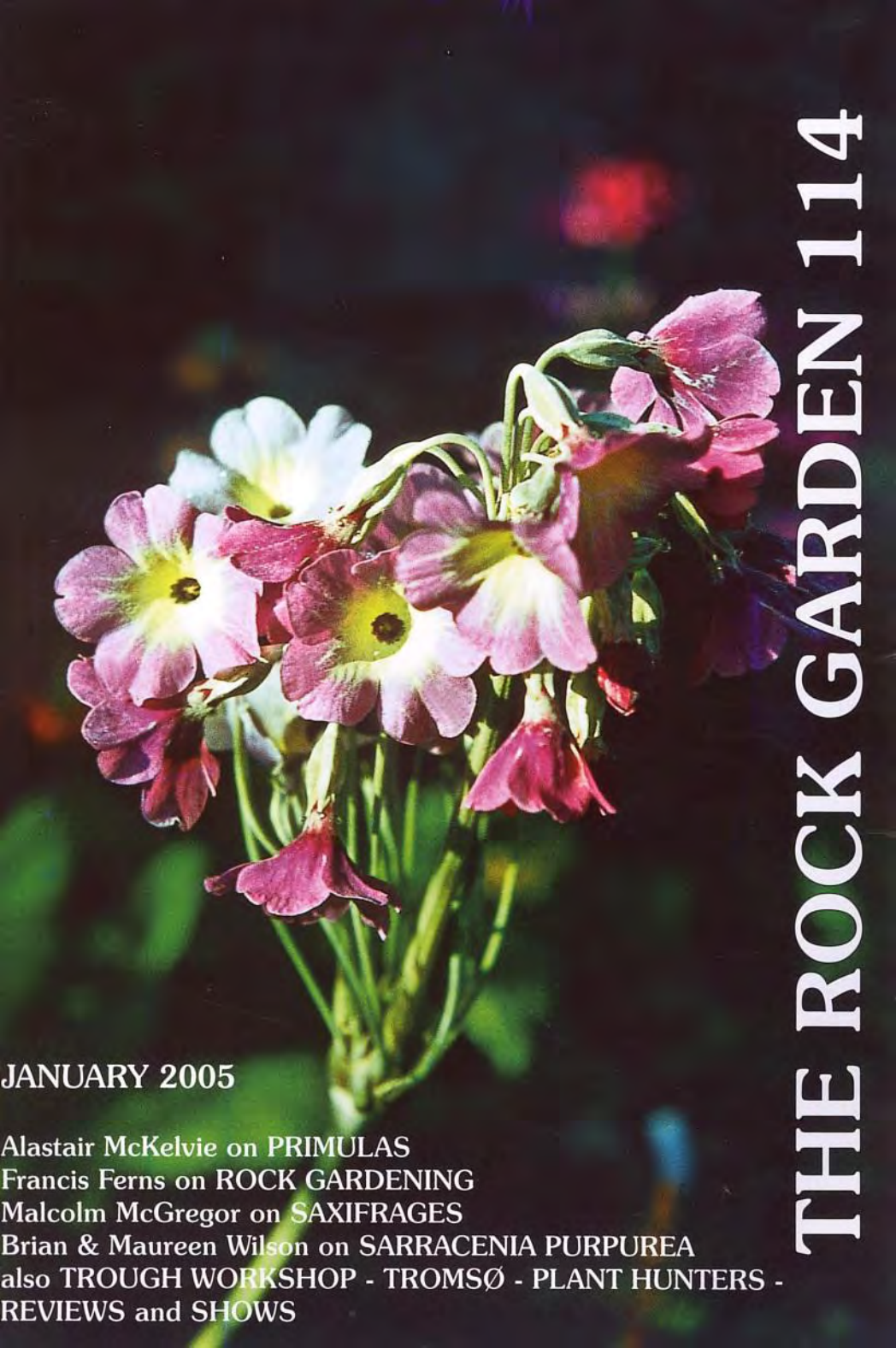

THE ROCK GARDEN 114

JANUARY 2005

Alastair McKelvie on PRIMULAS
Francis Ferns on ROCK GARDENING
Malcolm McGregor on SAXIFRAGES
Brian & Maureen Wilson on SARRACENIA PURPUREA
also TROUGH WORKSHOP - TROMSØ - PLANT HUNTERS - REVIEWS and SHOWS

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Alastair McKelvie, SRGC Subscription Secretary
43 Rubislaw Park Crescent, Aberdeen, Scotland, UK, AB15 8BT

Alastair.Mckelvie@btopenworld.com

SRGC email - *info@srgc.org.uk*

The ROCK GARDEN

The Journal of the
Scottish Rock Garden Club

January 2005

Number 114

COVER: *Primula alpicola* is one of the primulas recommended by Alastair McKelvie in his article.


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Malcolm McGregor
16 Mill Street
Hutton
near Driffield
East Yorkshire, UK
YO25 9PU
tel. 01377 270717
email: mcgregor@cix.co.uk

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Carol Shaw
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John Howes
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Spring Bank
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Tel. 01482 225663 (Evenings only)

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Exciting times

AFTER MY FIRST YEAR AS PRESIDENT, Malcolm suggested I write an editorial. I have decided that I'm writing in exciting times for the Club. Plenty of activities are 'on the go', and overleaf we announce a major new fund, the Diana Aitchison Fund, which will help us boost students in learning about, and developing a career in, alpine plants. This fund reflects a key part of the club's purpose – educational activities – and it strikes me that much of what we do fits this bill.

The wonderful displays that the Club mounts at Gardening Scotland, at Ingliston, and the information and guidance that accompanies them have a real educational and promotional purpose (we must have given out ten thousand leaflets on fish-box troughs). We also gain many new members for the Club. They have become a calendar fixture at the start of June, and 'Sandy Leven's team' had another real success in 2004 – their eighth gold medal in succession.

Troughs also featured at the summer workshop at Mosstodloch, where fifty members were treated to a practical day of making and filling fish box troughs – and this time it didn't rain! These are great events, very sociable, and it's wonderful to see the enthusiasm generated in the participants! You can see in the report just how much fun we had, as well as learn a bit more about the actual process involved.

Also in July, our good friend Finn Haugli hosted a Conference to celebrate the 10th anniversary of the Tromso Botanic Garden in north Norway, and we provided a modest sponsorship for Ron McBeath to be the 'SRGC Speaker'. The conference was a great success, well supported by members from Scotland and Scandinavia.

Finally, I want to mention the Club web-site (www.srgc.org.uk), or at least one aspect of it. The Club web-site goes from strength to strength. We had to increase its capacity last year thanks to the high level of use it receives, and it is a real credit to the Club, and a great educational resource. To add to the value of the site, we will shortly be putting all the back issues of THE ROCK GARDEN on the site, as a resource available to all. So, visit the site, use the back issues, read the articles and other items, and make use of one of the very best information sources on rock gardening. *Ian Bainbridge.*

The Diana Aitchison Fund

The Scottish Rock Garden Club is very pleased to announce the establishment of a major new fund managed by the club, the Diana Aitchison Fund.

Diana Aitchison was a keen gardener and plantswoman with a particular interest in alpines. In the 1960s she attended the Kent Farm and Horticultural Institute, and then worked at the Royal Botanic Garden, Edinburgh, under Alf Evans' guidance. After leaving the RBGE, she set up her own nursery at Spindlestone near Belford, Northumberland, growing many rare and unusual plants, and was a keen member of the SRGC North Northumberland Group.

Because of a generous provision in Miss Aitchison's will, and by agreement with her executors, the club has very recently received a substantial sum, which we will invest to provide a good level of income each year. The annual income generated, which will amount to several thousand pounds, will then be used for grants to be awarded under the terms of the Fund.

The Diana Aitchison Fund will be used in order to permit or help students looking to make a career in horticulture to further their knowledge of alpine plants, and could include education costs, living expenses, and placements at establishments of gardening excellence, such as botanic gardens, colleges or nurseries.

The Club is now working hard to make the most effective investment decisions for the funds available, and to set up the procedures for advertising the Fund and assessing the applications to it. Full details of this will follow in the June Journal, and we hope to make the first awards under the Fund during 2005.

The SRGC would like to take this opportunity to thank the executors for their part in enabling the Diana Aitchison Fund to be established. We all look forward to the Fund helping many students develop their interest in alpine plants, and follow in the footsteps of many of our well-known members.

Ian Bainbridge, President.

Cowslips, *Primula veris,* with fritillaries

Getting started with Primulas

Alastair McKelvie

EVER SO MANY of my gardening friends say to me "I just can't grow primulas" or "Primulas just won't grow for me" which are two ways of saying the same thing. When you investigate further, the reasons for their lack of success seem to boil down to four main factors:

- Climate
- Soil
- Pests
- Wrong choice of species

Climate

You might think that within the UK there would be insufficient variability of climate to affect the growth of primulas selectively and adversely, especially when you consider the wide

range of conditions that gardeners can produce within their own back yards. Yet you only have to talk to nurserymen who sell primulas to find that they do a pretty brisk trade with gardeners, usually in the south of England, who buy the same range of exotic primulas year after year, having successfully killed off the previous year's purchases. And it is not only gardeners who have this problem; quite a few nurserymen will tell you that they don't stock many primulas because their climate is just not suitable. Naturally within this vast genus of around 450 species the same conditions do not suit all of them but John Richard's book *Primula* can give all the information any gardeners might want about the growing needs of any particular species.

The two main climate factors which limit the growth of primulas in the UK are summer heat/drought and winter wet. There are not many primulas which like hot dry summers, the exceptions being species with thick leaves such as *Primula auricula*, species which die back in the summer such as *P. palinuri*, and tough old species like *P. denticulata* and *P. vulgaris* which don't seem to object to drought and even when apparently down-and-out throughout the summer, burst into growth in the autumn rains. Most primulas, however, dislike drought and high temperatures which is one of the reasons why they tend to do better in cooler Scotland than in England. Temperatures above 20°C are generally not recommended for most primulas.

A bigger factor in the lack of success in my opinion is winter wet especially when combined with a lack of frost and snow. Plants which go into some degree of hibernation in late autumn and remain so until March-April are so much better equipped to survive than plants which experience the typical fluctuating warm/cold of an average British winter and which therefore have a stop/start regime for the whole of the winter.

It is because northern and upland Scotland have the colder drier winters which suit many primulas that species such as *Primula bhutanica*, *P. aureata* and *P. nana*, can survive outside with no protection in some places. Many gardeners have marvelled at the range of Himalayan primulas which can grow outside unprotected at Cluny Gardens near Aberfeldy, with a cool moist climate during growth, and a cold fairly dry winter. In contrast gardeners at low altitude, even in northern Scotland, find many primulas difficult when grown outside.

Many of the adverse affects of climate can be ameliorated by growing in a glasshouse with varying degrees of heat and humidity to give the dry conditions which so many primulas need in the winter. Of course there is a wide range of primulas such as *Primula malacoides* which are house plants and require a fair bit of heat but these are outside the scope of this article.

Soil

Most primulas prefer a well-drained soil with a fair amount of organic matter and a pH of between 5 and 7. Soils derived from limestone are generally not suitable although in Cambridge I successfully grew *Primula pulverulenta* in 10 cm of soil over chalk, albeit with frequent recourse to the watering can. A number of alpine species grow on limestone in the wild but do not positively require it in cultivation so that a slightly acid pH seems to suit almost all species.

High alpine species do best in a free-draining compost with a large amount of grit and do not need so much organic matter as do species from wet or wooded sites. These latter species definitely require a high organic matter compost, with the organic matter as much as 75%. Some European lowland species such as the common primrose (*Primula vulgaris*) are less fussy about organic matter content and will even grow on almost pure clay. The bulk of the common primulas we grow in our gardens, however, do appreciate plenty of organic matter especially in the form of well-rotted leaf mould derived from broad-leaved trees (coniferous mould being much too acid for most species). As a rule leaf-mould is better than peat. Plants seem to grow better in the leaf-mould while peat has the added disadvantage of attracting the dreaded vine weevil. Peat can also become water-logged more than leaf-mould so that mould is really the preferred option. I know that peat is more easily obtained in garden centres but most of us can get access to a supply of leaves to rot down into mould. Where I garden, in Aberdeen, most gardeners are only too glad to get rid of surplus autumn leaves.

Pests

By far and away the biggest pest of primulas is vine weevil, so much so that quite a number of gardeners have given up growing primulas because of it. The black beetles are nocturnal so are not

often spotted unless you go out with a torch at night when they can be seen munching away at leaves. They produce characteristic notches in the leaves, not only of primulas but also shrubs especially rhododendrons and pieris. Plants can usually survive this leaf damage although it is unsightly but the damage down by the grubs of the weevil can be fatal. The white grubs with orange heads live in the crowns or down in the roots of the primula and feed happily until all the roots are cut and the plant dies. If a primula suddenly wilts you can be pretty certain that vine weevils are at work.

For plants in pots, at the first sign of damage, you can tip the plant out and kill the offending weevils before watering thoroughly and repotting. In the open garden you can do the same, lifting plants and killing the weevils, but if you have a sizeable area to deal with, mechanical control such as squashing is just not feasible. Vine weevil is endemic in my garden and I just have to tolerate the damage it causes from time to time but it does seem to have reached a status quo and I do not lose many primulas even though the notched leaves are quite evident. I examine the roots of my glasshouse primulas regularly in early autumn when the larvae are evident and in this way I can keep the pest under control. The larvae are the over-wintering stage of the pest so that control in the glasshouse at this stage can give effective control. Cleanliness in the glasshouse and in the garden helps to remove hiding places for the beetle and is highly recommended although as far as I am concerned this is an acme of perfection.

Biological control of vine weevil can be achieved by using a pathogenic nematode *Heterorhabditis megidis* . This is watered on to pots and enters the bodies of the larvae, infecting them with a fatal bacterium. To be effective the compost should be moist and open with a temperature range of 12–20°C and applied from mid-August to mid-September. Results seem to be encouraging in England but rather less so in Scotland.

Chemical control in potted primulas is possible using imidacloprid (Provado Vine Weevil Killer). Applied as a drench it acts as both a contact and systemic pesticide remaining effective in the compost for up to six months. It is not suitable for the open garden.

Aphids are the only other serious pest of primulas but they can readily be controlled with systemic insecticides. For organic

gardeners regular inspection of plants, removal of the aphids and the use of natural predators such as ladybirds can also be effective.

Diseases

The biggest single disease of primulas is virus. It is reckoned that most long-established species and cultivars are infected to a greater or lesser degree with cucumber mosaic virus. Virus symptoms vary from quite mild to severe but infected plants typically show distorted leaves with yellowing around the margins and between the veins. Flowers are often streaked and distorted. Severity of symptoms varies between species and cultivars with some plants hardly affected while others are eventually killed.

Whatever degree of symptoms your plants show they should be immediately disposed of preferably by burning. If you are reluctant to get rid of a valuable plant then at least isolate it from all other primulas if possible. Primula viruses are readily transferred by aphids so that aphid control is vital at all times. The disease can also be spread by handling infected plants and then touching healthy ones so that it is easy to infect quickly a whole

Primula auricula (02) and *Primula elatior* (03) are two European primulas suited to sunny conditions

collection of primulas. Thankfully primula viruses are not spread by seed so that seed propagation is the best way to keep healthy stocks.

Micropropagation is another way to maintain virus-free stocks. Viruses do not seem to enter the growing meristem tips of plants so that propagation from such tissues can lead to healthy plants. *Primula aureata* is a species which has been cleansed of viruses in this way.

The only other important disease of primulas is botrytis which mainly affects plants in glasshouses. Leaves and basal stems rot away and powdery spores are produced. Good chemical control is becoming more and more difficult with new regulations on pesticides but the best method of control is to maintain a good ventilation system in the glasshouse especially in late autumn and throughout the winter. Few hardy primulas die from winter cold but they regularly succumb to mild damp unventilated conditions.

Propagation

Seed production and germination are the keys to keeping your primulas free-flowering and disease-free. This is because of their freedom from viruses as mentioned above but also because many primulas are short-lived and because young plants often flower much better than older ones.

Around 90% of primula species are heterostylous i.e. they have two floral structures, pin where there is a long style so that the stigma is at the mouth of the corolla, and thrum where the style is short and is located low down beneath the anthers. In these heterostylous species good seed set only occurs when pollination is between pin and thrum flowers. In a number of heterostylous species self-pollination does result in limited seed set but often the offspring are weaker than those from cross-pollinated plants. *Primula scotica* is a good example of this where self-pollinated seedlings are weaker growing than cross-pollinated ones. As a general rule then, one should grow several plants of a primula species together in order to obtain seed.

Any seed compost which is generally suitable for alpines will do for primulas. It is important to keep the tiny seed moist at all times and not to cover them with any depth of soil. Although light does not seem necessary for germination covering seed with brown paper does not seem to give good results. Seed should simply be

Primula denticulata (04) and *Primula marginata* (05) are two more primulas suited to sunny conditions

sown on to the surface of a layer of fine grit and gently watered in.

Warmth helps to speed up germination of many species and to give sizeable plants for planting out in the autumn but since many species require a period of cold weather (optimum four weeks at a temperature of around 4°C) before they will germinate that it is probably best just to sow seed in January-February and leave the pots of seeds in a cold frame until the seeds germinate, probably in April or May. However, never despair but leave ungerminated pots in your cold frame for a year or two when seeds may suddenly appear.

But primulas have one useful trick in that seed of many species will germinate exceedingly fast if sown as soon as the seed capsules are ripe and the seeds are brown. A good technique is to cover the developing seed head with a paper bag and take the seed as soon as it is shed. Simply collect the freshly ripe seed and sow in seed compost in a frame. Germination often occurs in a couple of weeks. Petiolarid primulas such as *Primula nana* are good examples of primulas which germinate freely when the seed is fresh.

A good general rule for germinating primula seed is to sow some of the seed as soon as it is shed and to keep the rest cool in a paper bag before sowing in early spring. In that way you get the best of both worlds.

Seedlings should be pricked out into 7 cm pots when they have developed two true leaves using the same compost as for the seeds. With a regular supply of weak liquid feed the seedlings will be ready to plant out the next spring.

Seedling production has so may advantages that it should the preferred method for most primulas but there are a number of species which propagate so readily vegetatively, either by cuttings (*Primula marginata*) or by division (*P. denticulata*), that it is the preferred method. Indeed *Primula denticulata* forms such large clumps that it is necessary to split them up to encourage good flowering and also to retain a particularly good coloured strain. Again for example, auricula cultivars have to be propagated vegetatively in to order to keep them true to type. But as a general rule seed propagation is the ideal method.

A selection of beginners' primulas

I now list a number of primulas suitable for beginners with the

Primula gracilipes

genus bearing in mind that individual gardeners have a restricted range of soils and conditions so that not all the plants mentioned will be appropriate for everyone. In addition to the species mentioned there are ever so many excellent hybrids to try.

GENERAL CONDITIONS

Sunny positions and not too dry soil with plenty of organic matter:

P. auricula	Easy in any decent soil. Often available as hybrids with *P. hirsuta* in the form *P.* x *pubescens.*
P. denticulata	Thrives in any decent garden soil and is extremely hardy. Split regularly to maintain vigour and flowering.
P. elatior	Less vigorous than the above but still a good garden plant.
P. frondosa	Easy in any decent garden soil. Split clumps up regularly but better as young seed-raised plants.
P. farinosa	A weaker version of *P. frondosa* and not so long-lived.
P. gracilipes	The hardiest of the petiolarid primulas. Long-

lived but has the habit of flowering intermittently throughout mild winters instead of one main flowering in spring.

P. marginata — Easy in any sunny well-drained spot. Cuttings root readily. Cut back regularly to prevent plants getting leggy.

P. x *pubescens* — Cross between *P. auricula* and *P. hirsuta* with many good forms. Easy.

P. veris — Naturalizes readily, especially in grass. Short-lived so grow regularly from seed

Light shade

P. alpicola — Cool moist shade and a fairly moist soil in light soils. Long-lived and self seeds.

P. bulleyana — Easy and vigorous in soils with plenty of organic matter. Self seeds readily. Ssp. *beesiana* equally good.

P. chionantha — Excellent plant for moist or wet soils forming good clumps. Self seeds readily

P. hirsuta — Light shade and a well-drained moist soil. Good in troughs. Long-lived and should be split regularly.

P. ioessa — Light shade in moist soils. Short lived so sow seeds regularly.

P. japonica — Vigorous and easy candelabra primula in moist soil. Self seeds readily.

P. x *pruhoniciana* — Hybrid offspring from *P. juliae* with primrose–like plants in various colours such as 'Wanda'. Easy in light shade. Split regularly.

P. pulverulenta — As for *P. japonica* but can tolerate wetter soils. Can be short-lived so sow seed.

P. vialii — Good in light shade in moist but well-drained soil. Disappears for seven months each year. Short-lived so sow seed.

Primula bulleyana

Primula hirsuta

Primula rosea (09) is best suited to wet conditions and *Primula nana* (10) is best under glass in winter.

Wet soils

P. florindae	Vigorous long-lived plants in moist or wet soils at stream sides. Self seeds readily.
P. rosea	Moist heavy soils in sun. Short-lived. Seed should be sown fresh.
P. sikkimensis	As for *florindae* but not quite such wet conditions. Shorter lived so sow seed.

Glasshouse

P. allionii	Easy enough under glass if no water allowed to fall on to leaves. Prone to winter botrytis so keep well-ventilated. Long-lived and easy from cuttings.
P. aureata	Perhaps a surprising choice for easy primulas but is easy enough in a well-shaded cool glasshouse and dry in winter. Will grow outside in cold dry winter conditions.
P. nana	Best protected under glass in winter and kept cool outside in summer. Short lived so sow fresh seed regularly.

Primula aureata is best suited to glasshouse cultivation

Ian Christie and Ronnie Loveland (above) with bulk supplies

Fish boxes are not too difficult to get hold of

Highland Trough Workshop

Davie Sharp

ON ONE BALMY DAY IN JULY, fifty folks from far and wide took part in a workshop in sunny Mosstodloch, not only to produce and plant up a polystyrene trough, but also to plant up a mini trough/dish. There were enough people to form five groups; you've guessed it! Of ten! There were a couple of enquiries from New Zealand and the USA, but unfortunately they couldn't make it, so, therefore, the need for this short article, which will go some way to explain the techniques used in the production of these now well known, if not infamous 'Aberdeen Fish Box Troughs' as originally expounded by Ian Young and others. And for those who weren't there – the pictures give a pretty good flavour of the day as well as the process.

So, don your boiler suits and collect the few tools you need; a hot air gun (usually used to assist in stripping paint), a carving implement (may it be a D.I.Y. surform rasp, a piece of pointed stick, a paint brush handle,

Carole & Ian Bainbridge (our President) getting ready for the fun

STEP 1

Using a knife or surform, start by removing the lip of the box and any square edges.

Once complete, the next job is to use your imagination to produce scores along the sides of the box to represent the strata found in stone. Do this using a knife or, better still, the handle of the paintbrush.


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Next, using the wire brush, roughen up the surface of the box, removing any writing that may be printed on it.

You can still carve or deepen any of the scoring you have already made. Before you are finished using the wire brush, roughen up the top 5 cm (2") of the inside. Finally, make at least four drainage holes in the bottom of the box.


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or a craft knife/Stanley Knife), a wire brush and finally a 6½ cm (2½") paint brush and some external masonry paint. The last item needed is some fine dry sand for putting on the finishing texture. A few words about the paint - use at least three colours; black, sandstone and yellow. How much paint? A test/sample pot of each colour will adequately cover four polystyrene boxes measuring 38 cm x 28 cm and a depth of 13 cm (approx. 15" x 12" x 6"). Where do you get your boxes? Ex-fish boxes can be acquired from fishmongers; if you get them from this source ensure you wash them out thoroughly, as it's been reported that boxes that have not been thoroughly cleaned have been attacked by birds. Supermarkets often dispose of boxes of various sizes, which can be readily used.

Having collected all that is required, you can start to be creative. The process can be split into four obvious steps:

Step 1 Carving or distressing,

Step 2. Resealing or glazing,

Step 3. Painting

and finally Step 4. Planting.

Step 1. Carving or Distressing

This operation can be messy. If you are working outside, do so on a calm day, as when you break the sealed surface of your box, polystyrene granules are released and as you get absorbed in the task you will end up creating a blizzard! Perhaps working in the calm of a shed or garage will help to stop any complaints!

Step 2. Resealing or Glazing

After step 1, the surface of the box will be rough and crumbly, so now is the time to reseal the surface. This operation is best done outside, in the fresh air, as fumes are produced by the hot air gun.

Step 3. Painting

Now is the time to show your real artistic flair, 'slapping on the paint'. The brush stroke to use is the stipple technique; a dabbing action, using the ends of the bristles of the brush lightly loaded with paint. Here goes! Start by dabbing on the black in the scores you have made to imitate the rock strata. (The amount of black you use depends on the type of rock you're trying to imitate.) Then, here comes a slight change to the brushing technique, place dollops of the other two colours on to the box and using the stippling method blend all three colours. Remember! Paint the top inside of the box as well as around the rounded bottom of the box.

Now comes the good bit! Spread a layer of sand, 2–3 cm (1") deep,

STEP 2

Hold the hot air gun a 7½ cm (3") from the box and slowly move the gun over the surface of the box. You will notice that the surface starts to glaze over - this is the objective of the operation. Take care not to let the gun get too close to the box, as the surface will readily blacken. Remember to reseal the inside lip of the box and the drainage holes.


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STEP 3

Start by dabbing dark paint into the indents you have cut.

Next blend them with lighter paint.


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Troughs painted and dipped in sand need to be left to dry for a while.

on a plastic covered surface such as a floor or the ground. Then dip the painted surface of the box on to the sand. This acts like blotting paper! Any part of the box without sand can be re-sanded by scooping the sand on to the surface with your hand.

Allow your box to stand and dry. This may take an hour or more depending on the amount of paint you have applied. Once the box is dry, or fairly dry, inspect it for any unpainted spots that may have appeared whilst drying. Lightly loading your paintbrush with paint and then dabbing it in the sand before applying it to the box can easily treat these.

Step 4. Planting

Cover the drainage holes with plastic windbreak mesh to stop compost from dropping through and to stop worms and other creepy crawlies from invading your box. Next, add your compost to form a mound which comes about 5cm above the side of the box. The compost I use is a loam-based compost; John Innes No 2 or 3 or loam with added granular fertiliser, mixed with 4-6 mm grit in 50:50 proportions. Now putting your artistic hat on, use stone to produce a mini landscape. You could create a mini crevice garden using thin slivers of rock, or use two or three larger pieces of rock to form an outcrop. To top dress, use smaller fragments of stone or grit similar in colour to the rock/stone used. When planting your choice of plants, bear in mind not to use any that will quickly out grow their allotted space. Let your imagination loose!

Aftercare

Water in your plants well to ensure you've not left any dry pockets. The following spring you can feed the trough with a few granules of fertiliser. Water regularly with a weak dilution of plant food.

Polystyrene is a very versatile material. It is light, making it ideal where weight can be a problem such as living in a flat where you have at your disposal a balcony or an extended windowsill. In this case you can produce your own stone in one of two ways. The first is to collect a second box and cut the sides into irregular shapes to imitate slivers of stone. Treat them in the same way as in the trough production. The second method is to cut the side of the box into more regular pieces and to stick them, one on top of the other, to produce a stack of five or more of your pieces. Use wood worker's glue, not a solvent type, or you'll melt the polystyrene. With the aid of a hack saw blade or some other cutting implement start carving the 'stack' to resemble the shape of a rock. Finish off as for the first method. Producing your own stone certainly reduces the weight of the finished trough.

STEP 4

Filling the trough with compost.

One of the troughs ready for planting.

On a day like this you need a good supply of plants available - Ian Christie came with a wonderful range.

Someone is very organised (and neat!)

Lorna Milnes (who organised the Elgin Discussion Weekend) working with Ian Bainbridge.

Two groups well on with planting.

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A couple more pictures of people at the workshop. There was even time for a quick softie.

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A beautifully finished and planted trough.

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And, at the end of the day, a big advantage of a fish box trough is just how light it is!

Pictures by Ian Young and Ronnie Loveland.

Correspondence

Is this plant true to label?

Dear Mr. Holland,

I only recently have read your short article "Is this plant true to label?" in the Rock Garden No. 113 and I am sure I can reply "No, it is not".

I bought this plant in April 1985 under the same name *Edraianthus owerinianus* from the nursery of Mr. Subrt in the town of Horice here, in Czechoslovakia, now the Czech Republic. I was also devoted by its compactness, by silverness of its leaves and by ite good growing properties so that after about six years of its growing at my rock garden I decided to write an article about it for our Bulletin "Skalnicky".

The Editor of the Bulletin was a good botanist and he immediately convinced me that *Edraianthus owerinianus* is a mistaken name for this plant. He showed me a copy of a page from the Red Book of Soviet Union dealing with the real thing. I was able to see there that this very rare Edraianthus looks very differently, having columnary arranged leaves in similar way as have Drabas, and small narrow flowers.

Our plant however must be just a silver leaved form *of Edraianthus pumilio* and that is why some seedlings are without the silver hue of their leaves. We grow it now under the name *E. pumilio* 'Silver Leaf'. I am not sure if Mr. Subrt is the culprit of this mistake. I don't know if he was in fact the first person who had introduced this plant to culture under this name or not. But in subsequent years this plant with the mistaken name spreaded on the whole Europe and I see now also on over the world.

That is what I know about this plant.

Zdenek Rehacek <zrehacek@yahoo.com>

[Editor's note: Merv Holland whose letter gave rise to this reply, also wrote asking if it was possible for the journal to publish a report on the "Highland One Day Workshop" – thanks Merv.]

Iris urmiensis. Photo by Jim and Jenny Archibald.

Plants Without Borders: Modern-Day Plant Hunters

Bobby J Ward

AS GARDENERS, we take pleasure in visiting arboreta and public parks, as well as private gardens, where we value the splendor and variety of plants. But how many of us think about how these plants came to these gardens, or how they got to a neighborhood garden center, a mail order catalog, or the Scottish Rock Garden Club's seed exchange?

The way we garden in the United Kingdom and North America has been heavily influenced by the introduction of foreign plants. Since the 1600s, intrepid plant hunters have introduced numerous additions to our gardens. Bulbous plants from the eastern Mediterranean and Turkey, alpines from the high Himalaya, shrubs and trees from eastern Asia, South African bulbs, and ferns and bright tropical annuals from South America –

Campanula choruhensis. Photo by Josef Jurášek.

all have taken root far from their native lands and have enriched Anglo-American gardens.

Modern-day plant hunters have enjoyed relative ease of travel and welcome comforts unimagined by their predecessors. However, even with modern conveniences, much of the twentieth century held difficulties for these explorers. International political and ideological differences, often resulting in war, thwarted and frustrated explorer's opportunities for collecting in many areas. However, in the last few decades of the twentieth century, diplomatic relationships in such areas were rekindled. Now we are enjoying a new wave of horticultural introductions in the post-Cold War collecting era. Since the closing decades of the twentieth century, a modern plant-hunting renaissance has existed, meeting the demands of a public with considerable leisure time for gardening.

During this period, we have seen the rise of entrepreneurial, private nurserymen who stock their nurseries and catalog listings with plants and seeds obtained on collecting trips to the countries whose doors were formerly shut to plant exploration. These modern-day plant hunters have several common traits. They have a nursery, a business, or a "green industry" affiliation. Only a few are university-degreed horticulturists or

botanists, while most have acquired their considerable skills and knowledge about plants, botany, and horticulture through non-traditional paths. Most important, they are all highly motivated by their obsessions, making them effective and efficient in introducing plants to their customers.

These enterprising plant hunters are part of a continuing tradition of discovery. Their stories are just as compelling as those of the pioneer explorers in earlier times and their collections are just as valid. They have reintroduced plants lost to cultivation, found hardier forms and geographical variants from higher elevations, recognized "new" plants with garden potential, and even found species new to science as well as additional source material for breeding and hybridizing new varieties. Some focus on one family or a single genus, others on a specific geographic region or on new forms and variants.

Their enthusiasm and passion rarely translate into financial gain or public recognition. Except for their own plant catalogs, seed lists, and occasional magazine or society journal articles, these plants-people rarely publish anything about their horticultural efforts. For most, when they retire or pass on, their considerable specialized knowledge will be lost.

My interest in these contemporary plant explorers came from attending study weekends and annual meetings of the North American Rock Garden Society where I heard some of these explorers, including some from the Alpine Garden Society and the Scottish Rock Garden Club, tell of wondrous new plants they were finding and growing. I was smitten when I attended the Alpines 2001 Conference in Edinburgh and had a mind-boggling midsummer's eve stroll through the Royal Botanic Garden's alpine house and rock garden, displaying plants from all corners of the globe.

I have spent the last five years gathering information on several dozen contemporary plant hunters, talking to them in person, on the phone, by email, fax, and by post. I have traveled with them in the Andes, in Mexico's Sierra Madre Oriental, and in the urban gardens of Prague. I have followed their footsteps in the floral richness of Cape Town and in the amazingly diverse rooftop nurseries in downtown Tokyo. Even with this limited shared experience, I have come to understand the importance of these rare individuals. I am pleased to preserve some of

their horticultural contributions and a bit about their lives in my new book, *The Plant Hunter's Garden*. The following short overviews are a sampling of the unique personalities and the marvelous finds I cover in the book.

Chris Chadwell's passion is the Himalaya, having spent twenty or more seasons there, earning him recognition as an authority on the plants in the "abode of snow." Chadwell's interest in traditional medicinal plants led him to be an advisor for a time to the Royal Government of Bhutan, as herbal formulations remain a primary health care feature of the region His garden in Slough (Berkshire) is crammed full of plants from his trips, including *Geranium himalayense*, the seed of which he collected beside a glacial lake in Zanskar on the border of Tibet with his bride Dorothy on their honeymoon. His photographs of *Meconopsis aculeata* and *Androsace muscoidea* quicken the heartbeat. Many of his introductions are now firmly in cultivation, and his seed subscription service remains popular with alpine enthusiasts in the U.K. and abroad.

Romulea discifera. Photo by Rod and Rachael Saunders.

Crocus scardicus. Photo by Jim and Jenny Archibald.

Alstroemeria werdermannii subsp. *flavicans*. Photo by John Watson.

Jim and Jenny Archibald say that seeds are dreams in packets, and they bring an intellectual approach to the business of contemporary plant hunting. Their trips have taken them to Uzbekistan in central Asia, the Mediterranean and Middle East, South America, South Africa, New Zealand, and the American West. Seed lists include *Muscari mcbeathianum* discovered by them in Turkey in 1985 at a site now lost to livestock grazing. Re-introductions to cultivation include *Iris urmiensis* and *I. paradoxa*. There are also seed from clonal forms of *Helleborus* x *hybridus* made by plantsman Eric Smith, who at one time ran a nursery (The Plantsmen) with Jim. They include 'Ariel', 'Electra', 'Miranda' and 'Pluto', the latter blooming for me in my North Carolina garden each February, annually reminding me of the Archibalds and the warm gooseberry tart they served me in their home.

Our alpine gardens are richer for the contributions of three Czech plant hunters, Josef Halda, Josef Jurášek, and Vojtěch Holubec, who have added gentians, campanulas, Edraianthus, daphnes, saxifrages, and drabas, to name just a few examples, to their annual seed catalogs. Over beer in a noisy Prague pub, Jurášek and Holubec related stories to me about their numerous foreign plant hunting expeditions. There were frightening

Androsace muscoidea. Photo by Chris Chadwell

revelations about remote areas where highway robbers demanded money and cameras (but fortunately not their concealed collection of seeds). At times, there have been sticky political situations and suspicious border guards unaccustomed to dealing with foreigners who say they are entering the country solely to collect seeds for their flower gardens. On one such trip in the Caucasus, some members of the Rock Garden Club of Prague (whom Vojtěch affectionately describes as "people who are crazy for alpines and mountain plants") were taken by the army and jailed for two days for "violating border laws". Upon their release, they were honored as "important guests" at a celebration by the villagers.

Josef Halda has made seed available from the most inaccessible of places (the portion of Tien Shan in Kazakhstan, for example) and his botanical monographs on gentians, daphnes, and primulas, illustrated by his wife Jarmilla, have earned him all-star status. He is a frequent traveler to North America where he has prepared rock foundations for dozens of rock gardens. One, affectionately called Mt. Halda, is at Siskiyou Rare Plant Nursery (Oregon).

Rod and Rachel Saunders specialize in plants from "the fairest cape ... in the whole circumference of the globe." They have operated Silverhill

Primula dryadifolia.
Photo by Josef Halda.

Seeds for 15 years in Cape Town, collecting seeds when weather, seasons and fires dictate. Rachel also shares duty as the editor of the journal of the Indigenous Bulb Society of South Africa. The Saunders were once trapped in a cave by a flooded river in the Chimanimani Mountains of Zimbabwe. They emerged three days later chilled, without food, and all their seed packets drenched. Still they have provided us with the opportunity to grow Dimorphotheca, Osteospermum, Romulea, and Aloe. Few of us know the handsome restiod reeds, such as *Elegia capensis* and *Thamnochortus insignis*, both of which would dwarf a rock garden, but which regularly appear in their lists.

Panayoti Kelaidis of Denver (USA) has been fascinated with South African flora as well, primarily the high elevation, cold hardy plants of the Drakensberg, promoting *Zaluzianskya ovata*, *Diascia integerrima* (a selection called 'Coral Canyon'), and ice plants (Delosperma). I have stayed up late with Panayoti, the rest of his household asleep and my eyes heavy from jetlag, to listen to "just one more plant" that he saw in the Drakensberg His passions also take in the indigenous flora of Colorado and the intermountain basin of the U.S. West, an area of low rainfall, cold dry winters, and hot (low humidity) summers. He, and his spouse Gwen, have promoted *Aquilegia scopulorum*, *Salvia dorrii*, and *Prunus besseyi*, the latter a dwarf form of the Colorado sand cherry.

The uplift around volcanoes in Chile and Argentina is one of the areas of concentration for John Watson and Anita Flores de Watson. The two have mastered the challenging identification of Andean flora on their own seed collecting trips and on expeditions they have led for the Alpine Garden Society and others. I have traveled along the northern Chilean coast with them, admiring yellow-flowering *Rhodophiala bagnoldii*, becoming horrified minutes later when the plants were bulldozed by

highway construction crews, an indication of the rescuing nature of their work. A well-known specimen of gardens is *Mimulus naiandinus* and a selection, 'Andean Nymph', has become popular. *Ourisia polyantha, Anarthrophyllum desideratum,* and numerous Alstroemeria are among the jewels of their efforts. Currently they are working on a flora of the Andean Viola, both the rosulate and non-rosulate species, and are contributing sections to the series of *Plantas Altoandinas,* the Chilean flora, published by the Fundacion Claudio Gay (Santiago).

We are fortunate to be living in an era when so many choices of plants are being made available by contemporary plant hunters. As long as there is enthusiasm and inquiring minds, we will have "new" plants to take pleasure in growing. David Attenborough wrote in 1989 in the foreword to *Plant Hunting for Kew*: "The heroic days [of plant hunting] are by no means over. Here is a chance to savour them while they are still dawning."

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Bobby J. Ward, Raleigh, North Carolina, USA. Email: biblio@nc.rr.com

[Editor's note: Bobby Ward will be speaking at the Alpine Garden Society (Devon-Exeter Group) on 17 February 2005 at 7:30 p.m. at St. Peter's Church of England High School, Quarry Lane, Exeter. He is also talking at The Eden Project on 23 February 2005 at 6:00 p.m. at The Foundation Building, Bodelva, St. Austell, Cornwall. The title of both talks is "Modern-Day Plant Hunters."]

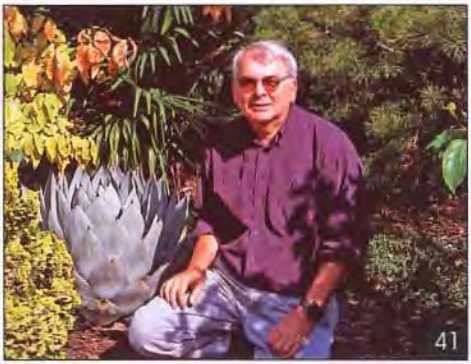
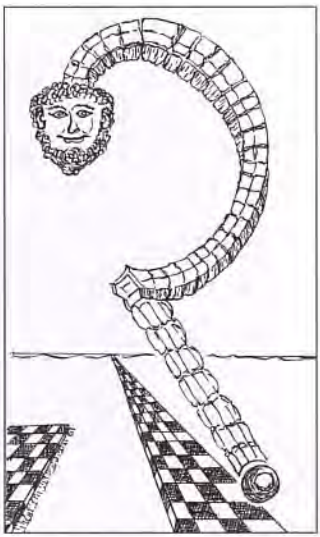


Photo of Bobby J. Ward by Michael E. Chelednik.

The Elements of Natural Rock-Gardening

Francis Ferns



"There ance was a very pawky duke
Far-kent for his joukery pawkery. He
owned a hoose wi' a grand outlook, A
gairden an' a rawkery".

ex *A Border's Omnibus*, Lavinia Derwent

THIS ESSAY IS TRIGGERED by watching yet another mismatch of design and technology on TV; aided by a virtual unreality computer image, abetted by a bulldozer and cement mixer to produce a monument of unstable equilibrium, worthy of Picasso at his meanest. I admit that some high profile designs are excellent in their execution and finished effect; but in so many cases I have to ask ... could not something better have been done? Something that does not entail re-mortgaging the house; something that is more economical on both labour and materials; above all, something that is plant friendly and resident-gardener friendly in the long run.

My theme embraces the use and misuse of stone in garden design; in particular its use and purpose in rock-gardens. Finally, whilst I agree that the arts of growing and competitive showing should be energetically developed, I suggest that the current emphasis on the acquisition of more species combined with a proliferation of the hybrids of horticulture and their cultivation, is pushing the arts of framing the picture, of overall garden display and presentation, too far into the background. I greatly regret this.

I am about to try to point the way to use stone to create a rock-plant-garden; always reminding myself that the word derives from the old Norse "garthr" = a yard; a usage still prevalent in

North America where even the largest of gardens may be called a yard; a modest plot, a humble, unpretentious, comfortable space in which the plants, rock plants and alpines in this context, can flourish, be shown at their best and be enjoyed by their humble owners, who, in so doing, may show a little pride for their effort and achievement. I am also aware that gardens are very personal creations; so there are many styles and ways in which stone can be used to make a rock-plant-garden; however, better not to be too ambitious, perfection often lies in simplicity; pride, the Greeks of old did say, tends to be followed by a fall.

To do justice to my theme, I need to take a critical look at the oracles, both western and eastern, to try to identify the sources of present-day thinking.

I limit my brief to consider the historical sources and evolution of the current Western use of rock in a garden and the older Far-Eastern one; they are patently different, though some writers have suggested that at one time they might have had a common root in Assyria. The legendary Hanging Gardens of Babylon, the Paradise Gardens of the Tsao gods of China, and the Garden of Eden have a certain similarity in their story-line; "pairidaeza" is an old Persian word. I am focussing only on rock work for rock-plants, not Stonehenges, not the landscape gardens of antiquity, or of Brown, Humphrey Repton or the designers of present-day golf courses.

In so limiting my brief I have to omit terraces and troughs; but I must take space to say that both are without equal for the infirm with creaking joints or to provide for close inspection of small plants in macro-habitats and with special cultivation needs, in particular the control of seasonal watering, soil mixtures and feeding. They can be fitted comfortably into any garden space and solve a changed in ground level with ease; but they do lack character. Maybe I should include the frame and the alpine house; but I see the genii of Giant Technology rear their ugly heads. No one could call the alpine house at Kew ornamental; even if beauty is reputed to lie in the eye of the beholder.

Farrer, Robinson and Ruskin

Reginald Farrer (1880-1920) was the leader in his day for the cult of the natural rock-garden, but not the creator of the idea. Farrer himself gives credit for that to ... "Mr Robinson the great and

good" ... so confirming William Robinson (1838-1935) as the creator of alpine rock-gardening. Robinson's interest, during a long and active life, lay clearly in horticulture, that is in plants. That horticulture should take second place to architectural design was anathema to him. In 1871 he published a magazine called "The Garden", to be devoted to ... "pure horticulture of the natural or English [sic] school; free from rigid formalities, meretricious ornaments, gypsum, powdered bricks, cockle shells and bottle ends" ... all echoed by the nursery rhyme about contrary Mary. His condemnation is as robust as that of Farrer.

Farrer, like Robinson, was severely critical of the Victorian style of garden construction and design; particularly of the way rock was used. He condemned Victorian garden taste as ... "formality without beauty, extravagance without value". I long to quote him at length; his dauntless prose makes me laugh; his argument however makes me think, as he scythes and tramples his way through swathes of Victorian pretension and hubris. He throws a shower of sparks at Sir Joseph Paxton (1803-1865), the designer of the Crystal Palace for the Great Exhibition of 1851. He dismisses John Ruskin (1819-1900), the artistic doyen of taste for the era, as ... " an admirable and very verbose writer of doubtful mental balance through most of his life and quite off it in later years". In so doing, he tended to ignore the facts that Paxton was a successful construction engineer, in particular of glasshouses, with a horticultural grounding and Ruskin was a graphic artist and painter ... "If you can paint one leaf, you can paint the world", he wrote.

Ruskin's fault lay in the fact that he avoided a strict scientific study either of the leaf or the rock-work of the landscapes he painted; faults he admitted, but still did not study to overcome. He just did not like the precision required by the scientific disciplines developing around him.

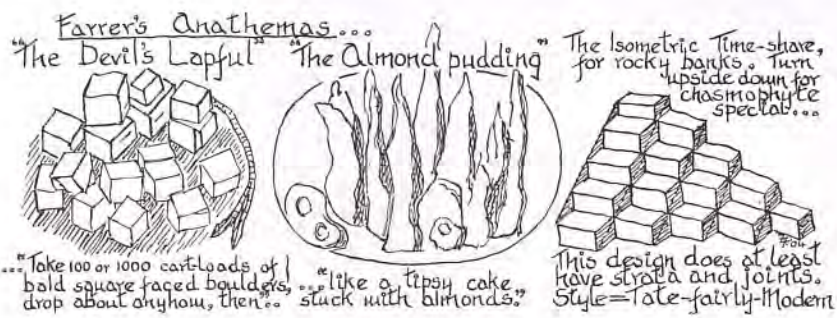
Farrer in his own way was not all that far removed from Ruskin; both were products of the mid to late 19th century. It is unfair, for example, to blame Victorian bad taste on the action by the Director of the Apothecaries' Garden at Chelsea in 1772 when he dumped some 40 tons of stone from the Tower of London and volcanic lava brought from Iceland by Sir Joseph Banks with a topping of flint and chalk in the, now named, Chelsea Physic Garden. The RHS *Dictionary of Gardening* (1992) reports that it

still exists. However, I read further to find that by 1890 at Friar Park, Henley-on-Thames, Sir Frank Crisp used 7000 tons of rocks, some weighing up to 6? tons each, to build his rockery: by 1947 that rockery had become another casualty of the Second World War.

Both examples were novelties of their time: innovation carried to excess, perhaps. Gertrude Jekyll reports that Henry Correvon of the Jardins Floraire, Geneva, found beauty in Sir Frank Crisp's masterpiece. He said ... "What constitutes its beauty is the harmony of the lines, and above all the dimensions of the plants with regard to the rocks": both were contributors to Robinson's magazine "The Garden". A note I found by C J M Adie, written in 1949, points out that in his youthful memory Crisp's rock-garden and grotto were not as bad as they sound in print. He found them quite exciting ... "The upper or 'Matterhorn' was a perfectly well constructed rock-garden, built largely of cyclopean blocks, covered with a vast and varied collection of well grown alpines; to those not interested in the plants, its most striking feature was the whitewashed concrete replica of the Matterhorn."

Farrer's Recipe for a Perfect Rock Garden, circa 1900

On the building and creating of the urban rock-garden Farrer



starts boldly ... "The ideal rock-garden must have a plan". Then he dips his pen in acid and lambasts three prevailing techniques. Although well known to informed readers of the literature I will repeat and illustrate as best I can and in so doing have added one more. He goes on to rule making ... "There is but one. Have an idea and stick to it. Let your rock-garden set out to be something definite, not a mere agglomeration of stones". It all seems frighteningly awful advice; especially when one analyses the content and counts the number of times it is ignored; maybe that arises because he was not very specific.

Farrer never really mastered the handling of rock to make it look truly natural: "natural" in this context meaning the presentation of the visible rock structure as it emerges from the underlying bed-rock. No more had Ruskin attempted to understand geology or botany; although both, including their successors, scattered their text with exhortations to readers to make their work look "beautiful" ... look "natural". They never dug deep enough to discover the reality of rock.

If you are tempted and are thinking of copying the wilder aspects of Earth's landscape ... beware! Keep in mind that such habitats are tricky to convert from dream to reality and difficult for rock plants to colonise. The nearer one gets to the permanent snowline, the fewer the plant species, the more barren the rock and, coming right down to earth, the result may make your lovesome thing more difficult to sell in the long run.

The 19th century gardeners and landscapers have left a legacy of design faults, both on the ground and in their writings, which has clouded the minds of their successors to the present day. The teaching of Robinson and Farrer, with their emphasis on what grows naturally still has not erased it. Nor, for that matter, did Gertrude Jekyll (1843-1932) in her writing, in particular in *Wall and Water Gardens*; an admirable book, full of ideas, but all the rockwork in the photographs seems to tumble indiscriminately like Farrer's "Devil's Lapfuls". I give Paxton's monumental work at Chatsworth as a prime example.

Such simulated boulder-filled streams are rarely seen in a day's walk in the hills. Those found, like fantail screes and rock falls, make poor living conditions for a diversity of alpine and rock plants. The most recent example is to be found at the National Botanic Garden of Wales, Llanarthne, where a most adventurous

Three views of Paxton's monumental rock garden at Chatsworth – a prime example of Farrer's 'Devil's Lapfuls'

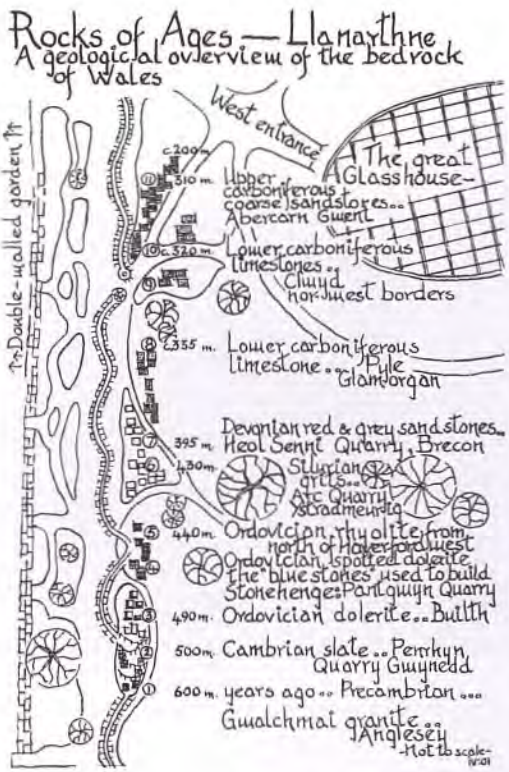


tableau with a geological story-line is presented as a Celebration of the Geology of Wales. There is not a plant in sight on the rock-work which looks as if it has been scrubbed with a wire brush. I would love to plant it up with primula, iris, dwarf willow, heathers and a myriad more to clothe the raw nakedness of quarried blocks of stone; after all Middleton purports to be a botanic garden, and in that respect it is definitely worth a visit along with Aberglasney nearby.

I have only seen one wholly successful geological and botanical combination in my travels over the years. That was in the Denver Botanic Garden, Colorado. There, both rock and plants are cleverly and interestingly used in their proper botanical context; lime haters are to be found on granite rock work, lime-lovers on limestone, a modest dry-stone stream with small rock and pebbles, another corner with slatey strata and tuffs; somehow it all fitted together comfortably and the plants seems happy. It is a rock-plant-garden not just a garden of rock scattered with plants or a plantsman's garden scattered with stones.

Farrer progresses to eulogise about Japanese gardens ... "Someday when the ship of my fancy comes home, I will have a Japanese build me one of his perfect gardens." Again, he did not work out why the Japanese style, as he saw it, was so satisfying to his aesthetic taste; he would not ... "plunge into the sea of their mysticism and symbolism in design".

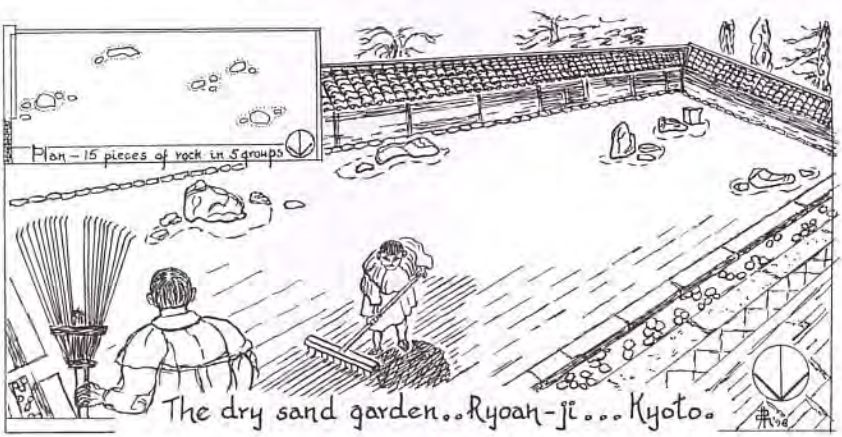
I am about to do so, to a limited degree. Fools rush in, they say. Are there any angels left since Darwin to tell me where they would fear to tread?

Echoes From The More Distant Past

The evolution of Japanese garden styles, like those of Europe, can be seen running parallel with changing periods of social history. None of the original gardens remain; only vestiges preserved by the religious orders to which they had been donated by their owners. The styles are gleaned from paintings and texts. Probably the earliest to be recorded was the Heian style (794-1184). Japanese gardening drew inspiration from earlier Chinese styles; initially influenced by the mythology surrounding their Tsao gods, the Immortals of Chinese legend who lived in a paradise land. These gardens were a model on earth of their heaven, a lifelong reminder of the state that man, the feudal landowner, might achieve and aim for, every time he walked through them.

As Japan began to assimilate and copy the rich source of Chinese thinking and technology, the polytheism of its Shinto religion was absorbed by the growth of Buddhism. Buddha was born c. 530 BC in India. Japan acquired Buddhism from China by way of Korea. This was a more unified religion, which in its more developed stages, taught, among other things, that heaven, man and earth were a trinity through the study of which man could achieve enlightenment.

The dry sand garden in the Ryoan-ji temple complex at Kyoto contrasted so sharply with the symbolic clutter of quasi-Japanese



gardens which I had seen in Britain, that at first sight I had not realised that it really was a garden. It is the absolute in rock-garden design, comprising a carefully raked area of white sand, perhaps the size of a tennis court, with a few judiciously placed stones or rocks; not a plant or tree to be seen, only the moss around some of the stones.

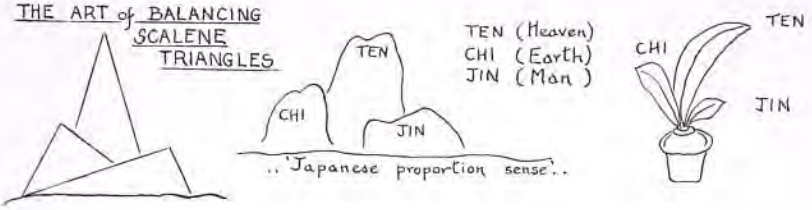
This design sprang from the influence of Zen Buddhists in the late 13th century; a breakaway group that looked for enlightenment, not through faith or unquestioning acceptance of unproven dogma, but through meditation, reflection and the discarding of the old mental habits. Such a garden has been created to enable the beholder to achieve a tranquil frame of mind and better understanding by striving for a completely blank mind; for, as one old, too oft quoted, Buddhist text puts it ... "Who discovers nothingness is law, such a one has wisdom". It all depends what is meant by "law" and "wisdom" in the context and understanding of the interpreter who made the translation from the riginal texts.

Zen also drew on the ethical and moral teaching of Confucius, who placed more emphasis on the development of the mind by positive thinking rather than by negative meditation to achieve Nirvana through enlightenment.

The sand garden at Ryoan-ji remains, a place for meditation for some, a place of wonder, may be of awe, for other philosophies. The denial of living things in a garden is not acceptable however for those of us who wish to grow rock plants. Rock has been used to create a place to relax the mind and so aid meditation and deeper thought in the long search for ultimate Buddhist truths.

Be all that as it may; generations of Japanese minds have had instilled into them a sense of proportion and balance which has become almost instinctive. It is evident in the present day in the basic teaching of flower arrangement techniques and in the Tea Ceremony rituals.

A Japanese member of the Alpine Garden Society confirmed my opinion twenty years ago. Junichi Hagiwara then told me that he had recently written a book ... "The first published rock-gardening book in Japan. When I had a plan to write the book I really didn't know what to do. Already I had a big rock garden, but I had not a theory what to do. Japanese rock-garden had a proud history of its own, and everybody possess the arrangement instinct; for example the flower arrangement theory, Ten, Chi, and Jin."



More recently I wrote again when trying to reconcile the western approach to rock-garden making with the Sino-Japanese approach. I found his comment telling because from our respective viewpoints and backgrounds each of us has had difficulty reconciling the eastern and western styles. I risked sending him the draft of an article I had written for the AGS *Bulletin*. I copy three sentences from his very full reply, assisted by his word processor, which he tells me does not fully convey his meaning. I find that the quaintness of the computer translation has a certain charm; also to me it underlines the difficulty of conveying the ideas, the idiom and the nuances of thought, not fact, from one language to an alien one with a different culture and structure; this can so easi;ly cause misunderstanding ... "thank you for a thesis you sent me. Contents are as it is respectable and it isn't thought there was a foreigner. Knowledge is very necessary though I am as it thinks it wants a Japanese to read it" ... I still wonder ... did I get it nearly right? I now condense it to the art of balancing the scalene triangle; balance is the essence.

THREE SKETCHES from JUNICHI HAGIWARA'S Letter SHOWING DIFFERENT BALANCED PLACINGS of CONIFERS or EVERGREEN PLANTS.

Perusal of the recognised historical periods of Japanese garden design, shows that, as the centuries passed, the original concept of the Paradise Garden, seemingly an eastern presentation of the Garden of Eden, both shrouded behind a web of allegory and myth, evolved, dissolved and resolved; especially when it came into

contact with the younger western European and American styles, which broadened the horizon of the garden builders who in their turn were losing contact with the original thinking and purpose instilled by the Buddhist philosophy and rigid orthodoxy of Zen.

Moving forward from the Nineteen Twenties

We now enter the age of the alpine gardeners. The Alpine Garden Society was first off the mark in 1929 followed by The Scottish Rock Garden Club in 1933. Stormonths, Reginald Kaye, Hocker Edge, Will Ingwersen and Clarence Elliott were names of nurseries and nurseryman to conjure with. Gentians, primulas, violets, ramonda, jankaea, daphne, Kabschia and Engleria saxifrages, and sempervivum species were torn from the rocks of European and Balkan alps to cover the rock work of the stonemasons.

The accent has always been on plants. It is hard to find any positive theme or style in the use of rock-work as an attractive garden feature fit for growing or display of alpine or rock plants. I ask, if you found a beautiful picture, would you not frame it and hang it in a special place, where it was shown to its best advantage? Why are not beautiful plants treated likewise? The Japanese have the ability to do so and take great care to frame the picture from their living room windows; even their Bonsai pots help to frame the plant and give it space, not crowded, in what I call Old English Bluebell Style, with visions of weekend pedal cyclists, rushing home with armfuls of bluebells on the carrier, to be crammed into jam-jars and forgotten. The Scottish style is more prone to bundles of heather.

So often in the west, rock has been scattered along a bank where the ground falls away or rises between level lawns; not even as useful a style as a terrace and dry stone wall, but probably much cheaper and certainly easier to construct. My father had such a rock garden built by a local nurseryman who plied his trade just down the road. Alyssum, arabis, aubrietia, rock rose, grape hyacinth, chionodoxa, mossy saxifrage and *Saxifraga aizoon* (now *Saxifraga paniculata*) were planted in small boxes of stone, a sort of honeycomb style, called pockets. The stone was the locally available Kerridge sandstone. I was given a corner at the bottom of the garden; three mounds of earth, dotted with a few pieces of

rock, with a buddleia overhanging it, on which I tried to grow the golden rain of *Chiastophyllum oppositifolium*, *Veronica spicata*, *Sempervivum tectorum*, thyme and *Dianthus deltoides*, until the buddleia outgrew its strength and died. Contrary-wise, the rock-plants began to perk up and flourish. Gentians *septemfida* and *sino-ornata*, *Iris lacustris*, and *Campanula* 'Warleyensis', the double one, were added ... then we moved.

I still look through the gate of "Green Oaks" when I drive past occasionally. The present owner has cleverly levelled the old gravel and marl path, reduced the pockets and top dressed the whole with grey-pink Hilton gravel, simulating a scree, with large slabs, placed stepping stone fashion, leading to the front door; a distinct improvement to what I remember. The early nineteen-thirties were still an age of the pick and shovel, and the horse and cart; at dusk the lamplighter passed by lighting the gas mantles in the road outside ... quite magical.

My Japanese friend JH put it succinctly, when he wrote in 1981, giving his impression of rock-garden construction in Britain ... "It is easy to introduce the English rock-garden making to Japanese people. It is suited to the small gardens that are found in every corner of Japan; but the westerner never admires the rock arrangement. Japanese have the trained eyes to understand the garden as a work of art. For example, the Royal Botanic Gardens located at Kew and Edinburgh, I know both of them are very popular for Japanese alpine lovers and both these gardens are interesting about the plants ... but ... if there are no plants there will be only ruins."

Nevertheless the old basic skills and basic teaching still shine through to show a masterful sense of balance and proportion, the most recent examples being the refurbishing of the Japanese garden at Tatton in Cheshire and the garden at the Chelsea Flower Show 2003 which, for the moment, is to be found within the Walled Garden at Middleton, Llanarthne, Wales. They exhibit the exercise of a skill which we should look for and study, when trying to build and plant our own small rock-plant-gardens. Note I write 'study', I do not mean slavishly to 'copy'.

In Japan the Paradise Garden has shrunk to the Tea Garden

and small Tsubo gardens of courtyard and passage-way. Fly west again to return to our own cabbage patch; for such it is and such it was. In both east and west land scarcity has reduced the size of our own back-yards; the front too, so often being nothing but a car park.

The Cabbage Patch

Hech mon! The pawky duke!
Hoot ay! An' a rockery!
For a bonnet laird wi' a sma' kailyard
Is naethin' but a mockery" ...
... Mebbe ye'll need a glawsary.

I have redrawn a plan I found for a small three metre garden, masking most of the symbolism, but I think retaining the balance, the style and the frame. In so doing, I suddenly realised that none of it is natural, within my definition, except the plants. To keep it in proportion the tree would need partial Bonsai treatment by root restriction, or if an apple was chosen, one grafted on a dwarfing rootstock. The stone birdbath is a practical substitute for a stone lantern. You may exercise your ingenuity in searching for scalene triangles in the stones around the little bubbling cauldron under the tree. Cover the ground with sand or gravel and you have a setting for saxatile alpines which would grow naturally and retain a sense of proportion.

Nevertheless, despite the attractions of this Japanese formality I would advocate the principles set out in *Natural Rock Gardening* by B H B Symons-Jeune, which was published in 1932. It is not an easy read and requires concentration; but so does building good natural rock work.

Very old are the rocks and no one knows
Through what wild centuries roves back the rose

Building good natural rock work is the art of creating the illusion of reality. In discovering how the bedrock is formed and altered by time long gone, a little of the geologist's sense of time may rub off; a humbling experience requiring no dogma, philosophy or theism; I

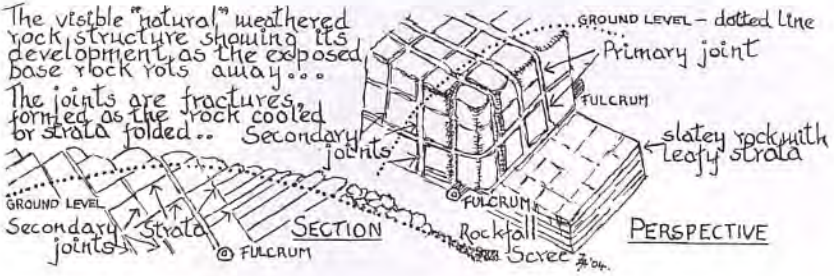
submit that rock requires respect at all times and in all places, naturally so, even for the climber and walker in the wild.

First a definition of a natural rock-plant-garden. Symons-Jeune suggests that it is one where the quarried rock has been so placed that it retains its fundamental character, when fitting the rockwork into the available garden space. The finished result should be a balanced impression of the true rendering of the emergent bedrock, or say an outcrop in the wild.

That is not to say that you have to try to fit together the pile of stones lying on the driveway into a cube of quarried rock weighing a ton or two, a kind of jigsaw puzzle and Rubik cube exercise; but you must study its strata and determine where the individual stones have fractured across the strata, these are the jointing lines. In the handling of the jointing lies one of the secrets for the creation of the illusion of natural rock.

Looking at the exposed face of stratified rock, one tends first to see the strata and angle of dip to the surrounding ground. You will first need to determine both these in your rock garden construction. The section diagram shows how strata can lie beneath the surface of the ground. An angle of dip or strike or both of less than say 25° is easier to handle and more likely to remain stable than any closer to the vertical.

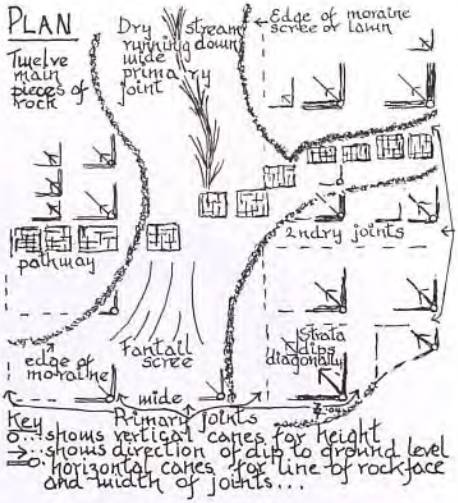
The appreciation of jointing is harder to achieve. I have tried to show it in the perspective sketch which looks rather like a stack of Yorkshire limestone viewed from above with its deep erosion



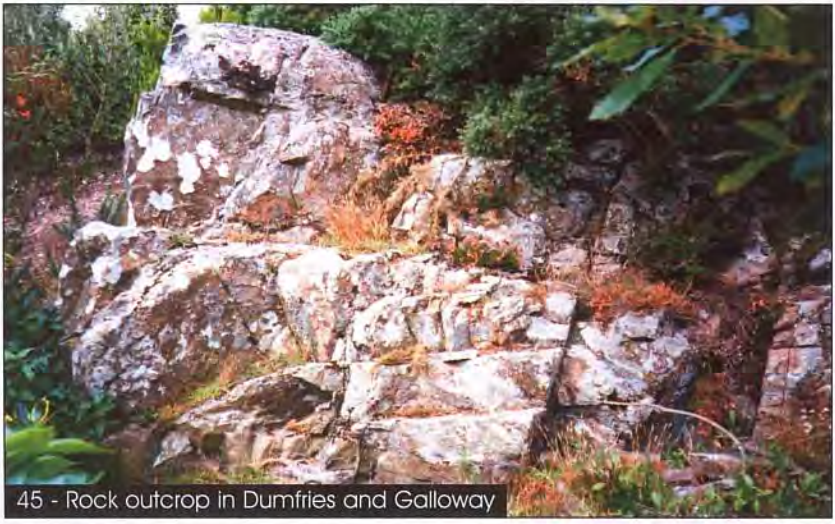
grykes. Once understood, the variations are limitless, but are best kept rigidly lined out, as shown on the plan; otherwise the rockwork will look disjointed!

You must have a plan; that rings a familiar bell. Unlike Farrer, I mean a plan on paper and on the ground. I suggest that you use a

bundle of metre length canes pushed in as indicated by the small circles on the plan. However, you must go to the hills to look for a style you like and think will fit into your garden and study it. Any rock exposure on planet Earth is not necessarily right for a small garden. The hexagonal organ pipes of Fingal's Cave, the twisted and contorted strata to be seen at Lulworth Cove, the acres of weathered limestone or foot scraped pavement at Malham; not forgetting the Matterhorn and Everest, are not suitable examples to study for the small rock-plant-garden. Plants are few on these awe inspiring, wonderful, majestic and often barren manifestations of restless earth activity. I give one example which may help to explain jointing a little better.



The picture of an outcrop of native basic rock at Glenwham, near Logan in Dumfries and Galloway, is a practical example to


45 - Rock outcrop in Dumfries and Galloway

study. The main strata dips from left to right of the picture; it also falls or strikes, at a more gentle angle from front to back, into the ground. The primary joints run at an angle about 10° from the vertical, the widest being the rock face at right angles to the camera where the soil and rock has completely eroded away, leaving a bluff or buttress which gives strength and firmness to the whole. The hairline cracks on the face are just shattering of the rock as it crumbles away; better not to try to imitate them. Be warned, even if you had such a truly natural outcrop in your own garden it would be hard work getting anything like an androsace or Kabschia saxifrage to establish itself and flourish, because, wet though the west coast of Scotland may be, the seedlings would have to struggle against drought in summer as the surface moisture drained away; *Sedum dasyphyllum* or thyme or *Dryas octopetala* might manage, but they are not very exciting these days. To simulate the structure and make it more plant friendly, it is necessary to widen the primary joints and some of the secondaries and indicate the strata with just a few rocks which would run water into the main mass of gritty loam which in turn would be substituted for the main mass of barren bedrock. The sketch plan only uses twelve large key rocks.

Oh Dear Me!

My other photograph needs no comment. Farrer made it all, years ago. The rockwork shown has been part of a large garden in

46 - No comment!

Northumberland, which has been split up into smaller residential plots. It could have been built sometime between 1910 and 1930. The rock seems to have been placed edgeways on to make pockets; ash trees, holly and fir have seeded and grown to maturity over the past 80 years and torn apart any semblance of order, only the crazy-paving remains intact. As a final blow the planners in their wisdom placed a preservation order on the trees, and that was that. Until, one winter at the end of the century the wind blew hard and long; now the owners of the garden have a clear kailyard ... an ill wind! I think not.

A minor poet wrote "A garden is a lovesome thing. God wot!" but don't fall in love with the framework of your rockery, until, like Pygmalion, you have completed the sculpture; then and only then you should breath life into it by planting and cultivating the rock plants for which you built it. Then, may both be happy the years long. You may even have created a work of art.

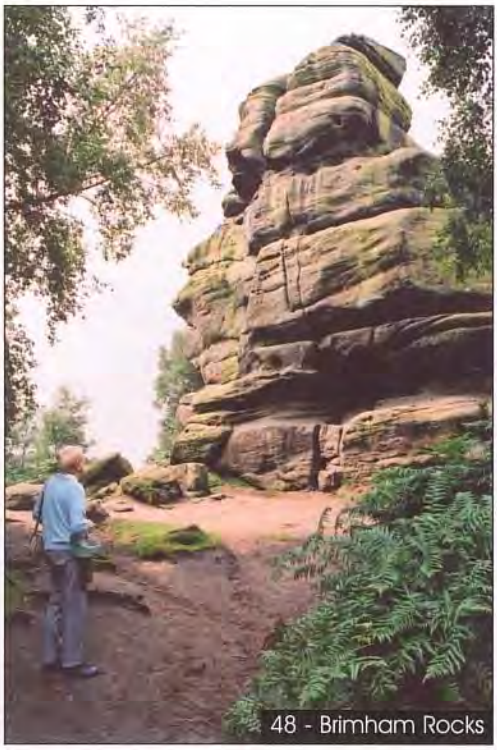
47 - Harlow Carr replica

P.S. The Harlow Carr concept of garden design through the last few decades needs a year or two to mature; by which time th eplant growth will have camouflaged the artefacts, but even that will not create the balance which Correvon and Jekyll saw at Henley-on-Thames.

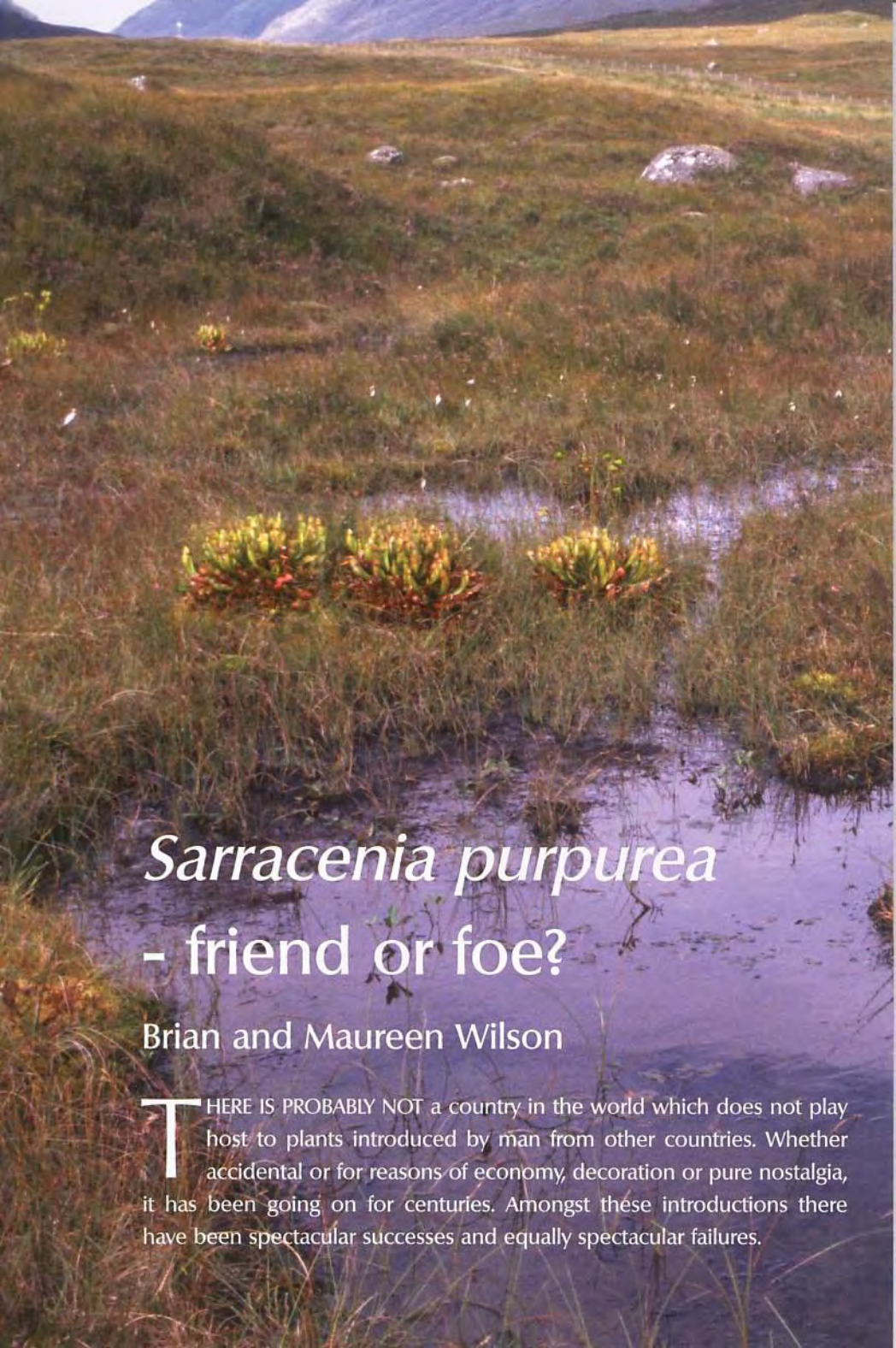
Much energy and thought has been expended; not all of which has impressed me in its execution as much as it seems to have impressed others. I focus only on the rock-work, namely the replica of Crisp's and the cement-rendered grotto of rubble and brickwork historically known as Pulhamite.

A pile of 3–5 cwt. (150–250 kg) or less of quarried stone blocks does not do justice to the Friar Park replica and rockery which reportedly used stone blocks weighing up to 6½ tonnes each; further the replica was some 30 ft high and said to be to scale. The Harlow Carr replica of this cannot begin to give a fair impression of the robust design style of the period it is supposed to represent nor of the elegant pinnacle of the Matterhorn itself viewed from the Swiss side, that is to say from Zermatt. The same mountain viewed from the Italian side, Cervinia, looks rather more solid; nevertheless, a 30–90 ft fir tree, a mile or more distant from the observer needs to be represented, in a model of a mountain 500 times higher than the lowland forests and deserted landscape it towers above to the open sky, by mosses rather than young conifers. The combination of planting and rockwork does not, nay cannot, achieve any balance of scale.

Would it not have been easier and more telling of the period to create a Farrer "Devil's lapful"? I went next day to do Brimham Rocks ...*golly what a rawkery!*



48 - Brimham Rocks



Sarracenia purpurea - friend or foe?

Brian and Maureen Wilson

THERE IS PROBABLY NOT a country in the world which does not play host to plants introduced by man from other countries. Whether accidental or for reasons of economy, decoration or pure nostalgia, it has been going on for centuries. Amongst these introductions there have been spectacular successes and equally spectacular failures.

49 - *Sarracenia purpurea* colony on Rannoch Moor

ALIEN CLIMATES often do not suit introductions, conversely others thrive so well that they escape into the wild and become a threat to a country's indigenous flora which in turn upsets the whole ecology. Examples of garden escapes that come to mind in Scotland are Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*) not to mention *Rhododendron ponticum*, all originally introduced for their decorative properties and now a menace in the countryside. Hindsight is a wonderful thing and our garden-loving ancestors can be forgiven for not foreseeing the effect these introductions would have when they got out of control.

Equally worrying is the situation whereby someone deliberately sets out to plant a 'foreign' plant directly into the wild. One plant growing wild in Britain and believed to have been planted deliberately is *Sarracenia purpurea*, one of around eight species of Pitcherplants from Atlantic North America. It was first knowingly planted in a bog in Central Ireland in 1906 and has become widely naturalised there over the years. Interestingly, two other species (*Sarracenia flava* and *S. leucophylla*) which were planted at the same time, did not survive.

On mainland Britain there are a few isolated clumps of *Sarracenia purpurea* (for example one in Surrey and four in Cumbria) which are thought to have been deliberately planted, although no one is quite sure. The southern plant has remained as a solitary clump, spreading vegetatively, but not setting viable seed since no other plants have appeared in the vicinity. Of more interest to readers of this journal perhaps are the colonies of plants growing on Rannoch Moor in the West Highlands of Scotland. Again, it is assumed that 'someone' planted the original plants, but what is interesting in this case is that the plants are setting viable seed. This is evident from a number of clumps of varying sizes including plants which are at least two to three year old seedlings. This perhaps suggests that the northern climate is more conducive to their reproductive well-being than the southern.

Rannoch Moor is an undulating glacial plain surrounded on three sides by mountains. It is a vast watershed lying at an altitude of over 300m (1000 feet) and occupies an area of around 145 km^2 (56 square miles). It lies between the area west of Loch Rannoch in Perthshire and east of the mountains surrounding Glencoe in Argyll. The moor was once part of the

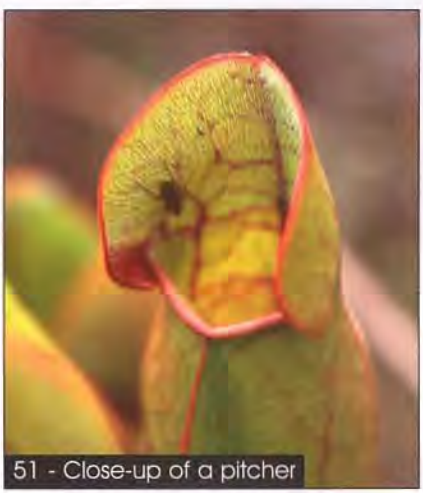
ancient Caledonian pine forest which covered much of Scotland, but as a result of man's deforestation, only stumps remain, still visible in eroded areas. It is described by Derek Ratcliffe in *Highland Flora* as "....a kind of wet desert, an inhospitable expanse of peat bog and open water which remains one of Nature's last refuges". There are raised dry areas, rocky outcrops, and water-filled depressions. Blanket bog, which consists of several species of sphagnum moss is the predominant vegetation type of the area. Other species inhabiting the moor include *Calluna vulgaris, Erica tetralix* and *E. cinerea, Myrica gale* (Bog myrtle), *Narthecium ossifragrum* (Bog asphodel), and the two species of cotton grass - *Eriophorum angustifolium* and *E. vaginatum*. Several species of rush are present, including the rare Rannoch rush (*Scheuchzeria palustris*), now found nowhere else in Britain. Because of the poor nutrient content of this type of habitat, insectiverous plants are to be found, including two species of sundew namely *Drosera rotundifolia* and *D. intermedia*. Not surprisingly, therefore, being an insectiverous plant itself, *Sarracenia purpurea* is to be found growing at the edge of and sometimes in the shallow water of the pools alongside both *Drosera* species.

There are three colonies of *Sarracenia purpurea* that we know of growing on the moor. There could be others. One was discovered by a Scottish Natural Heritage staff member in 1992 and documented in the *Glasgow Naturalist*. At the time it contained a total of 31 plants over a radius of around 50 m. On a recent visit (August 2004) we counted 25 plants at this

50 - Self-sown plant in flower

site. About 8.5 km (5.25 miles) away 'as the crow flies' is the colony we are most familiar with which contains 19 plants, the largest of which are up to 25 cm (10") high and 45 cm (18") across. There is a third colony lying mid-way between the other two containing 8 plants.

The water-containing pitchers of *Sarracenia* are actually modified leaves which have a broad lip at the open end on which insects alight. The pitfall traps work by a one-way system of downward pointing hairs which lure the victims into the liquid below. With no means of escape, they drown and are 'digested' by the plant to provide it with nutrients. The pitchers on young plants are generally a rich mahogany to wine-red colour throughout. On mature plants the colour is pale yellow to lime green with the red colour retained in the coarsely marbled veining. The colours become lighter during the growing season. The solitary, nodding flowers are about 5 cm across on scapes 30 to 45 cm tall and can only be described as bizarre. The mahogany red, downturned sepals and petals meet up with the similarly coloured peltate style. The latter is a large disc resembling an upturned umbrella, and together with the sepals and petals enclose the stamens. One presumes that the purpose of this arrangement is to protect the stamens from rainfall and splashback, - an excellent strategy as far as living on Rannoch Moor is concerned with its 2.5 m (100") annual rainfall! Flowering time is from the end of June onwards, and the flower structure remains intact long after the 'working parts' have ceased to function, in a manner similar to that of hellebores. In winter the plants can take all the extremes of climate that the inhospitable moor can throw at them by way of wind, frost, and snow. We have not seen them in winter, but know a Club member who has seen them covered in rime.


51 - Close-up of a pitcher

So, what of the presence of these imposters on the fragile habitat of Rannoch Moor? They appear to be doing no harm, and are not spreading

to any vast extent. Neither are they going to venture beyond the wet moorland habitat. The numbers have fluctuated over the years since they were discovered but no one knows how long they had already been there. It is not possible either to establish how many plants were originally planted and how many plants have grown from dispersed seed. Seed production is not copious, since many plants have no flowers; occasional flowers are eaten by sheep or deer and in the long hot summer of 2003 for instance, no seed was set at all. The pitchers themselves are not grazed by animals. There is occasional evidence of a plant having died (or been dug up?) There was serious discussion some years ago about removing them but this was not carried out. Certainly the situation needs to be monitored from time to time and action taken if the plants start to show any dramatic increase in numbers. In the meantime, the rich 'fly soup' contained in the pitchers scarcely makes an impact on that scourge of the tourist - the Scottish midge! The plants are, however, a good deal more eco-friendly than

52 - Close-up of *Sarracenia* flower

53 - Immature self sown *Sarracenia purpurea*

the fossil fuel-burning gizmos used by hoteliers and holiday home owners to create a midge-free environment during the biting season.

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54 - Single plant of *Sarracenia purpurea* in habitat

SPRING JEWELS

Malcolm McGregor looks at the dwarf cushion saxifrage species of Section Porphyrion

55 - *Saxifraga stolitzkae* (x 3.5)

The last twenty years has seen our knowledge of dwarf cushion saxifrages increase dramatically. New species have been identified in Iran, the Caucasus, China and the Tien Shan, and some wonderful species have been seen in cultivation for the first time. Among the introductions are some which have to be rated among the most beautiful of all Porphryion species: from the Himalayas *Saxifraga poluniniana, Saxifraga cinerea* and *Saxifraga lowndesii*; from the Tien Shan *Saxifraga alberti*; from Iran *Saxifraga ramsarica*; from the Caucasus *Saxifraga columnaris* and *Saxifraga dinnikii*. With all these introductions, there is an unprecedented range of species now available to us and this survey brings together the latest information on these as well as commenting on the classic rock-garden subjects such as *Saxifraga burseriana* which have been grown for very many years.

MANY OF THE CUSHION PLANTS which so delight the specialist rock gardener are difficult plants to grow and maintain in the long term. In its natural habitat *Eritrichium nanum* is a glorious plant but in cultivation only the most dedicated of growers is likely to succeed. Similarly, the cushions of Androsace and Dionysia can require great attention. Even the specialised cushion Draba species can be lost very easily. Compared with these, most of the saxifrages in section Porphyrion are remarkably easy to grow and keep, although there are those which remain sufficiently challenging to maintain the interest of the expert.

The charm of cushion plants is obvious: the rotationally perfect domes of foliage have a fascination that is writ large in the domes of the Eden Project. The dome is an incredibly efficient form: for a greenhouse it is very strong and provides the largest ratio of ground covered to surface area; for a plant it allows every bit of foliage to be exposed to the sun without the need to maintain superfluous lengths of stem. Like jewelled pin-cushions or millefiori paperweights the plants are studded with flowers which may be intensely coloured. Few plants have quite the same exquisite perfection as the best cushion plants and while it is possible to grow many of them to large size it is not always a case of bigger is better. In some cases the right size for one of these domed cushions is relatively small, certainly within the compass of the average grower as well as the obsessive cultivator.

The dwarf cushion saxifrage species of section Porphyrion

come from the mountains of Europe, the Middle East and Asia. Many of them are widely available, easy to grow in the open as well as in an alpine house, and they retain the qualities that make them so attractive in their natural habitats. Growers have been hybridising them for over a hundred years, initially crossing European species but progressively involving new species as they have come into cultivation, a process that is still going on today. The flowering season is surprisingly long, from the very beginning of the year, sometimes even in December, through to late spring, the last coming into flower well after Easter with *Saxifraga andersonii* only coming into flower for me at the beginning of May.

THE BOTANICAL PERSPECTIVE

The most widely accepted taxonomy of the genus Saxifraga is that of Gornall (1987) in which he identifies section Porphyrion, one of fifteen sections, as having three subsections:

subsection Kabschia
e.g. *S. burseriana*, *S. lilacina*, *S. aretioides*, *S. juniperifolia*
subsection Engleria
e.g. *S. sempervivum*, *S. media*
subsection Oppositifoliae
e.g. *S. oppositifolia*, *S. retusa*, *S. georgei*

Members of the first two subsections have alternate leaves and are separated from one another primarily by the form of their inflorescence and the form of the individual flowers. Subsection Oppositifoliae species have opposite rather than alternate leaves but they are then further subdivided into two series, the first of which (series Oppositifoliae) is represented by *Saxifraga oppositifolia* and the second (series Tetrameridium) by *Saxifraga georgei*. The significant thing here is that the species clearly belonging to series Oppositifoliae, which are *Saxifraga oppositifolia*, *S. retusa* and *S. biflora*, appear very similar to the other opposite-leaved species such as *S. georgei* and *S. quadrifaria* but this may only be superficial.

Evidence from genetic analysis suggests that *Saxifraga oppositifolia* is closer to *S. aizoides*, the sole member of another section, Xanthizoon in Gornall's taxonomy, than it is to most of section Porphyrion. This supports the fact that these two species can hybridise, as they have done naturally in the past to form the now-stabilised species *S. nathorstii*, but that there are no hybrids formed between any of *S. oppositifolia*, *S. biflora* and *S. retusa* and any other member of section Porphyrion either in the wild, or despite repeated efforts, in cultivation. Many of the other opposite-leaved species from the Himalayas, such as *S. georgei* and *S. quadrifaria*, readily form hybrids, in cultivation if not in the wild, with other members of the section. It is also worth remarking here that further genetic analysis suggests that *S. mutata*, which has traditionally been placed in section Ligulatae, the encrusted Silver saxifrages, is much more appropriately seen as close to *S. aizoides*, and I think it likely that a further revision of the genus will recognise these newly revealed relationships.

In this account I am going to discuss the species which are, in Gornall's taxonomy, Kabschia and Engleria saxifrages, with the addition of the opposite-leaved species of series Tetrameridium. This coincides with the limits adopted by Radvan Horny and his co-authors when they wrote their seminal work which was first published in Czech by the Prague Rock Garden Club and which was published in English in 1986 by John Byam-Grounds, in a revised edition, under the title *Porophyllum Saxifrages*.

Saxifraga scardica (opposite) exemplifies subsection Kabschia and *Saxifraga federici-augusti* (above) subsection Engleria.

WHERE AND HOW TO GROW THEM

Among these saxifrages are species which will suit gardeners across a very wide range of conditions. Hot dry habitats will be best managed by species such as *Saxifraga ferdinandi-coburgi* from the Balkans. This is one of the species which is likely to figure in the ancestry of many of the bright yellow flowered hybrids which are the best suited for full sun in a drier area. At the other end of the scale are areas of high rainfall and generally much colder winters, where many of the Himalayan species, which the gardener in a dry area struggles to maintain, will grow well. Typically the bright pink hybrids which feature Himalayan species prominently in their ancestry, and which flower so prolifically but which can be short-lived in dry areas, will be much longer-lived in cooler, wetter areas. Of the species *S. poluniniana* and *S. lowndesii* grow far more happily, and stand a chance of a much longer life, in cooler conditions with an ample water supply in summer.


56

Saxifraga ferdinandi-coburgi in a trough

Although many species can be very successful in the open rockery it would generally be true that if a large collection is to be maintained a number of approaches should be considered. Obviously some of the smaller species are best grown in pots, from considerations of size if nothing else. Pots have the advantage of being appropriate for smaller specimens, they can be moved to an appropriate site at different times of year, perhaps to a lighter position in winter, a shadier one in summer. But there are other very appropriate situations for Porphyrion saxifrages.

Raised beds and troughs are highly appropriate and in many ways raised beds can be treated as extra-large troughs. In both cases the gardener has to fill them with a growing medium. For Porphyrion saxifrages this will need to be well-drained, and with a good layer of grit or gravel on the top. This seems easy enough. A mixture of garden soil or compost is mixed with sand and gravel

until an appropriate mix is achieved. In wetter areas this may involve more gravel and sand to ensure that plants do not get waterlogged. The obvious problem associated with such an approach is that it is easy for plants to get too dry and to avoid this, watering needs to be carried out as needed. Although this is a snag, with well-drained compost plants will develop much more extensive root systems. A thick layer of grit or chippings as a top layer reduces surface evaporation but can make it difficult to plant and establish new specimens. In drier or in more southerly areas it is better to have a position which does not get the full sun in summer. In the wild plants may be exposed to full sun but in the mountains night temperatures will be far lower than day temperatures, which will tend to ensure good dew formation even in summer, and there will be rain from thunderstorms most days in summer. Porphyrion saxifrages, with the exception of *Saxifraga lilcaina* which demands an acid compost, are not fussy regarding pH but they are far more demanding as far as abundant water and good drainage is concerned.

Troughs are very effective for these saxifrages as the scale of the plant can seem more appropriate if the surroundings are of an appropriate scale. They also allow a group of related plants to be grown together – the plants from a particular area, or a range of cultivars of a single species or parental cross, or even one in which only pink-flowered saxifrages are grown together, or even – perish the thought – pink-flowered saxifrages are planted alongside other pink-flowered rock plants, such as a dwarf daphne, and some European primulas such as *Primula integrifolia*. Whatever the company the qualities that make a plant a good trough plant are present in Porphyrion saxifrages. The ideal trough plants need to be quite small, slow-growing, and showy for their size, and Porphryion saxifrages are all of these.

Tufa is highly appropriate for most Porphyrion saxifrages, although I would exclude the Oppositifoliae subsection from this as they seem to want a more extensive root run. Plants can be grown in small holes drilled in the tufa and will grow slowly but in character, hard and healthy. My own preference is to insert rooted cuttings in ¼" diameter holes about 2" deep (6 mm diameter, 50 mm deep), using a matchstick to poke them in with a bit of thin potting mix and the tufa drilled from the hole. Water them in well – say a small watering can for a single cutting – and repeat that regularly for a while. At some point your attention will pass to

something else but by then the rooted cutting should have started to get established.

PROPAGATION

There are two fundamentally different ways of propagating saxifrages: one is to grow plants from seed; the other is to propagate the plant vegetatively, by division or by taking cuttings, although in the case of Porphyrion saxifrages, division is not usually as effective as taking cuttings. A cushion may look very healthy but that does not mean that it can de divided in half – you are more likely to lose both halves than you are to end up with two healthy plants.

Cuttings generally root well, and within a few weeks, without rooting hormone, if the cutting is from a healthy, vigorous plant and it is prepared properly. Cuttings should be small, usually a single rosette or shoot, and the lower leaves should be peeled away until the little cutting has only fresh material at the bottom. This can then be rooted in a pot or tray of peat and sand, or potting compost and sand, with a ¼" of sterilised sand on the top. Adding grit to the mix in the tray is not recommended as the cuttings root better in a fairly even mix. I water each cutting in with a pipette full of water as I go, to ensure each cutting is well settled in the sand. When I have a whole tray of cuttings I stand the pot or tray in a tray of water until the water reaches the surface of the sand. Keep the tray covered for a week or two to let the cuttings settle and then you only need to keep them protected from heavy rain, which might wash the cuttings out before they are rooted. No heat is needed at any time. The cuttings will take different lengths of time to root, depending on the species, the state of the plant used for cuttings and the time of year when the cutting is taken.

Most species and hybrids root very well, although some such as the "whorled" species from the Caucasus can be very difficult as can *Saxifraga diapensioides* and *S. columnaris* which are both slow to root. It is always good advice to take cuttings from vigorous healthy plants but this does not take account of the fact that many people only get round to taking cuttings when their plant starts to look rather old or poorly. It is much better to take the cuttings from young and healthy stock but cuttings from older plants will root although in some cases a second round of cuttings from the young plants achieved in this way will result in plants with more vigorous roots. The normal advice on timing is that cuttings should be taken immediately after flowering, or as a second best in

Saxifrage cuttings in a standard seed-tray

September or October. In fact cuttings can be taken at almost any time of the year. The plants are probably at their most vigorous in the spring, forming new shoots after flowering from which cuttings can be taken. These may be small, even very small, but are likely to root rapidly. Cuttings taken at other times take longer to root but they will usually do so. The only months which I normally avoid as far as cuttings are concerned are the summer months when the high temperatures seem to be something of a problem. In general cuttings can be taken when you have the time. It should not need to be said that each batch or row of cuttings should be labelled as you go – in a standard seed tray I line out about two hundred cuttings of up to around forty different cultivars so it becomes vital to be methodical.

It might seem essentially unlikely that Porphyrion saxifrages could easily be raised from seed. They appear to be such small plants that it would take too long to raise a plant to flowering size. In fact most of them grow surprisingly quickly from tiny seedlings and often flower in their second year. Fresh seed can germinate very rapidly, in around two weeks, but seed which has been stored will germinate more slowly and irregularly. Nevertheless raising saxifrages of this type from seed is surprisingly easy and very rewarding. The only real snag is that of knowing the provenance of the seed you sow and of realising that seed of *Saxifraga burseriana* 'Gloria', which has been propagated over the decades by cuttings, will give rise to seedlings, which if it has not crossed with anything

else, will be *Saxifraga burseriana* but will not be *S. burseriana* 'Gloria'.

THE HISTORICAL PERSPECTIVE

Sometime after 1880, a seedling saxifrage, which had appeared in the Melrose garden of John Brack Boyd, flowered for the first time. Its flowers were pale yellow and it became clear that it was the result of a cross between the white-flowered *Saxifraga burseriana* which it was near, and the strong yellow *Saxifraga aretioides*, which was the only yellow-flowered saxifrage in the garden. This was the first hybrid saxifrage from this section of the genus which had been produced in cultivation.

There are some wild hybrids in Europe and in the Caucasus, and recent work has suggested that there is very extensive hybridization in some parts of the Himalaya but obviously plants only hybridise when they flower at times which overlap and when they grow in close proximity, and plants may be separated by vertical distance as much as horizontal distance. John Brack Boyd's seedling was the first known seedling that had appeared because of the propinquity of Porphyrion saxifrage species which had previously been kept apart. This Scottish hybrid, which was named *Saxifraga* x *boydii*, was much later given the cultivar name 'Old Britain', so it is *Saxifraga* x *boydii* 'Old Britain', although since it is a Scottish plant 'North Britain' following the usage of Walter Scott might have been more appropriate. Two second-generation seedlings, *Saxifraga* 'Cherrytrees' and *S.* 'Falconside', named after the houses of John and his brother William, were put into circulation around 1890, and although 'Old Britain' is pretty scarce in cultivation, 'Cherrytrees' is still available and 'Faldonside' is still a very good plant which looks good in any company.

The species involved in *Saxifraga* x *boydii* were *S. aretioides* which comes from the Pyrenees and *S. burseriana* from the eastern Alps. These two species had long been recognised. *Saxifraga burseriana* was one of three species in section Porphyrion recognised by


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The house of John Brack Boyd - 'Cherrytrees' near Kelso

Linnaeus in 1753, the other two being *S. caesia*, and *S. oppositifolia* which is outside the range of the discussion here.

The discovery and description of the Porphyrion species we recognise today mirrors very much the pattern that can be seen in many groups of plants in which the gardener is interested. European species were largely known by the second half of the 19th century. The boundaries of species were quite well understood and most of the species had entered cultivation. This is certainly not true of plants from the Caucasus, from which dramatic species are still entering cultivation for the first time. The Porphyrion saxifrage species endemic to the Caucasus still need further work and it is only in the last ten years that some of the most exciting species have appeared in cultivation

Saxifraga juniperifolia (1805) and *S. kotschyi* (1856) occur in Turkey, as well as in the Caucasus proper in the case of *S. juniperifolia*, but the species which are endemic to the Caucasus did not otherwise start to be described until the last quarter of the 19th century. By 1909 eleven species had been described but after the Russian Revolution no further species were described until 1956 since when there has been a proliferation of species described, the majority of which are not in cultivation. Many of the species are narrowly defined, a feature of Russian botany, but there are indisputable species in any tradition among them.

In parallel, from Iran, *Saxifraga iranica* was described in 1906, *S. wendelboi* in 1967 and *S. ramsarica* in 1993.

The geopolitics of the mountainous countries of Asia further east meant that it was not the great range of Porphyrion saxifrages from the mountains of Nepal, Sikkim and Bhutan that was first described. Prior to 1850 only *Saxifraga ramulosa* had been described, in 1830. In the period of the Great Game it is appropriate that the next two species to be decribed were *S. alberti* from the Tien Shan in 1877, and *S. afghanica* which although widespread was originally found on the borders of Afghanistan and described in 1880. From 1883, with Engler's description of the Chinese *Saxifraga nana*, through to 1933 nineteen further species were described. Many have never been seen in cultivation and the status of a number is under question today but there are a number of species with which we are familiar: *Saxifraga lilacina*, *S. andersonii* and the closely allied *S. stolitzkae*, and the tiny *S. georgei* and *S. quadrifaria*. No further species were described from this region until 1958 when Harry Smith published his remarkable paper on the Himalayan saxifrages in which he described 54 new

species relevant to us here. Among these are a number of the species which we are led to believe are in cultivation today and some which are are indubitably so: *S. alpigena* (the collection McB 1379), *S. cinerea*, *S. lowndesii*, *S. poluniniana* (although this is in danger of disappearing from cultivation in England at least), *S. matta-florida* and *S. lolaensis* which probably belong to just one species, and *S. pulvinaria*.

An area of confusion has been highlighted in recent years by the work of Jan Bürgel. Having already looked at hybridisation of Porphyrion saxifrages in the Balkans, his attention has turned to field studies of the Himalayan saxifrages. After a series of visits he has made a strong case that many of the species which have been described are at best confused and in many cases may be wild hybrids, and that the number of species with which we might be dealing may be far fewer than has been previously thought.

Three of Harry Smith's fifty-four, *Saxifraga williamsii*, *S. brevicaulis* and *S. sessiliflora* are very closely related to one another and appear superficially to fit well with other members of section Porphyrion. Harry Smith pointed out some anomalies regarding their leaves which are strongly ciliate and lack the lime-secreting pores which is a distinguishing characteristic of the section. They do form small cushions which are like those of the Porphyrion saxifrages and have creamy-white flowers although they have spots on the petals, a characteristic that can be found in sections Ciliatae, Gymnopera and Trachyphyllum but not otherwise in section Porphyrion. It is clear now that they are misplaced in section Porphyrion and should be seen as belonging to section Ciliatae of which *S. hirculus* is the type specimen. The vast bulk of the species from section Ciliatae are very difficult to maintain in cultivation and this helps make sense of the repeated failure of *S. williamsii* to be established in cultivation despite its obvious desirability.

SPECIES IN CULTIVATION

There are around 100 species that have been described and around half of these are in cultivation although many of them are in restricted circulation. However as can be seen from the notes below it is possible, fairly easily, to assemble a collection of around thirty different species, of which some, most notably *Saxifraga marginata* and *S. burseriana*, can be found in a number of very distinct forms.

One characteristic which has failed to raise the attention of botanists up until this point is the colour of anthers and pollen. This is a noticeable distinguishing character among the species which have white and purple flowers. All white-flowered species from west of Pakistan have yellow anthers and yellow pollen. East of Pakistan all such species have orange, brown or dark red anthers and orange pollen. In collections from Pakistan, generally the SEP collections, some have yellow anthers and pollen, some red-brown anthers. The failure of botanists to comment on this must result from their use of herbarium specimens for their primary observations.

In the case of the purple-flowered species the situation is very similar with the species from east of Pakistan having dark red-brown anthers, and those from west of Pakistan, in this case the Caucasus, having yellow anthers, although this is complicated in the case of *Saxifraga columnaris* by the fact that some of the recently collected material has pale red, rather than yellow anthers. Since there are no other saxifrage species in which anther colour is known to vary this is a significant observation and needs further investigation.

As far as is known all the yellow-flowered species have yellow anthers and pollen but the yellow-flowered species from Bhutan and the far-eastern Himalaya remain obscure and information regarding these would be very valuable.

EUROPE

Within Europe there are Porphyrion saxifrages in the Picos de Europa, Pyrenees, Alps, Apennines, Dolomites, Carpathians and the Balkans. The white-flowered species *Saxifraga caesia* is the most widespread being found from the Pyrenees to the Tatras and also down to Montenegro but most of the European species are far more restricted in their range. Many of the species are very straightforward in cultivation but there are some, including *S. caesia*, which are far from easy to grow well.

Saxifraga corymbosa

ENGLERIA SUBSECTION

These have numerous very small flowers, petals often not emerging from the calyx, in a generally hairy, and often quite complex, inflorescence. *Saxifraga corymbosa* (syn. *S. luteo-viridis*) has yellow flowers but the others have either dark red flowers or pink flowers in dark red calyces. *Saxifraga sempervivum* and *S. federici-augusti* (which used to be *S. grisebachii*) are common in cultivation and *S. stribrnyi* is not too uncommon. The other two species are *S. media* and *S. porophylla* which are much harder to obtain and to keep.

Saxifraga media tends to be monocarpic and is best therefore maintained from seed, while *S. porophylla* needs to be kept in tufa.

Saxifraga sempervivum (left), *Saxifraga porophylla* (middle) and *Saxifraga stribryni*

YELLOW FLOWERS

As well as the yellow-flowered Engleria, *Saxifraga corymbosa*, there are yellow-flowered species from subsection Kabschia. *Saxifraga aretioides* is uncommon in cultivation and the allied *S. felineri* may not be in cultivation, but the other three species are all in cultivation. *Saxifraga ferdinandi-coburgi* flowers best in higher light levels and is therefore best grown in the open. *Saxifraga sancta* and *S. juniperifolia* (*S. sancta* ssp. *pseudosancta* according to some), which is primarily a Caucasian species, are also far better on the rockery where they can form extensive mats and flower better.

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Saxifraga aretioides from the Pyrenees.

Saxifraga felineri from the Picos de Europa at Fuente De.

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WHITE FLOWERS

Saxifraga marginata, in a number of forms which can be extremely beautiful, is excellent outdoors, as is *S. scardica*. *Saxifraga burseriana* is another wonderfully variable species, although its flowers are rather less weather-resistant. *Saxifraga karadzicensis* was until recently treated as a subspecies of *S. marginata*, and *S. obtusa* is closely allied to *S. scardica*, although less attractive. Less common and progressively more difficult are *S. tombeanenisis*, *S. vandellii* and *S. diapensioides*. *Saxifraga caesia* and *S. squarrosa* are also uncommon in cultivation, and certainly best grown in tufa although even here they are not easy to keep. *Saxifraga spruneri*, which is a fairly anomalous species, is quite straightforward in a pot or in tufa.

As can be seen below the flowers of *Saxifraga karadzicensis*, like those of *S. scardica* and some forms of *S. marginata*, turn an attractive shade of pink as they age.

Saxifraga karadzicensis

Both *Saxifraga burseriana* and *S. marginata* show great variety.
Top: *Saxifraga burseriana* 'Cordata' (left) and 'Crenata'
Bottom: *Saxifraga marginata* 'Balkan' (left) and *Saxifraga marginata* subsp. *rocheliana* (all x 1.5)

THE CAUCASUS

There are a number of mountain groups which in general terms are part of the Caucasian complex. The Great Caucasus, along the northern borders of Georgia and Azerbaijan; the Little Caucasus running from southern Georgia and incorporating most of Armenia, and the Pontic Mountains of northern Turkey are all included here.

Most of the Porphyrion saxifrages in this region have numerous small yellow flowers although there are exceptions: there are two species with purple flowers, a white-flowered species which is discussed under *Saxifraga juniperifolia*, and a yellow-flowered species with single flowers. There is a great deal of complexity in the taxonomy of the multi-flowered species, with the narrow species concept of Russian botany adding quite substantially to the number of species recognised by most western botanists.

YELLOW FLOWERS – SINGLE FLOWERS

The one species here, *Saxifraga carinata*, is not in cultivation.

YELLOW FLOWERS – MULTI-FLOWERED – NORMAL ROSETTES

There are a number of broad species that are generally recognised and from which narrower species can then be defined if that is felt appropriate: *Saxifraga kotschyi*, *S. pseudolaevis*, *S caucasica*, *S. juniperifolia*, and associated species. *S. juniperifolia* and *S. pseudolaevis* are quite straightforward to grow; *S. kotschyi* and *S. caucasica*, or the closely allied *S. desoulavyi* which is somewhat easier to obtain, are harder, perhaps best in a pot. For completeness, the often very narrowly defined species asssociated with *S. caucasica* are *S. desoulavyi* and *S. sosnowskyi*; with *S. pseudolaevis* there are *S. biebersteinii*, *S. caspica*, and *S. polytrichoides*; and with *S. juniperifolia* there are *S. artvinensis*, *S. grisea*, *S. ruprechtiana*, *S. kusnezowiana* and *S. charadzae*. Some of these are in cultivation from seed collections but identification and species boundaries are often very uncertain.


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Saxifraga desoulavyi (x1)

YELLOW FLOWERS – MULTI-FLOWERED – WHORLED FOLIAGE

The two broad species, which some authors would split further, are *Saxifraga scleropoda* and *S. subverticillata*. *S. scleropoda* is available and easy; *S. subverticillata* is neither. Again, for completeness, the narrow species associated with *S. scleropoda* are *S. abchasica*, *S. sommieri* and *S. unifovealata*; and associated with *S. subverticillata* there is *S. colchica*.

Saxifraga scleropoda

Collections by Josef Halda in 1993, reported as having been from Abchasia, of two white-flowered Porphyrion species JJH9309174 and JJH9309176 are intriguing. The two species, which have flowered in cultivation, are close to, or belong to, *S. marginata* and *S. spruneri*. These have not been otherwise recorded, as far as I know, and their status remains uncertain.

Saxifraga subverticillata

PURPLE FLOWERS

Both the purple-flowered species from the Caucasus, *Saxifraga dinnikii* and *S. columnaris*, were described in 1892 but they were only introduced into cultivation after the Czech expedition in 1996. Neither are suitable for cultivation in the open except perhaps in tufa. Both seem well-suited to pot culture. *Saxifraga dinnikii*, is very distinctive although only arguably attractive, with very distinctive, longitudinally-corrugated petals with a serrated margin. It also has yellow anthers, quite unlike the purple-flowered species from the Himalayas, and a combination not achieved in any of the garden hybrids. *Saxifraga columnaris*, which can be the most exquisite of all Porphyryion saxifraga species, seems to vary in this characteristic, which would itself be unique amoung Porphryion species, and it may be that plants with yellow anthers, rather than red-brown may be hybrids with *S. dinnikii* .

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Saxifraga dinnikii with yellow anthers and corrugated petals

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Saxifraga columnaris

IRAN

The saxifrages of Iran are often treated with those of the Caucasus but the three Porphyrion species with white flowers, *Saxifraga iranica*, *S. wendelboi* and *S. ramsarica*, are allied to one another but not clearly to the species in the Caucasus. All are in cultivation and are attractive. There is a case to be made that they are allied to the white flowered species with yellow anthers from Pakistan seen in some of the undescribed collections under SEP numbers. *Saxifraga koelzii*, which has light yellow petals, is from the Kakashan Mountains but has not been introduced. It would be of real interest.

Saxifraga ramsarica

Saxifraga wendelboi

CENTRAL ASIA

None of the species from this area is common in cultivation. *Saxifraga alberti*, which can have white or pink flowers, has come into cultivation from a number of seed-collecting expeditions; *S. bryomorpha* which was collected and named by Halda is probably properly identified as *S. ovczinnikovii*; and *S. vvedenskyi* may only be a rather more lax white-flowered form of *S. alberti*.

Saxifraga bryomorpha
(probably syn. *S. ovzcinnikovii*)

THE HIMALAYAS & CHINA

This is a massive region which it might seem sensible to break down into smaller areas but quite a number of species have very wide distributions and it is very clear that even when different taxa are being considered relationships only make sense across this wide region.

PINK/PURPLE FLOWERS

Saxifraga lilacina from the Western Himalaya has long been in cultivation from a single introduction, although many plants are now of hybrid origin, often being in fact the cultivar 'Quarry Wood' which is lime tolerant where *S. lilacina* is very definitely not. *Saxifraga lowndesii* from Nepal is in cultivation from a McBeath collection. It varies quite a lot, the strongest coloured forms being extremely attractive. It needs not to dry out.

Saxifraga lilacina

There are a number of other species with pink flowers which have yet to become available. *Saxifraga ludlowii* from Tibet, which from photographs appears generally not unlike *S. dinnikii*, would be particularly nice. ACE2401 is said to be the Chinese species *S. pulchra* although this is arguable. *Saxifraga decora* is also reported to have pink flowers and there are a number of other species, such as *S. andersonii*, which have flowers which range from white to pink. *S. chionophila* (incl. *S. schneideri*) has tiny petals. Plants labelled as *Saxifraga rhodopetala* seem to be little more than pink-flowered forms of the general *S. andersonii–S. stolitzkae* complex. The collection McB1377, from which both pink- and white-flowered plants were raised, seems to fall within this.

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Saxifraga lowndesii

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Saxifraga sp. McB1377

Saxifraga pulchra in western China

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WHITE FLOWERS – YELLOW ANTHERS

Saxifraga sp. SEP37

The most common examples of this are some of the SEP collections, such as SEP 37 and SEP45, from Pakistan. These have not been formally described, but there are a number of species which may equate to some of these: *Saxifraga staintonii* is recorded as Nepalese; *S. doyalana* as Tibetan; and *S. unguipetala* as Chinese. This last is repeatedly stated as in cultivation but it is likely that most of the plants under this name are misidentified.

WHITE FLOWERS – ORANGE/RED/BROWN ANTHERS

In the Himalayan region many of the white-flowered Porphyrion species differ markedly from those of other regions. A number of characteristics may mark them out. One is the colour of the anthers and pollen; the other is flower shape. Unlike the white-flowered species from further west, the white-flowered species from east of Pakistan have orange rather than yellow pollen, and orange, red or brown rather than yellow anthers. That anther and pollen colour in these saxifrages has not been investigated by botanists, is presumably because it is not a characteristic which will be preserved in herbarium specimens.

The flower shape of these species, whether they have white or purple flowers, is also very often, although not invariably, a distinctive and quite different one. In these, the central part of the flower is depressed in such a way that the stamens and twin stigma are more or less in a plane with the petal surface, rather than projecting out above the petals surface. At the same time the profile of the flower tends to an oval rather than a circle. This is not allied to size as can be seen very clearly in species as diverse as


S. stolitzkae (x2)

Saxifraga stolitzkae McB1476 shows the crystalline texture of the petals

S. andersonii, which can be fairly tall and has a flat head of flowers, and *S. georgei* which is very small, with single sessile flowers, and tiny opposite-leaved rosettes. Finally it is worth remarking that the petals of these species are often much thicker than in other species and the surface appears crystalline, with the larger tapetal cells refracting the light.

WHITE FLOWERS – ORANGE/BROWN ANTHERS

There are three taller species regularly listed by nurseries: *S. cinerea*, *S. andersonii*, and *S. stolitzkae*, although the last two, which have multi-flowered heads of flowers, are often confused, and are not always very tall. Other species are *S. afghanica*, *S. rhodopetala*, *S. lamarum*, *S. micans*, and *S. decora*.

Saxifraga polunininana is the most important of the species here. This is an easy plant in the short run but can disappear very suddenly if it suffers drought or excessive heat. When it first came into cultivation it became very widely distributed in Britain but it is now rarely seen in England where it seems to have been lost by most growers. It has been used extensively in many of the recent hybrids both from England and the Czech Republic. The other species which may be found in cultivation, although they will need to be searched for, include two or three species which form mats of tiny rosettes: *S. pulvinaria*, *S. matta-florida*, and the very similar if


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Saxifraga sp. ACE2401

not conspecific *S. lolaensis* both of which are included in *S. subsessiliflora* in the *Flora of China*. *Saxifraga hypostoma* as seen in cultivation, seems usually to be *S.* x *tukuchensis*, a hybrid between *S. hypostoma* and *S. andersonii*.

Other species which are generally not in cultivation, certainly not under names which are indisputable, are *S. clivorum*, *S. kumaunensis*, *S. ramulosa*, *S. rupicola*, *S. saxicola*, *S. saxatilis*, *S. saxorum*, *S. likiangensis*, *S. calcicola* and *S. mundula*.

A recent collection, *S.* sp. ACE2401 from China, with red anthers and what seems to be yellow rather than orange pollen, is in very limited circulation.

WHITE FLOWERS – ORANGE/BROWN ANTHERS – OPPOSITE LEAVES

There are three species in cultivation. *Saxifraga georgei* is a species which makes a cushion of extremely small rosettes; *S. quadrifaria* is even smaller but is very scarce; and *S. alpigena* is somewhat larger and can be found under the collection McB1379. Not in cultivation are *S. decussata*, *S. monantha*, *S. nana* (which includes *S. octandra* and *S. qinghaiensis*), and *S. subternata*. *S. jarmilae* appears to be appropriately placed here. Its


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Saxifraga alpigena McB1379 is one of the opposite-leaved species

foliage is tiny, like that of *S. oppositifolia* ssp. *rudolphiana* or a very reduced *S. quadrifaria*, and the white flowers are in scale. Also not in cultivation are *S. roylei*, *S. duthiei* and *S. vacillans* which may be better grouped with *S. oppositifolia*, *S. retusa* and *S. biflora*.

YELLOW FLOWERS

None of the yellow-flowered species from this region are in general cultivation. *Saxifraga meeboldii*, which is closely allied to the Caucasian species such as *S. pseudolaevis*, was collected as CC&McK 809, and was flowered, but may no longer be in cultivation. It is particularly interesting in that it is very strongly scented, a characteristic not otherwise noted among Porphyrion saxifrages.

Saxifraga meeboldi CC&McK809

The Bhutanese species *S. sherriffii* was grown to flowering size by Willie Buchanan but was lost to cultivation around 1960. There are some other appealing yellow-flowered species still out there which would be of great interest. In Bhutan there are *S. thiantha* and *S. flavida*, while in Tibet there are *S. elliottii* (including *S. buceras*), *S nambulana*, *S. kongboensis* and *S. rotundipetala*. I have not been able to trace even a colour photograph of any of these species.

HYBRIDS

The garden hybrids are too numerous to consider here but there are a number of wild hybrids which should be mentioned. It had been thought until recently that there were only a very small number of wild hybrids among the Porphyrion saxifrages but that position has had to be revised radically in recent years. Until these last ten years the only generally recognised wild hybrids were *Saxifraga* x *luteo-purpurea*, *S.* x *patens* and *S.* x *akinfievii*.

Saxifraga x *luteo-purpurea* AA12

The most famous is *Saxifraga* x *luteo-purpurea* from the Pyrenees. This derives from wild crosses of *Saxifraga aretioides* and *S. media* and populations can be found in which further crossing, self-pollination and back-crossing, create hybrid swarms in which very varied forms can be found. It is particularly interesting because this hybrid was crossed with *Saxifraga lilacina* to produce the original *S.* x *anglica* hybrids. Russell Vincent Prichard produced many cultivars such as 'Cranbourne' and 'Christine' which, alongside Reginald Farrer's elusive 'Myra', still hold their place.

There is one other hybrid of relevance from the Pyrenees is *Saxifraga* x *saleixiana* (*S. aretioides* x *S. caesia*) which is very like a pale yellow form of *S. caesia*. *Saxifraga caesia* also hybridises with *S. squarrosa* in the eastern Alps to form *S.* x *tiroliensis*.

Jan Bürgel's work among the saxifrages of the Balkans has helped to reveal the extent of hybridisation in the wild. Although there are a number of Porphyrion species which grow together no wild hybrids had been found although some had been produced in cultivation. It is now clear that the two crosses which had been produced artificially and which had been named as *Saxifraga* x *biasolettoi* (*S. sempervivum* x *S. federici-augusti*) and *S.* x *wehrhanii* (*S. marginata* x *S. scardica*) exist in the wild. There is also another wild cross, *S* x *karacardica*, involving *S. scardica* crossed with *S. karadzicensis*.

The Caucasus is home to *S.* x *akinfievii* (*S. dinnikii* x *S. scleropoda*), *S.* x *columpoda* (*S. columnaris* x *S. scleropoda*) and *S.* x *dinninaris* (*S. dinnikii* x *S. columnaris*), all of which were collected by recent Czech expeditions and of which only the first was previously known. These are not widely available but are in circulation.

The situation regarding the saxifrages of the Himalayas was thought to be one in which collections of the species defined by

Harry Smith and his forerunners would gradually come back to us as collecting trips took place. Ron McBeath is foremost among those who have brought back exciting new plants including *Saxifraga polunińiana*, *S. lowndesii* and *S. cinerea*. In recent years however our view of these saxifrages has been undergoing radical revision particularly with the discoveries of Jan Bürgel in Nepal who has visited a number of the same areas as George Smith years earlier. It is now clear that hybridisation in the Himalayas is extensive. Jan has found plants in the wild which appear to represent the following crosses: *Saxifraga cinerea* x *S. polunińiana*; *S. lowndesii* x *S. polunińiana*; *S. andersonii* x *S. pulvinaria*; and *S. andersonii* x *S. hypostoma* (*S.* x *tukuchensis*). This last is in cultivation often under the label *Saxifraga hypostoma*, and it now seems clear that most of the plants in cultivation under this name are specimens of this wild hybrid.

Saxifraga x *columpoda*

He also suggests that *S. alpigena* should be regarded as a hybrid of *S. quadrifaria* with *S. andersonii*. It will take time to absorb the information that these discoveries represents. It implies that the species previously defined will undergo great revision and that some of the confusion regarding previous collections which have come from the Himalayas may start to make more sense.

THE FUTURE

It is clear that a great deal still remains to be uncovered about these saxifrages: the limits of the section, the extent of hybridisation in the wild, and the boundaries of species in the Himalayas, are the most obvious. There are new species which one can only hope will appear, or reappear, in cultivation at some point.

The development of the garden hybrids is outside the scope of this survey but it is clear that since the publication of *Porophyllum Saxifrages* in 1986 the situation has changed very dramatically with a proliferation of hybrids from crosses that had not been attempted up to that point. I hope to be able to return to them in the future.

BIBLIOGRAPHY & FURTHER READING

R J Gornall, 'An outline of a revised classification of *Saxifraga*', *Botanical Journal of the Linnean Society* 95 (1987): 259-272

Webb & Gornall, *Saxifrages of Europe*,1989

Despite its title, this is an invaluable treatment of saxifrage species from *all* continents.

Horny, Webr & Byam-Grounds, *Porophyllum Saxifrages*, 1986

An amazing piece of work with one of the most beautiful book covers you could ever see.

Winton Harding, *Saxifrages – A Gardener's Guide to the Genus*, 1970 (revised edition 1992)

This is a first-class introduction to the genus

Malcolm McGregor & Winton Harding, *Saxifrages: the Complete list of Species*, 1998

The first complete listing of all saxifrage species and synonyms since Engler & Irmscher in 1916.

Malcolm McGregor, *Saxifrages from Scratch*, 2001

A short and down-to-earth introduction.

The annual ***The Saxifrage Magazine***, from the Saxifrage Society, is by far the best single continuing source of information about the genus.

SOURCES of PLANTS

Most alpine nurseries stock one or two Porphyrion species but if you want to go further then you will need to start to look for those with longer lists. These must include the following:

Mendle Nursery, England <www.mendlenursery.com>
Aberconwy Nurseries, North Wales
Tough Alpine Nursery, Scotland <www.alpines.co.uk>
Ger van den Beuken, Netherlands <gervandenbeuken@wanadoo.nl>
and, in North America the longest list is that of Harvey Wrightman, Canada <www.wrightmanalpines.com>.

There are a number of German and Swiss nurseries with excellent lists: the most famous of which must be Sündermann in Lindau and Jacob Eschmann in Emmen but unfortunately neither has a website.

ACKNOWLEDGEMENTS

Thanks are due to a number of photographers for permission to use their pictures:

Winton Harding: *S. ferdinandi-coburgi* and *S. wendelboi*
Francis Ferns: *S. felineri*
Jozef Lemmens: *S. pulchra*
John Howes: *S.* x *luteo-purpurea*

and the Saxifrage Society for allowing me to use the pictures by Duncan Lowe of *S. ramsarica* and *S. lilacina* from their slide library. I am very grateful to them all.

Thanks finally to Jean Rogers for enabling me to find Cherrytrees (and Faldonside) and to my Editorial predecessors Alastair McKelvie and Ian Bainbridge for editorial assistance.

82 - Two troughs full of saxifrages in the author's garden

Show Reports 2004

BLACKPOOL SHOW
March 13th

The early spring shows are usually dominated these days by a good array of bulbous plants vying with the immaculate cushions of species and hybrid dionysias; the Blackpool show was no exception with the premier awards for each of the open sections going to top class examples of each.

The Farrer Medal was awarded to *Dionysia viscidula* x *freitagii* EGW MK 91/1 shown by Paul and Gill Ranson. There are a number forms of this cross and four fine examples were on show. All the forms are extremely floriferous; the variation being in the depth of flower colour – mauve pink with a pale yellow eye surrounded by a ring of deeper mauve.

The Duncan Lowe Award (best plant in a 19 cm pot) went to Robert Rolfe with a beautiful form of *Fritillaria carica* (Baba Dag, Turkey) with perfectly formed flowers on 7 cm stems; the flowers with the outer greeny-yellow tepals gently turned out and up pagoda-style and the inner petals pure yellow.

Certificates of Merit were awarded to Derek Pickard for


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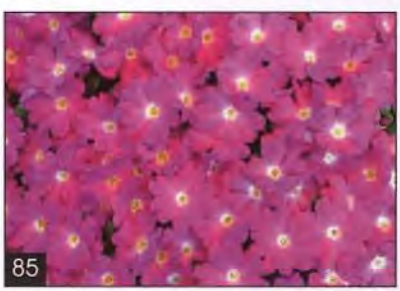
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Three specimens of *Primula allionii* at Blackpool Show: 'Marjory Wooster', 'Anna Griffith' and 'Mary Berry'.

Dionysia bryoides , Geoff Mawson for a gleaming dome of *Raoulia eximea*, and to Jim Almond for *Iris maracandica*, a yellow Juno Iris found in eastern Uzbekistan and into Tadjikstan; Jim also won the AGS medal for the class 45 six pan. A local exhibitor and noted photographer, Mr. S. Cumbus from Lancaster was awarded Gold for his splendid photographic exhibit.

Elsewhere in the show two of the bulbous entries were significant for their quality. The first, *Colchicum szovitsii* is widespread in the wet, snowmelt, mountain meadows of the Caucasus, eastern Turkey and Iran, had been worked up into a show winning potful from two bulbs over 4 years; in this case with each of the bulbs presenting 3 or 4 of its attractive pale lilac-pink flowers. It was shown by Diane Clements. The second, *Fritillaria rhodocanakis* ssp. *argolica*, exhibited by Fred and Pat Bundy, made an attractive entry with its pot full of 15 cm stems each topped by a widely flared browny-red chequered bell with a green central stripe to each petal.

Corydalis are often difficult to show in character, and *Corydalis ledebouriana* is one which quickly becomes leggy. The specimen shown by Ivor Betteridge was in perfect show condition with numerous stocky, upright 8 cm stems each topped by a compact head of white spurred flowers tipped red/purple.

Finally the Kirby Cup, for the best foliage plant in the show was awarded to the Rod and Shirley Johnson's splendidly silver *Celmisia spedenii*, increasingly popular as an entry for such classes although I have to say that, in keeping with many Celmisias that make it to the show bench, by the time all the old foliage is stripped off to make a tidy exhibit they can look rather naked and a little out of character. *Alan Furness.*

NORTHUMBERLAND SHOW
March 27th

Although the show was early this year the event still attracted 74 exhibitors who between them benched 684 high quality plants; a commendable achievement considering the rather cold weather prior to the show.

The show's premier award this year was a Forrest Medal (Scottish Rules) and it went to Clare Oates of Scunthorpe for a splendid specimen

of *Viola jooi* from the Carpathian mountains of central Europe. This species has a basal rosette of elongated, heart shaped leaves from which erupt many 12cm stems topped with light blue, medium-sized violets. Clare also won the Sandoe Trophy for the show's best plant in a 19 cm pot with the sweetly scented *Narcissus jonquilla* 'Minor'.

The other major achievement in any show is to win one of the two six pan classes. The large six pan class (up to 36 cm) attracted three entries and was won by Tommy Anderson of Kendal with a splendid entry which included two relatively recent kabschia saxifrage hybrids; the pure white *Saxifraga* 'Charles Chaplin' and the pink *S.* 'Allendale Bambi'. The small six pan (up to 19 cm) was won by Ian Kidman of Ebchester with an entry of *Androsace laevigata* 'Goteburg', *Primula* 'Aire Mist', *Saxifraga hypostoma* x *S. georgei*, *Primula allionii* GFS 1984, *Dionysia viscidula* x *D. freitagii* 'Ewesly Lambda', and *Dionysia bryoides* H1986.

Ian also won the E G Watson Trophy (new or rare, in flower) with the now rarely seen Caucasian primrose, *Primula renifolia*. He was also awarded a Certificate of Merit for a large cushion of *Dionysia aretioides*. Another attractive plant of Ian's was *Hymenoxys torreyana*, a species found at up to 2200 m in the mountains of north-eastern Utah and Wyoming which forms a loose silvery cushion covered with 2.5 cm, full petalled, yellow daisies on 5 cm furry stems. All of this, added to many other first places, resulted in him winning the R B Cooke Plate for the most first prizes in the open section.

Primula renifolia

A number of other fine plants were awarded Certificates of Merit; John Mullaney for a large, unblemished *Saxifaga poluniniana*; Della Kerr for a pristine pot of *Erythronium multiscapoideum*; and Irene Sentence for the increasingly popular, large flowered, deep blue form 'Ylva' of *Clematis tenuiloba*.

On occasions plants of a particular genus can be seen to dominate a section of the show; this time it was hepaticas, and particularly forms of *Hepatica nobilis* in section B. The successful exhibitor was David Boyd, a local group member, whose foray onto the show bench earned for him the Section B trophy, the Gordon Harrison Cup, together with an SRGC

Bronze Medal. For me the pick of David's entries were *Hepatica nobilis* var. *japonica* 'Shiun' with 1.5 cm dark blue flowers on 6 cm stems set off in the centre with a large deep blue cluster of petaloid stamens, and 'Momo Otone' with pink, streaked white, 2 cm flowers on 15 cm stems, foliage olive green mottled with lighter dapplings. Unusually, due to a tie in total prize points, Tom Green was also awarded a SRGC Bronze Medal.

Derek Lockey, another local exhibitor, won the Cyril Barnes Trophy for section C of the show. The Northumberland Cup, for a first time exhibitor, was won by Martin Hughes with a well flowered plant of *Primula vulgaris*.

Three other notable plants complete this brief survey. The first was a seed raised (JJA 497004) pot of *Fritillaria hermonis* subsp. *amana* shown by Fred and Pat Bundy. With thirteen 17 cm stems each topped by a 4 cm wide, flared, yellow bell faintly chequered red-brown on the outside, more deeply chequered on the inside this was to my eyes a superb exhibit. The second plant, shown by Don Peace, was a selected seedling from *Saxifraga* x *kochii* (*S. oppositifolia* x *S. biflora*). Named 'Firebrand' by Don the exhibited plant formed a tight mound of carmine flowers. The third was a plant which I suspect has never before been seen on the show bench – *Berneuxia tibeticus* from China. Shown by Alan Newton in one of the 'rare' classes. A member of the Diapensiaceae, *Berneuxia tibeticus* is rather like a smaller flowered white shortia, but clump-forming rather than stoloniferous. Grown for many years by Steve Doonan in the USA and growing well on peat walls at Gothenburg, this is a genus that I hope we will see more of in the not too distant future.

It is not without significance that I have finished this show report by mentioning one of the many plants that Alan grows so well. After a decade organizing the Northumberland Show on behalf of both societies Alan is retiring as Show Secretary and we all offer our grateful thanks to Alan and to Brenda and daughters Victoria and Clare for all their hard work over the last ten years. *Alan Furness.*

ELGIN DISCUSSION WEEKEND
October 1st – 3rd

A cyclamen was again the Forrest Medal winner at the SRGC Highland Discussion weekend show. This year, however, the honour went to well-known cyclamen enthusiast, Roma Fiddes from Kintore in

Forrest Medal winner
Roma Fiddes

Aberdeenshire for her superb, seed raised, *Cyclamen rohlfsianum*. This plant always takes me back to the happy days of my childhood when I lived in Libya and was able to enjoy it in the wild. Roma showed the medal plant in a 2 pan class, where it was teamed with a dark-flowered form of the sweet scented *Cyclamen purpurascens*, with large heart-shaped silvery leaves with a mottled edge. Roma and Sandy Leven from Dunblane, provided many of the examples of this stalwart genus of the autumn flower scene on display in the hall. Sandy's plants helped to earn him the East Lothian and Mary Bowe trophies, so no surprise there.

Anyone who doubted the ability of ferns to provide colour and texture throughout the year would surely have been convinced by the attractive varieties shown, mostly by Bolton fern maestro, Harvey Shepherd and by Brian and Shelagh Smethurst from Bury, at this October show. Harvey won both the Jubilee classes with a dozen of his immaculate ferns. I particularly liked his winner in the 'Native to Scotland' class, *Cystopteris dickieana*. There were nearly as many ferns on show as there were cyclamen; no mean feat. Your correspondent must confess to a pitiful lack of knowledge of these charming plants save for basic admiration but the health and vigour of all these ferns was a delight to see. (See SRGC website, show report for several ferny photos by Sandy Leven).

Some of those attending the weekend from furthest afield had been thoughtful enough to bring lots of great plants with them on their long journeys. Richard O'Connor from Kirkby Stephen brought a good entry, including the diminutive *Cyclamen intaminatum*. The Smethursts also showed some interesting dwarf shrubs, including the variegated *Coprosma* 'Marble King' and the (to me) unusual *Lophomyrtus* x *ralphii* 'Pixie'. I am not aware of seeing this latter plant offered in commerce, though I have since discovered several outlets for it in the RHS Plantfinder. Little shrubs were popular elsewhere on the benches. Roma Fiddes brought the rich burgundy-coloured *Leptospermum scoparium nicholsii*

'Nanum' and Audrey Leach from Alloway showed just how obliging a plant is the "wee Eric", *Gaultheria* (*Pernettya*) 'Pearls', with her youthful but very well-fruited specimen. There were attractive bulbs in evidence, of course, with *Sternbergia sicula* and crocus from Glassford Sprunt and Jean Wyllie. I was more taken, perversely, by the fine foliage and form of *Saxifraga fortunei* 'Mount Nachi' from Liz Mills; and *Saxifraga fortunei* 'Autumn Tribute' and the unusual New Zealander, with glaucous uppers and tan reverse, *Celmisia hieracifolia*, from Honorary SRGC President, Bette Ivey.


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Coprosma 'Marble King'

Harvey Shepherd won the Logan Hume Cup with his planted tree trunk garden and local Member, Liz Holland won the Wellstanlaw cup for her floral arrangement which included the large, handsome waxy yellow flowers of *Tricyrtis macrantha macranthopsis* in a seasonal selection. Johnnie Black from Carlisle again supported and won, Section Two, with *Gentiana* 'Blue Silk' and a collection of plants that again survived the journey north in the company of an apparent myriad of small dogs.

Add to the aforementioned the delights of *Primula capitata, Viola koreana, Aeonium tabuliforme, Incarvillea sinensis, Townsendia, Campanula, Fuchsia* and so on, you can see that there are many gems to brighten the lengthening days. Thanks be to nature!

Margaret Young


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Harvey Shepherd at Discussion Weekend

NEWCASTLE SHOW
October 9th

Saxifraga longifolia

A cold drizzly day greeted exhibitors at the fifth Newcastle Autumn Show as they worked to bench just over 400 plants. If joint show secretaries Mike and Pearl Dale had been around I'm sure they would have again been delighted. A changed family wedding date meant they had been double booked for the day and opted to attend their daughter's wedding and miss the show. Peter Maguire assumed the role of Show Secretary – but only for the day!

The show attracted an incredible array of plants shown principally for foliage effects, fern, cushion, conifer and classes for plants in fruit or seed were also well contested.

Saxifraga longifolia from Ian Kidman's winning three pan entry was selected as best foliage plant in show. Another exceptional non-flowering plant was *Coprosma petriei* exhibited by Trevor Jones which was considered for the Farrer Medal and awarded a Certificate of Merit. A dreary day and dull hall lighting didn't flatter it, indeed at the award presentation it was described as 'the shrub over there that looks like its got lots of little slugs crawling over it.' Fortunately the grower was in Hertfordshire and Alan Newton who staged the plant was also out of earshot in the kitchen.

Coprosma petriei

It was only in sunlight the following day I could properly appreciate the plant's qualities. Masses of glistening translucent blue pearl like berries crowding a dense compact branching framework – delightful!

From Sections B and C Sheila Leighton's lovely *Campanula cashmeriana* was selected as best plant with Joan

Bradbury from Elwick getting most first prize points in Division C and David Boyd getting the award in Section B.

Campanula cashmeriana

Large pans of cyclamen were scarcer than normal. Rannveig Wallis commenting that a topsy turvy summer had prompted *Cyclamen graecum* into growth early and most had been flowered out two to three weeks ago. In contrast mid and later season bulbous material seemed to have stayed dormant for longer than normal and would be too late for the shows.

Bob and Rannveig did however stage the best 19 cm cyclamen, part of their AGS medal 6 pan set. This *Cyclamen graecum* ssp *anatolicum* had foliage to die for, neat, compact and velvet like and basically a pale chocolatey brown blended with hints of green and particularly nice veining and lighter markings. Pale pink blooms complimented the foliage perfectly.

An impressive pan of *Gentiana* 'Blue Silk' from Ian Leslie collected the award for best gention and went on to fight it out for the final Farrer Medal choice, losing out to *Cyclamen hederifolium* 'Albiflorum' shown by Mike and Christine Brown from Wirral.

The winning plant had been sown in 1997 and filled a 27cm pot. A dense canopy of well marked foliage was topped with a large disc of pure white bloom in perfect condition. Mike has some interesting views on

Cyclamen hederifolium 'Albiflorum'

Judges at work at Newcastle: Jean Wyllie, Cecilia Collier and Sandy Leven

cultivation and finds *C. hederifolium* responds well to a liquid feeding regime throughout its whole growing period. A usual brew is Chempak 8 with 1:2:2 analysis but calcium nitrate is used as well at times for a nitrogen feed. The compost mix is weaker than most use (typically 1/3 leaf mould, 1/3 sterilised loam and 1/3 grit and/or lightweight aggregates). Larger *C. hederifolium* are grown unplunged and watered from below in saucers. Plants in plastic pots are double potted, the inner pot having taped over holes in their sides allowing study of compost condition and root growth. Decisions on watering are helped by data on plant weights, Mike believing that knowing wet pot weights, drying rates in different weather conditions and dry pot weights enables him to have more confidence than most in managing his plants. He claims not to have green fingers – a likely tale and not supported by his obvious care and attention to detail or show results.

Peter Maguire was awarded a gold medal for a photographic and educational display prepared for the Group and giving meeting and event details backed by an enticing range of Peter's plant photographs.

There were many other great plants on display but if I could have taken just one home it would I think have been *Petrocosmea rosettifolia*

shown by Cecelia Coller in her winning three pans from one continent set (Asia). This would undoubtedly fit into the "wee cutie" category north of the border. A small rosette of dark green tinged bronze rough and hairy leaves topped by many branched stems bearing hooded pale pink blooms with a most unusual three pronged lower lip the whole plant no more than 4" across and about 3" high.

Away from the hall seven trade stands and a well stocked members' sales area did their best to lighten wallets and purses. The group is fortunate in having willing helpers for show work and the kitchen worked flat out all day but it can't be right that some of our staunchest helpers don't get time to participate in or even see the show properly and we must try and spread the workload better in future. *David Boyd*

Illustrations by Graham Wenham, Ian Young, Glassford Sprunt and Sandy Leven. Many thanks to all of them.

RHS Joint Rock Garden Plant Committee

Recommendations made at SRGC Shows in 2004

Dunblane (Early Bulb) – 21st February

Award of Merit

Galanthus plicatus 'Sophie North' exhibited by E. Stevens, Sheriffmuir.
Narcissus jacetanus exhibited by M. & H. Taylor, Invergowrie.

Certificate of Preliminary Commendation

Ornithogalum sibthorpii exhibited by I. Christie, Kirriemuir.
Narcissus 'Betty Mae' exhibited by J. Wyllie, Dunblane.

Recommendation for AGM assessment

Galanthus plicatus 'Sophie North' exhibited by E Stevens, Sheriffmuir.

Certificate of Cultural Commendation

C. Lafong, Glenrothes for a pan of *Paraquilegia microphylla.*

Edinburgh – 20th March

Certificate of Preliminary Commendation
Fritillaria x *koshinomurae* exhibited by F. Hunt, Invergowrie.
Fritillaria kotschyana exhibited by F. Hunt, Invergowrie.

Certificate of Cultural Commendation
F. Hunt, Invergowrie for a pan of *Fritillaria conica.*

Perth – 17th April

First Class Certificate
Sebaea thomasii exhibited by C. Lafong, Glenrothes.

Certificate of Preliminary Commendation
Fritillaria 'Canmore Park' exhibited by R. Maxwell, Inverurie.
Primula obtusifolia exhibited by M. & H. Taylor, Invergowrie.

Recommendation for AGM assessment
Fritillaria hermonis subsp.*amana*, exhibited by R. Maxwell.
Fritillaria 'Canmore Park', exhibited by R. Maxwell.

Certificate of Cultural Commendation
C. Lafong, Glenrothes for a pan of *Sebaea thomasii.*
M. & H. Taylor, Invergowrie for a pan of *Primula albenensis.*

Aberdeen – 15th May

Award of Merit
Cypripedium parviflorum var. *pubescens* exhibited by C. Lafong, Glenrothes.

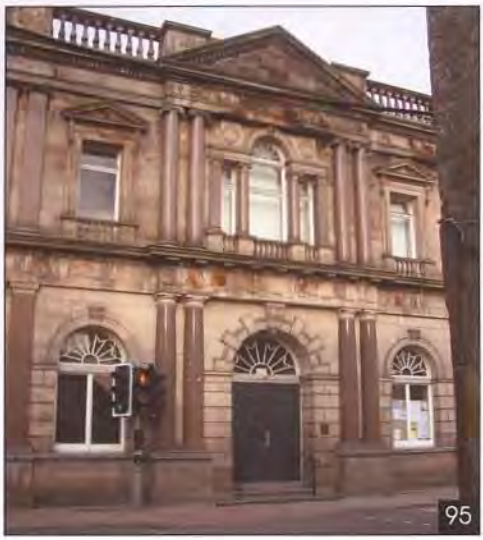
Certificate of Preliminary Commendation
Lewisia leeana alba ' exhibited by C. Lafong, Glenrothes.
Primula takedana exhibited by C. & I. Bainbridge, Easter Howgate.
Myosotis albosericea exhibited by F. Hunt, Invergowrie.

Recommendation for AGM assessment
Dicentra 'King of Hearts', exhibited by C. Lafong, Glenrothes.

Certificate of Cultural Commendation
C. Lafong, Glenrothes for a pan of *Lewisia leeana alba.*
C. Lafong, Glenrothes for a pan of *Cypripedium parviflorum* var. *pubescens*

The Award of Merit, First Class Certificate, Certificate of Preliminary Commendation and Recommendation for AGM Assessment are awards "as hardy flowering plants for exhibition". The Certificate of Cultural Commendation is an award to exhibitors.

NEW SHOW FOR 2005



Highland Show 25 June 2005

The Moray and the Inverness and District Groups of the Scottish Rock Garden Club are pleased to announce another great date for your diaries. On 25 June an SRGC Show will be held in Forres. The success of the Inverness Show has attracted the attention of several of the movers and shakers in the SRGC and for the last couple of years they have been gently trying to persuade us to upgrade this show to full national status. After much consideration we felt that the Inverness Show has qualities of its own that would be lost in a large show, so we declined this suggestion but kept the dialogue open. This has now evolved into a brand new national show in addition to our own local event.

Spring is already booked up with the current events on the calendar and we were persuaded to consider a summer date. This was agreed and Forres Town Hall is booked for the fourth Saturday in June in both 2005 and 2006.

June may not seem the most obvious date for an alpine show but the schedule was partly cribbed from the successful Alpines 2001 show and in 2004 we looked around our own garden and noted a long list of plants in bloom, not, unfortunately, of Forrest medal quality! The schedule and other details are in the Year Book and we hope that they meet with your approval. There are several broad classes that the organisers will scrutinise carefully on the day so that the schedule can be better tailored in future years.

Forres is a town noted for its gardens and gardeners. Alpine aficionados will not necessarily appreciate the flower sculptures in Grant Park which have significantly contributed to the town's successes in Britain

in Bloom but the real garden interest in the area is the love that local people have for their own gardens. We expect the show to be popular with the local people and anticipate high sales for our trade friends and for the club stall. We are hoping that you will be able to supply plenty of plants for this 50/50 stall.

The hall is, unusually, situated right on the High Street with plenty of free parking to the rear of the Hall. The show hall is of a medium size and well illuminated with white lighting.

Visitors from the south will find the hall on the left hand side of the High Street and the end of a Pelican Crossing, they should take the next left turn (by Little Sicily Italian Restaurant), then two more lefts to end up in the car park behind the hall.

Gardening visitors to Forres can easily fill any spare time during the judging of the show. The High Street is of the old fashioned variety with more independent shops of all types rather than national chains. Within easy walking distance of the rear of the hall is the excellent Christie Elite nursery specialising in trees and shrubs, many of which feature in our own garden. Brodie Castle and Brodie Countryfare are a 10-minute drive to the west of Forres. I have already said that Forresians are enthusiastic gardeners and an hour or so can easily be spent wandering along the footpaths of some of the estates and looking over garden walls, particularly the Sanquhar Estate. Directions can be obtained on the day.

Forres may seem to be a long journey for some, but please come and make an enjoyable weekend of it and visit your local friends at their homes.

We look forward to seeing you all in June. *David Shaw.*

Nothing could be more appropriate in Tromsø than Alpine Poppies

Alpines on top of the world - a report from Tromsø

Ian Young

I WAS SO TAKEN by what we learned during Finn Haugli's lecture on the Tromsø Botanic Garden at the International Conference in Edinburgh, Alpines 2001, that I, like many others, decided that one day I would have to visit Tromsø. So, when Finn contacted me with a provisional plan to hold a Conference in 2004 to celebrate ten years of the Arctic-Alpine Botanic Garden in Tromsø my immediate response was "I will be there".

As we flew north, the flight from Oslo to Tromsø gave glimpses of spectacular snow and ice capped mountain scenery and on the descent the beauty of this Arctic landscape was revealed.

I stepped off the plane with my layers of warm clothing to be greeted by a temperature of 30°C; this was not what I had expected. The Conference coincided with a heat wave that covered most of the far North.

Finn and his team of helpers did an extremely professional job in organising the Conference, all the lectures were held in the conference room of the hotel where we stayed. The intensive and varied lecture programme ran strictly to time allowing a short break between each of the talks for the delegates to stretch their

legs and come back refreshed for the next lecture. The SRGC were proud to sponsor Ron McBeath who gave the first talk of the conference, introduced by the SRGC President, Ian Bainbridge.

On Friday after afternoon we were took a short trip across the Island to the Tromsø Botanic Garden. The only heavy rain that fell while we were there could not dampen our enthusiasm as we disembarked from the busses and made our way down the hill through some natural birch woodland which was carpeted with the best flowering of *Cornus suecica* I had ever seen.

Our approach to the garden was heralded by an occasional clump of bright blue Meconopsis appearing in the native wood, and then we exited the trees to the most wonderful view down over the garden across the fjord and to the mountains beyond. This upper section of the garden slopes steeply down and is beautifully landscaped by well placed large rocks to create interesting paths and planting areas. The planting in the garden is done on a geographical order and this top section is dominated by Himalayan plants including wonderful stands of Cremanthodium.

The clumps of Meconopsis are among the best I have ever seen, growing very strongly and very much at home in the far north. I can remember when Meconopsis used to grow like this in Scotland but recent climatic changes have made them less vigorous and a bit more difficult to keep as healthy as these Tromsø ones. There are Meconopsis of all kinds including large plantings of *Meconopsis punicea* which, with the rain dripping from their petals, looked as happy as they must do when growing in their native habitat. There was much excitement, with film and pixels

How many of us have been delighted if we manage to get a flower or two on a Himalayan Cremanthodium? Well, here they grow in massive clumps, obviously very happy in the short intense growing season found this far north.

being used up rapidly, as we rushed around, like kids in a sweetie shop, photographing everything in sight.

We all agreed that some very impressive clumps of *Primula luteola* were without doubt the best we have ever seen even the Primula Professor John Richards was spellbound by them. The one group of plants that we could find any fault with was the rhododendrons, which is not surprising, as Finn tells us that they are often flattened to the ground under the weight of snow, none the less they still provided a good display of flowers as well as some evergreen structure to the planting.

We were all shepherded in to the cover of a specially provided marquee for a short official ceremony marking the first ten years of the Garden.

After the few short speeches were over the weather had turned. The rain was replaced by sunshine and blue skies as we worked our way down the hill through the other sections of the garden. All the hard landscaping is in place providing lots of planting beds some of which still have a lot of space to expand the already rich collection from the world's alpine floras.

I was very interested to see how well the plants from South America were growing, like this lovely clump of *Calceolaria fothergillii*

The biggest surprise was how good the bed of mossy saxifrages looked

We were all reluctant to leave when our transport arrived to take us back to the Hotel.

Sommaroy in the early evening

On the Saturday night the Conference Dinner was held at Sommaroy, an hour's bus ride to the west of Tromsø, where we enjoyed a delicious sea food dinner among the most beautiful scenery which was bathed in the twenty four hour summer sunshine.

The final highlight of my trip was when we were divided into several groups for excursions into the field to see the arctic flora. I was in the group to Skibotn which was a two hour drive east toward Finland. We were given special permission by the hydro electric company to use their normally locked rough roads that go deep into the mountains; travelling into the hills this way gave us the best opportunity to see many plants in one day.

I found plenty of *Dryas octopetela*, the emblem of the SRGC, but this single flower against the mountain scenery mirrored our club logo perfectly

The flora of the area includes many plants that are very rare in Scotland and we were delighted to see them all growing so plentifully in the area we visited. To see them in Scotland would take several months, a lot of luck, a lot of travelling and a lot of hiking.

Diapensia lapponica, that rare and localised Scottish native, was widespread, growing among grass, in rock crevices and on the exposed tops.

I also found another Scottish native, Ron McBeath, lying on a scree photographing Saxifragas

Tromsø Botanic Garden is a world wide treasure that needs to be encouraged. I have no doubt that it will grow in importance as a major resource for the study of Alpine plants especially as recent climatic shifts, giving us warmer summers, make them more difficult to grow in the long established gardens further south. Tromsø will also become a valuable source (and maybe the only source) for seed of these plants to restock the other Botanic Gardens of the world when wild seed is no longer available.

My congratulations and thanks go to Finn Haugli, Kristian Nyvoll and all who have helped to create and maintain this great garden in such a beautiful setting.

This is the first time that the Discussion Weekend has been in the heart of Perthshire at Pitlochry which is also called "The Gateway to the Highlands". Pitlochry is on the main A9 north of Perth.There are rail links from Edinburgh and Glasgow but also a direct line from London. The nearest airport is Edinburgh with bus and rail links to Pitlochry.

Pitlochry is a tourist town with many Hotels and B& B's. It is set in the most beautiful countryside with Ben Vrackie looking over the town. We have 2 distilleries near the town: Bell's and Edradour, the smallest distillery in Scotland. There is good High Street shopping and, of course, the House of Bruar just up the road. Gardens of interest include Cluny Garden and all the Perthshire Garden Collection, in total 11 gardens.The hotel, on the southern approach to Pitlochry, is set in 48 acres of beautiful grounds with red squirrels frequently seen and lovely walks into the local Black Spout Wood. Facilities include a pool, spa-bath and tennis courts. It is within an easy walk of the town - about 5 minutes - for shopping.

Please book early to prevent disappointment, as we have an allocated amount of spacein the hotel.

All accommodation at the Atholl Palace Hotel will be in double, twin or single rooms. If single members prefer to share a room, it will be greatly appreciated if, when booking, they could arrange this between themselves. Tell us the name of the person with whom you will be sharing. Otherwise, we will use our best judgement when allocating single delegates to twin rooms. Extra nights on the Thursday night before and the Sunday night after can be booked at a specially negotiated rate of £45 per person per night, sharing a twin room to include breakfast. Tell us on the reverse of this form if you need this extra accommodation and we will book it for you. There is no ground floor accommodation but there is a lift to all floors.

Star attractions will be the PLANT AUCTION, RAFFLE and 50-50 PLANT SALE, PLANT SHOW, and HOLIDAY PHOTOGRAPHIC COMPETITION. Details are in the Year Book.

Please use the booking form enclosed with the Secretary's Page.

Members should make sure that the form and remittance reaches Julia not later than 19th September:

The Registration Secretary, Miss Julia Corden, 2 Lettoch Place, Pitlochry, Perthshire PH16 5BB (Tel. 01796 474410)

Members wanting further information should write to Julia Corden at the above address or email julia.corden@ptlochry.org.uk

RESIDENT	
Friday Dinner – Sunday Afternoon Tea	£175
Saturday Lunch – Sunday Afternoon Tea	£120
NON - RESIDENT	
Saturday (morning coffee, lunch, afternoon tea)	£35
Saturday Dinner	£21
Saturday (morning coffee, lunch, afternoon tea, dinner)	£56
Sunday (morning coffee, lunch, afternoon tea)	£35

FRIDAY 7TH OCTOBER

16:00	Registration
19:45	President's Welcome Address
20:00	The Bulb Group Lecture – 'In Search of Bulbs' Jim Archibald
21:30	Small Bulb Exchange

SATURDAY 8TH OCTOBER

08:00	Registration
08:00 – 09:30	Setting up plants for show
09:00	Optional tours – Cluny, distillery or The Scottish Plant Hunters' Garden
11:15	'North East of Shimla' – Henry & Margaret Taylor
12:30	Show Opens
14:00	The Harold Esslemont Lecture 'Botanising in South America' – Ger van den Beuken
15:30	'George Forrest' – Brenda McLean
19:30	Dinner
22:00	Plant Auction and Raffle

SUNDAY 9TH OCTOBER

08:00	Registration
09:30	The William Buchanan Lecture 'Alpine cushion Plants and Porphyrion Saxifrages' – Ger van den Beuken
11:00	'One the Rocks – Jim Archibald
14.00	The John Duff Scottish Lecture 'Glendoick Gardens' – Jens Nielsen

Congratulations to Cyril Lafong who has won the Crosland Prize awarded by the Aberdeen Group for the best contribution to *The Rock Garden* in 2004. Cyril's article "Growing for Showing" appeared in the July 2004 issue. The decision on the award this year was jointly taken by the Aberdeen and the Ayrshire Groups.

A view of the creek in Bobby Ward's garden in Raleigh, North Carolina

Book Reviews

THE PLANT HUNTER'S GARDEN - The New Explorers and Their Discoveries

Bobby J Ward

ISBN 0-88192-696-5
Timber Press
340 pages, 250 colour pictures, 3 line drawings
£29.99

In 2003, I was lucky enough to be invited to lecture in North America, and started my tour in Raleigh, North Carolina, where I was met at the airport by Bobby Ward and my host Bobby Wilder. Over the next few days the three of us looked at gardens around Raleigh; visited Tony Avent's nursery; and lunched at a rural cross-roads diner on chicken and yams. Slotted into this were visits to look at wild flowers and this is when Bobby Ward's career as an environmental scientist working for the power and light company came into play. Telephone poles were the markers for us to plunge off into the undergrowth to find *Trillium pusillum*. Overhead power lines were a marker that *Viola pedata* would be round the corner. Our excursions included Flower Hill reserve where we photographed *Rhododendron pericyclamenoides* along Moccasin Creek, which sounds picturesque enough until the fact strikes you that it's named after water moccasins.

So, when Bobby Ward told me a few months ago that his new book, on contemporary plant hunters, was going to be appearing at the end of 2004, I proposed the idea that he should write a piece for this journalabout the genesis of the book because it seemed such a wonderful idea – one of those brilliant ideas that is stunningly obvious after someone else has had it – the classic plant hunters such as Forrest, Ludlow & Sherriff, and Wilson, are familiar through their plants but many of the contemporary plant hunters are only known by the few. You will

find the article elsewhere in the journal together with a selection of the beautiful photographs which he was good enough to get permission for us to have in the journal and with which the book is full.

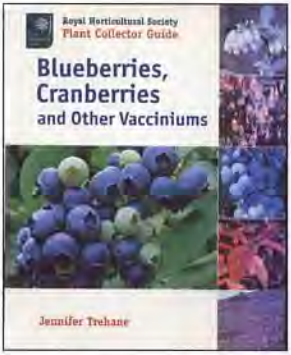
The twenty-five chapters on thirty-two plant collectors, include some very well-known figures to Scottish Rock Garden Club members: Jim & Jenny Archibald, Vojtěch Holubec and Rod & Rachel Saunders have all featured at recent Discussion Weekends. The selection of collectors is eclectic: 19 of them North American collectors, 8 British, 3 Czech and 2 South African. And the sort of plants they collect is certainly eclectic. In this volume you can find chapters on rock garden plant collectors such as Josef Halda, Rick Lupp, Josef Jurašek, Ron Ratko, Chris Chadwell, John Watson and Anita Flores de Watson, and Panayoti Kelaidis. Then there are those whose plants might more fairly be said to be for peat, woodland and wild gardens often from the Far East: Bleddwyn & Sue Wynn-Jones of Crug Farm, Don Jacobs of Eco Gardens, Barry Yinger from Pennsylvania, and Dan Hinckley of Heronswood can be seen in this category, and those who are specialists in a particular genus or plant type, such as Darrell Probst (Epimediums), Thad Howard (warm climate bulbs), Will McLewin (hellebores), Robert McCartney (American native woodlanders), and Clifford Parks (camellias). I'd like to detail what each of the collectors featured in the book specialise in but a list of the other collectors will have to suffice: Sean Hogan and Parker Sanderson from Oregon; Tony Avent from North Carolina; Sally Walker, once of Waterperry and Jack Drake's, now in Arizona; Carl Schoenfeld and John Fairey from Texas; Bill McNamara of Quarryhill in California who collects in China; and Bruce Rutherford and Pierre Piroche who focus on Magnolidae and the Chinese nursery trade.

Having a good idea and getting a great list of collectors is one thing, making a book is another, and that is when this book truly scores. Each collector and their collections is given a chance to breath: the individual elements of adventure, travel, the love of plants and gardens, and the qualities of the person, complement a survey of the some of the most important introductions of each collector. The pictures are beautiful and just make you want to be able to grow ten times as much as you do already and I loved the fact that there are pictures of each of the collectors – it crystallises the personal quality of the concept and the narrative.

If you are someone who has ever bought a plant with a collector's number attached, or if you've gone through a seed catalogue from one of these collectors marking up all sorts of exotic treasures, then this book is for you (and your wish list will be extended quite a bit). Or if you just love reading about plants and looking at beautiful pictures, or you want to know what the different people look like – this book is a joy.

In the end three things make this book such a delight- the people, the plants and the pictures. Irresistible! *Malcolm McGregor*

BLUEBERRIES, CRANBERRIES and OTHER VACCINIUMS



Jennifer Trehane

ISBN 0 88192 915 9
Timber Press & The Royal Horticultural Society

256pp with 66 colour plates, £22.50

This fascinating book should be on the bookshelf of every gardener in Scotland and northern England, the home of our four native species of vaccinium: *Vaccinium myrtillus,* Blaeberry (Bilberry in England); *Vaccinium uligonosum,* Bog Bilberry; *Vaccinium vitis-idaea,* Cowberry; and *Vaccinium oxycoccos,* Cranberry.

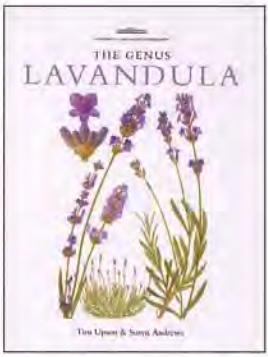
Perhaps it is because they are all around us on our moors and hills that until recently, the garden potential of the genus has been overlooked. The appeal for the gardener is twofold. Most species are happy in acid soil, highly ornamental, with glossy, evergreen leaves or richly coloured young growth and spectacular autumn colour, bearing clusters of pink, red, white or green, bell-like flowers, followed by berries that are generally blue, pink or red. Their other appeal for the gardener is as a crop. Blueberries and cranberries are now widely available in supermarkets, often imported from America. Blueberries, *Vaccinium corymbosum,* a North American species that is not represented in our native flora can also be grown by the amateur gardener in the UK. A number of cultivars are available from specialist nurseries. The same goes for the Cranberry, *Vaccinium macrocarpon,* which is not to be confused with our own Cranberry, *Vaccinium oxycoccos.*

The author is a grower of blueberries on a commercial scale in Dorset and tells the fascinating story of the start of commercial blueberry production in the UK. In 1949 a Methodist minister from British Columbia placed an advert in a British horticultural trade journal offering a gift of a hundred blueberry plants to anyone who would be willing to pay the postage. The author's father was one of those who responded to the advert.

The would-be grower of vacciniums as plants for the rock garden or for other garden settings is not neglected however and the part of the book devoted to vacciniums grown for ornamental value has a great deal to offer readers of this journal. The hardy species are mainly evergreen and range from ones that are suitable for trough culture and the rock garden, to those that will eventually grow into small trees. Many attractive species in the small shrub category are fully described in the detailed list of species and hybrids at the end of the book. The illustrations are of a high standard, giving the reader a good idea of the appearance of many of the more attractive varieties, both in flower and in fruit. Good plants for the high humus bed include *Vaccinium moupinense* from Sichaun, an evergreen shrub with red foliage in spring and big black fruit. *Vaccinium ovatum*, introduced from British Columbia by David Douglas, has been grown in the university botanic garden at St Andrews in a good, dwarf form for many years. The dense dark green mats produce orange-red new growth which retains colour all summer. *Vaccinium nummularia* is another attractive dwarf evergreen with deep red spring growth and pendant racemes of pale rose-red cylindrical flowers. *Vaccinium floribundum*, although a neotropical species from Ecuador and Peru, has coped robustly with three winters in my own garden in Cumbria, although it has yet to produce the long arching growths which are said to need pruning! *Vaccinium macrocarpon* ornamental cultivars, as opposed to those that produce the berries that are equally at home juiced or as an accompaniment to the Christmas turkey, are also detailed in the book, including my own favourite for a trough, the cultivar 'Hamilton'. This dwarf cranberry forms a congested mat of "evergreen" leaves that turn bronze in winter. The pale pink flowers are follwed by red berries.

All these and many more attractive vacciniums for the rock garden, trough and high humus bed are described in mouth-watering detail in this wonderful book. *Richard O'Connor.*

The Genus LAVANDULA



Tim Upton & Susyn Andrews

ISBN 1 84246 0102
Kew: Royal Botanic Gardens
456pp with 31 colour paintings, 54 line drawings, 31 maps, plus 123 colour photos, £37.50

Lavenders are not the most obvious subject for most rock gardeners but, although this book is not aimed at rock gardeners, it might just have that effect. I have never been enamoured of lavender in the garden – it is just too cottage garden and maiden aunt for me – but I have to say that I liked this book so much I bought the plants! Well a handful anyway - given the fact that this book deals in detail with all 39 species of lavender as well as almost 400 cultivars.

As always with books which Kew publish as Botanical Magazine Monographs, this is a wonderfully comprehensive treatment with chapters on cultivation and the history of cultivation, pest and diseases, morphology, propagation, phytochemistry, chromosome numbers and phylogenetetic relationships. But all of these, exhaustive and fascinating as they are, only serve as the hors d-oeuvre for the central body of the work which is, as one would expect, the detailed species-by-species treatment. The chapter on the history of lavender cultivation, the nurseries, and the history of the scent trade is fascinating and adds to the pleasure that I found throughout in the sense of a project which must have fully realised the authors' ambitions.

Most of the lavenders we grow in British gardens, however adventurous we are as gardeners, are almost certainly from among the seven species and their associated cultivars ands hybrids from Subgenus Lavandula. All these species can be found in Spain and in a number of cases are found through into France, Morocco and in the case of *Lavandula stoechas* around most of the Mediterranean. Some of these we are very familiar with, some less so, but most of us are far less familiar with the second subgenus, Fabricia, which is far more widespread. The centre of distribution for these species is northern Africa but they extend west to Macronesia and eastwards past Egypt and Ethiopia into the Arabian peninsula, and on as far as India, which means that far fewer of

these species are appropriate for outdoor cultivation in the UK, but offer great possibilities to growers in other parts of the world.

As I said, this book has persuaded me to go out and find a number of more obscure (to me at least) plants from subgenus Lavandula including 'Madrid Blue' and *Lavandula stoechas* 'Kew Red' which is a particularly attractive small red-flowered form from Almeria, and 'Madrid Blue' which was raised in Australia from a complex crossing of various plants including 'Kew Red', and the only commonly cultivated member of subgenus Fabricia, *Lavandula pinnata* which is from the Canary Islands. This is planted in a chimney pot, and is still flowering happily in mid-November and 'Madrid Blue' has just come back into flower. They are variously in a small rockery, a trough, and a chimney pot.

Finally I must mention the wonderful paintings and drawings by Georita Harriott, Christabel King and Joanna Langhorne. It was the exhibition of these at the RHS Show in February 2004 which won them a Gold Medal which first alerted me to this book.

All round this is a wonderful book, beautifully produced. *Malcolm McGregor*

GEORGE FORREST
Plant Hunter

Brenda McLean

ISBN 1 872291 44 9
Antique Collectors' Club
239 pp, 161 colour and black & white plates
£29.50

This is an absolutely fantastic book, full of facts, anecdotes, and wonderful illustrations and is a mine of information on one of the leading plant hunters of his time. Not only that, but the book is a great read; David, who thought it would be heavy going, is racing throughit, and is now planning next year's seed order based on the plant Forrest collected! From this book you will gain information about the man, his expeditions and the privations he suffered collecting the many different species, which we all appreciate in our gardens today. You will also rapidly realise why a 'Forrest Medal' is such a highly prized item in the SRGC.

If you simply treat this book as a coffee table volume, looking at the illustrations and dipping in and out of the text you will not be disappointed. If, however, you take the time to actually read the book you will be amazed at the wealth of knowledge to be gained about George Forrest and his seven expeditions to China.

Unfortunately Forrest himself did not write a book about his expeditions and up to now there has not been a definitive volume of his life. Thankfully this has changed with Brenda McLean's book.

Born in Falkirk in 1873 the first 30 years of Forrest's life are largely unknown, though we do know he went panning for gold in Australia. It is only after he joined Edinburgh Botanic Gardens that we start getting a clear picture of the man. Brenda then guides us through Forrest's seven expeditions to China his life at home with his wife Clemetina Traill and his eventual death in China at the age of 59.

Whilst it is now very easy for us to visit and travel through China at the time that Forrest was making his expeditions conditions were rather different. On his first expedition he was actually reported as having been killed by rioting lamas! He survived but many other westerners didn't. One can only wonder at the strength of character that enabled him to return for six more expeditions leaving his wife and three children behind in Scotland for years at a time.

In my ignorance I had always assumed that Forrest only collected plants and seeds, so I was amazed to discover that he also collected animals, birds and butterflies and that there are drawers full of his specimens at the Natural History Museum outpost at Tring, it put a very different light on Forrest for me.

Reading the book it would seem that Forrest was one of those souls who have the knack of 'being in the right place at the right time' – thus his entry to the RBGE and thus his first expedition sponsored by Bees Ltd., an enterprise set up by Arthur Bulley a socialist cotton broker from Liverpool. Bulley went on to sponsor his second expedition, perhaps out of guilt at the risks Forrest had taken during the first one.

In all Forrest's seven expeditions spanned a period of 28 years, during which time he was never at home for more than a year or so – I wonder how Clementina as a wife and mother felt at having her husband away for such long periods and in such dangerous situations.

There is such a wealth of information and so many wonderful pictures and prints in this book that I could write at length. My only recommendation is that you purchase a copy from Scott (our Publications Manager) and read it for yourself. *Carol Shaw.*

Dutch International Rock Garden Conference of Alpine Plants

• 13 - 17 April 2005 •

Wageningen, the Netherlands

To celebrate the 20th Anniversary of the Dutch Alpine Garden Society a large-scale conference is being organized.

On 13, 14 and 15 April lectures will be held and an extensive Plant Sale will take place at the Botanical Garden of Utrecht, with many foreign growers attending.
On 16 and 17 April you will be able to visit the world famous Dutch bulb fields, magnificent private gardens and interesting nurseries.

The lectures will be given by 13 well-known speakers:
Panayoti Kelaidis, Ron McBeath, Ian Young, Chris Grey-Wilson, John Richards, David Haselgrove, Philip Cribb, John Birks, Vojtech Holubec, Erich Pasche, Ger van den Beuken, Marijin van den Brink and Eric Gouda

These speakers guarantee there will be a wealth of information on all aspects of alpine plants. Among them are specialists ranging from bulbs, the North-American flora to orchids and constructing gardens.

English will be the official language at the conference , but all participants will be given the proceedings in Dutch, German or English beforehand, in order to ensure everyone understands the proceedings.

Thanks to sponsorship we have been able to keep the costs low, giving everyone the opportunity to attend.

The event will take place at the WICC at Wageningen. This conference centre offers all the facilities one can imagine and is easy to reach by car and public transport.

For more information contact the Bookings Manager:
Martijn Jansen, Tondensestraat 5, 6975 AB Tonden, The Netherlands
martijnjansen@zonnet.nl
or visit our website www.rotsplantenvereniging.nl

JACQUES AMAND
International

Below are photos of just a few of the plants and bulbs available from our two full colour catalogues published in January and July each year. See us in Edinburgh in June at Ingleston Showground. Visitors welcome to the Nursery. Many treasures not listed also available. To obtain our catalogues write to:

The Nurseries, Clamp Hill, Stanmore, Middlesex. HA7 3JS
or phone 020 8420 7110 or fax 020 8954 6784
or e mail bulbs@jaquesamand.co.uk or www.jacquesamand.com

Arisaema asperatum

Cypripedium formosanum

Arisaema elephas

Asarum splendens

Nomocharis meleagrina

Trillium stamineum

Trillium pusillum