*cinerea*). Cove west of Coverack, Cornwall, 1972.
Loch na Seil (*Calluna*). Loch southwest of Kilninver, Argyll, by 1963.
Loch Turret (*Calluna*). Loch near Crieff, Perthshire, by 1968.
Logan House (*Calluna*). From Mrs Young, of Currie, near Loganlea, 1937.
Loganlea (*cinerea*). Reservoir north-west of Pennycuick, Midlothian, 1937.
Loughrigg (*carnea*). Fell outside Grasmere, Westmorland, by 1948.
Lumsdaine (*Calluna*). Moor near Miss Logan Home's Nursery in Berwickshire, *c*. 1964.
Lumsdaine (*cinerea*). Moor near Miss Logan Home's Nursery in Berwickshire, by 1967.
lusitanica. Portugal, 1799.
Lyonesse (*vagans*). Cornwall, 1953.

(*To be continued*)

Recent Writings on Heathers, 1973

BAKER, H. A. 'New Taxa in the genus *Erica*.' *Jnl S. African Botany*, 39(3) pp. 105-121. Four new species and one new variety.
BLOOM, A. 'Chill-proof Charmers.' *Practical Gardening*, February, pp, 60-2. Winter-flowerers.
CHAPPLE, F. J. 'The Heather "Rosalind",' *Amateur Gardening*, January 6th, p. 32.
DERBYSHIRE, JANE. 'Heaths that brush winter aside.' *Popular Gardening*, January 13th, p. 23. Winter-flowerers.
GIBBONS, B. 'The Man who moved the Earth for Love of Heathers.' *Garden News*, July 6th, pp. 12-13. B. Malin and his garden.
HART, C. 'Fussy Heathers Provide Colour for all Seasons.' *Garden News*, November 30th. Soil Requirements.
HARBORNE, J. B. and WILLIAMS, C. A. 'A Chemotaxonomic Survey of Flavonoids and simpler Phenols in leaves of the Ericaceae.' *Jnl Linnean Society, Botany*, 65(4), pp 37-54.
MINNHAAR, J. 'Zur Steuring der Erikenblute.' *Gartenwelt* 6, p. 126. Deals with *E. gracilis*.
PENNINGSFELD, F. 'Weihenstephaner Versuchsergebnisse mit Ericen und Azaleen.' *Gartenwelt* 73(22), pp. 473-8. Data and advice on propagating media and the effect of trace elements.
ROBINSON, R. K. 'Mycorrhiza in certain Ericaceae native of Southern Africa.' *Jnl S. African, Botany*, 39(2), pp. 123-129. Infection was recorded in all 12 species growing under natural conditions and in cultivation. Its real significance remains obscure.

ROSE, D. 'What a Pity . . .; Guide to best all-round Heathers; The Plants of the 70's.' *Western Daily Herald*, August 24th/31st/September 7th. Reports Heather Society Conference and discusses heathers, and J. Letts.

SCANNELL, M. J. P. and MCCLINTOCK, D. 'Double-flowered forms of *Erica Mackaiana*.' *Watsonia*, 9(4), p. 432. 'Plena' and a new form with apparent double corolla.

SJOGREN, E. In 'Vascular Flora and Vegetation of the Azores Islands' in *Memorias de Soceedada, Broteriana* XXII: *Daboecia azorica*, pp. 27, 245-7, Figs. 73-4, V and VI; *Erica azorica*, pp. 32-5, 251-3, Figs. 73-8, V and VI; *Calluna vulgaris*, pp. 27, 245, 248-50, Figs. 75-6.

STREET, J. 'Jack's Heath had them guessing.' *Garden News*, No. 765, March 2nd, p. 10. Mr London's 'Limelight'.

TIMBAL, J. 'Sur l'Ecologie d'*Erica multiflora* L. dans le nord-ouest de la Tunisie.' *Bulletin Bot. Soc. France*, 119(5-6), pp. 325-333.

UNDERHILL, T. 'The latest Heaths and Heathers.' *Amateur Gardening*, April 7th, pp. 38-9.

WELCH, D. and KEMP, E. 'A Callunetum subject to intensive grazing by Mountain Hares.' *Transaction Botanical Society of Edinburgh*, 42(1), pp. 89-100. How to tell such hummocky *callunas* from wind-sheared ones.

WHITSEY, F. 'Home-grown Heather.' *Daily Telegraph*, September 8th, p. 6. Includes a photo of the Camerons' garden at Great Comp.

WHITSEY, F. 'Heathers for year-round colour.' *Popular Gardening*, October 27th, pp. 24-6.

WILSON, D. G., MARCHANT, R. and OLDFIELD, F. 'Fossil seeds of *Erica* from the Cromer Forest Beds.' *New Phytologist*, 72, pp. 1235-7. *E.lusitanica* and *E.umbellata* in Norfolk and Suffolk.

ZIMMER, K. 'Wirkung der Temperatur auf das Bluhen von *Erica gracilis*.' *Gartenwelt* 1, p. 16. Higher temperatures and long day favour flower production. *E. gracilis* can be out at Easter.

LIST OF MEMBERS

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*Indicates members willing to show their gardens by appointment.
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*HAIGH, Mr and Mrs R., Coed Berw, Pentre Berw, Gaerwen, Anglesey.
HARPUR, Mr and Mrs J. W., Drumquin, Graig, Glan Conway, Colwyn Bay.
HAWES, Mrs M. G., Heatherland, Llanteg, Narberth, Pembs.
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HENLEY, Mrs F. H., Gustard Wood House, Wheathampstead, Herts.

HOPKINSON, C., 19 Baker Avenue, Hatfield Peverel, Chelmsford, Essex.
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