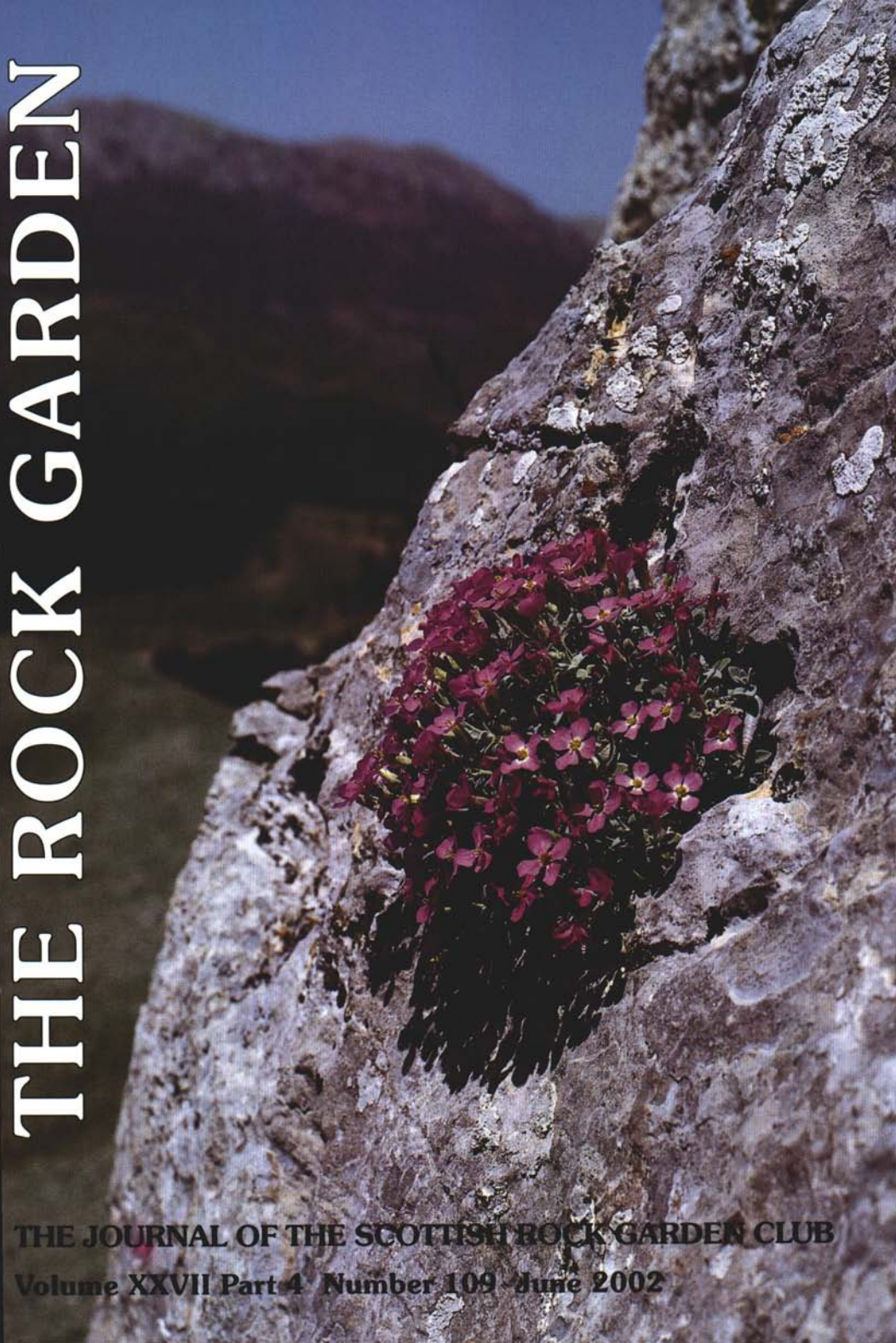
THE ROCK GARDEN



THE JOURNAL OF THE SCOTTISH ROCK GARDEN CLUB
Volume XXVII Part 4 Number 109 June 2002

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The ROCK GARDEN

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The deadlines for contributions are 1 November for the January issue and 1 April for the June issue.
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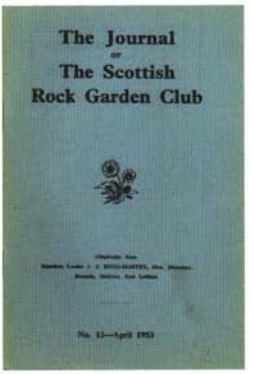

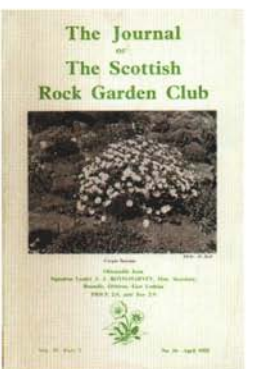

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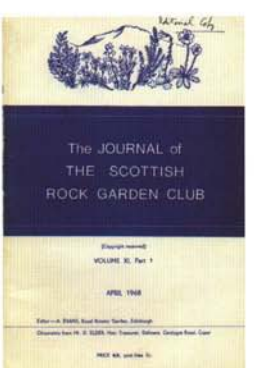


EDITORIAL

MIKE STONE IS HANGING UP HIS CHISEL – no longer will Columns of Stone be handed down from Askival. The first *Stone Column* was published in this journal in June 1982. It has been more than just a gardening column. Anyone who has met Mike or been to one of his and Polly's talks will recognise his distinctive tone of voice in the column. But they will also appreciate Polly's photographs which have recorded both plants and garden. It is the consistent eye that they have brought to this journal which readers will miss. In the last twenty years we have seen him reflect upon the plants he and Polly have been growing, on developments at Askival, trends in rock gardening and in showing, and, increasingly in recent years, on their travels. But it is not just Mike and Polly's gardening and plant-related activities that have been related. Mike has a point of view, not just on gardening. The column has placed political and social observation alongside observations about plants, construction of a rockery, and personal history. This issue sees *Stone Column* no. 40 and this will be the last one – Mike and Polly are moving on as Mike explains in the column – good luck from us all.

If Mike's efforts are something to mark then we should also remark those of Mary McMurtrie. Her new book, *Scottish Wild Flowers*, is reviewed on p. 412. For those who do not know, Mary McMurtrie is a watercolour painter who paints plants and it is a collection of these paintings which are being published. It is not her first book. Her previous book, *Scots Roses*, was only published in 1998. It is often a matter of note when an author in their 70s or 80s gets a new work published. What is so remarkable is that Mary McMurtrie was born in 1902. Her paintings reflect the traditions with which she grew up – this is not hard-edged contemporaneity but it stops a long way short of twee sentimentality although there is a softness to the work, an affection for her subject, which appeals. This club was founded in 1933 and it is salutary to realise that Mary McMurtrie, now in her hundredth year, was already in her early thirties, and running a nursery, which in fact she did for forty years.

It was 1937 before the first issue of this journal appeared. The next issue was in 1938 and then there was a gap of eight years during the War before no.3 appeared in 1946. The journal went on appearing annually

until 1951 from when it has appeared twice yearly. This is now the 109th issue of the journal which is now titled *The Rock Garden*, and this is a great opportunity for members to make up their set of back issues with a particularly good offer for issues from the first 26 volumes for just £1.00 per copy plus postage. Details can be found inside the back cover. It is fascinating to look at copies from different dates. Style and layout change through time, and earlier copies immediately evoke the period in which they were published, just as they do today.

Today, computerised technology means that quality can be guaranteed as never before. Books produced twenty years ago, full of colour plates which at the time seemed wonderful look sadly dated. A picture editor today can assume that every picture will be reproduced perfectly. And that allows our Illustrations Manager, John Howes, and me, freedoms and possibilities not available in the past. As the book reviews now feature images of book covers, so the Show Reports are moving in the same direction with images of plants and people. The Editorial Committee has been discussing how we should move the Show Reports forward and this is the first result of their thoughts, and of course of the efforts of Sandy Leven with his digital camera.

Technologies take a time to become fully mature and colour printing is no exception. But once they are fully mature they open up possibilities that are not at first even recognised. In the last issue, Ian Young reflected on what was involved in raising bulbs from seed. Following on from that, Ian agreed to put together the first SRGC photo-essay. Pictures rather than words take pride of place. Ian's sumptuous photographs make the point in a way that words so rarely can. The plants we love are beautiful and Ian's photographs make that so clear. I look forward to a follow-up, and to publishing other articles such as this, in the future. Both words and images have their place but only now have the possibilities of the image become fully open to us.

Finally, I want to thank all those who have written, or emailed, or phoned, or just passed on comments about the journal. They are much appreciated.

Fig. 145 *Primula grignensis*

Three new Primulas in northern Italy

Margaret & Henry Taylor

WITH THE WEALTH OF PLANTS coming in from distant parts of the world, it is important to remember what we have on our doorstep. The European mountains are readily accessible by car and the variety of choice alpine plants to be seen in one holiday is immense. For three weeks in May 2001, we toured by car, camping overnight either in the wild or in campsites. Our goal was finding and photographing three recently described European primulas, but with the bonus of seeing many other alpines which we had missed on our more normal late June holidays.

Motoring through Switzerland, on our third day from leaving Dundee, we found the old road up the St. Bernard Pass closed by more snow than normal just above the mouth of the tunnel. Before the grass had started to grow, there were *Soldanella alpina* and *Crocus vernus* ssp. *albiflorus* flowering by the thousand. Despite the name, the crocus can be in multiplying clones of white, veined purple or a gorgeous deep purple (see overleaf).

We continued through the tunnel into Italy where we were half drowned by a thunderstorm. On the shore of Lake Maggiore a campsite owner, whose camp was awash, took pity on us and gave us a hut bungalow at the cost of £10.50 for the two of us (much cheaper than accommodation in Britain). The introduction of the Euro should make travelling throughout Europe very much easier (3,000 lire to the pound was just one of the five currencies we had to juggle with).

A friend had suggested we look on Mt. Nudo 1235 m for a peculiar primula, not yet given a name, which unfortunately we failed to find. Near the cross at the summit, there was a good pink *Corydalis solida* in woodland, and in clearings, a strong form of *Primula elatior* alongside *Narcissus poeticus* var. *verbanensis*. This local form of the narcissus has a shallow yellow–centred corona with a thin red rim.

Primula grignensis

Then we travelled east of Lake Como to the Rifugio Carlo Porta on the slopes of Grigna Meridionale (southern). We had to hang onto fixed cables to get up the snow slope near the 2184 m summit. Beyond the aluminium dome, the snow was far too deep for flowers. At lower altitude in turf and on the limestone rocks there were superb clumps of *Primula auricula* with huge flowers and big leaves, and also *P. glaucescens*, but we failed to find *P. grignensis* on our seven–hour climb. In pathside rubble, there were dainty plants of dark purple *Viola dubyana* and just into the woods lots of blue *Hepatica nobilis* and the rare brighter blue *Pulmonaria visiani*. In deeper woodland, there were drifts of big showy white *Cardamine heptaphylla* and bright yellow *Anemone ranunculoides*. Fortunately, when heading off to climb at the crack of dawn, we had left our campsite fee on the hut doorstep under a bag of pannini, so we were given a warm welcome on our return, as we planned to go up the nearby Grigna Settentrionale (northern) the following day.

Success! We motored rather nervously up the very rough track to the Rifugio Tedeschi, then explored the cliffs at the edge of the treeline (mountain beech). Just above the pathside we scrambled with some difficulty through the trees and up small limestone cliffs where we found plenty of lovely *Primula grignensis* (fig. 145). Later in the day, we discovered it in hundreds on the east side of the mountain above Rifugio

Fig. 147 *Helleborus niger*

Locals told us that there was much more snow around than normal for 13 May. *Primula grignensis* is free-flowering and very variable in shades of pink to magenta with leaves between *P. hirsuta* and *P. allionii* and the habit of growing on shady cliffs and inside caves like the latter, but also *P. grignensis* can be found on free-standing limestone boulders facing in every direction. We did not see large swathes of the plant hanging over cliff edges as is common with the related *P. hirsuta* which is normally found on acidic soil. *P. grignensis* was described as a new species by D M Moser in 1998, though there is still dispute among botanists about classifying it as a distinct species.

The turf close to the melting snow was carpeted with thousands of *Crocus vernus* ssp. *albiflorus* (fig. 146) and *Helleborus niger* (fig. 147), with the flowers of the latter ranging from pure white through pink to deep maroon, an amazing sight which ran through a lot of film. We were delighted to have been directed here by our friend. We also found nicely scented *Daphne striata* and *Primula glaucescens* in rocky areas. Happily, we returned to our campsite, with chirping grasshoppers and a cuckoo calling from the wood opposite.

A detour south

Morning dawned with very heavy rain, so logically we decided to head south across the Po valley towards the sun. During a gap in the rain we had a picnic on a piece of waste ground and saw a good range of orchids, the

Fig. 146 *Crocus vernus* ssp. *albiflorus*

Fig. 148 *Rhodothamnus chamaecistus*

20cm *Orchis purpurea* pink with maroon spots, *Orchis morio*, *Ophrys bertolonii*, and also a big showy pink *Polygala comosa*.

Sadly, when we reached Mt. Orsaro in the Apennines the rain was even heavier! So we put the camera into double poly bags inside the rucksack, donned waterproof clothing and headed up the mountain. Snow lay deeply in hollows. On reaching the crest of the ridge, we did find *Primula pedemontana* ssp. *apennina* in bud, but without a single open flower. As it was still raining, with the wind blowing us off our feet, the camera remained in its poly bag. It was miserably cold and wet, but satisfying to find the primula. Strange things folk do for a hobby!

Primula recubariensis

We returned north across the Po valley to the Carega Massif, 2259 m, east of Lake Garda, and on a lovely day, climbed for eight hours walking over a lot of snow on the attractive limestone Mt. Zevola, a good area for a wide range of plants. In barren-looking cracks approaching a 1716 m ridge there were good flowering plants of *Primula recubariensis*. The leaves are small pale green and glandular and the flowers are in shades of bluish pink. It was described as a new species in 1998 by Prosser and Scortegagna. Above the pass, we found the first white *Primula spectabilis* that we have ever seen and, close by, plants of *Saxifraga burseriana* and a beautiful *Rhodothamnus*

chamaecistus (fig. 148) with a deep rose eye. Circling Zevola there were cliffs with dwarf, white *Arabis pumila* and sunny wet turf with sheets of vibrant blue *Scilla bifolia.*

At 1500 m, we scrambled down a steep, tortuous pass in thick mist; this mountain is very wet with 2500 mm of rain per year. There were many bluish flowered *Primula recubariensis* (fig. 149) growing on the cliffs, the almost stemless flowers nestling down in rounded, softly hairy leaves.

I climbed to one particularly good plant but failed to get a photo. Margaret gave good advice "Don't climb up there". She turned her back, heard a thump, and spun round to see me rolling down a steep scree and grabbing a solid rock on the edge of doom. Who would have expected a treacherous foothold to give way the instant I took my hands off the rock face to focus the camera? Apparently, I sat up and immediately examined the camera to check that it was OK. Fortunately, it was undamaged and I only suffered a few cuts and bruises.

In the damp leafmould of the beech wood, *Cardamine triphylla* was an attractive newcomer to us; the white flowers were on 10 cm stems above dark green three-lobed leaves. We deserved our local Sangiovese Merlot with the evening meal.

Fig. 149 *Primula recubariensis*

Primula albenensis

Then we motored north of Bergamo to Chignolo on the slopes of Mt. Alben, 2019m. As we left the village, we were joined by an eccentric elderly local man looking for company. He marched vigorously along entertaining us with endless chatter in a peculiar dialect, which strained my limited knowledge of Italian for Scotsmen ("Quanta Costa? Tropo Caro!"). After bending our ear for an hour or two I had to tactfully explain that Margaret liked to walk slowly and our 'Loco Rustico' should head onwards alone.

Climbing up towards the top of the Val Noseda, still within the treeline on shady limestone cliffs, *Primula albenensis* (fig. 150) was at its peak of flowering on 19 May. This primula grows in humus-holding cracks in the cliffs and was written up as a new species by Banfi and Ferlinghetti in 1993. It is perhaps the most attractive of these newly described European primulas with wavy edged, snowy white, farinose leaves quite variable in shape and pale lilac-blue flowers reminiscent of *P. marginata*. We actually found one exceptionally large plant with dark purple flowers and wondered whether it might be a hybrid with *P. auricula*.

Fig. 150 *Primula albenensis*

The Bivouac Testa is perched on the summit ridge; a strange Hansel and Gretel wooden chalet with red and yellow tulips growing beside the invitingly open door, a pleasing contrast to the usual severely locked mountain refuge. On sunny cliffs around here, we could only find *P. auricula* in its farinose-leafed form. Shady precipices were a home for large plants of *Saxifraga vandellii*. Farther south-east along the ridge on Mt. Secretondo, 1555 m, there was more *P. albenensis* in the shade and the farinose *P. auricula* in the sun. On our way back down the Val Noseda, we spotted a couple of small white-flowered *P. albenensis* on a high cliff. Also on this cliff there was the most sensational white, huge-flowered *Rhodothamnus chamaecistus*, with just a hint of pink veining in the centre of the flowers. This was another long day on the mountain, but very satisfying.

We then motored via Turin to Trinita in the Bousset valley where we saw *Primula allionii* on the cliffs, but the flowers were long gone over on the 20 May. In clearings in the beech woods there were good *Orchis militaris* and *Cephalanthera longifolia*. We got soaked by steady rain walking in the woods up the Val Sabione and saw only *Dactylorhiza sambucina* in yellow and red plus a few poor *Primula marginata*.

Into the French Maritime Alps

After crossing the border into the Roya valley in the French Maritime Alps we walked in sunshine, up the Valmasque valley from Casterino, into beautiful scenery with lots of flowers. Along the old road blocked by deep snowdrifts, we saw *Primula hirsuta*, *P. latifolia*, *P. marginata* and some hybrids between the last two species. We were delighted to get quite close to both ibex (bouquetin) grazing on the twigs of hazel bushes just below the track and chamois in the meadows on the opposite side of the river.

We have visited this valley several times over the last 30 years, as it is one of the most attractive flowery places that we know. There was only one other car parked at the road end and we met the owner when we returned in the evening. He was a German fritillaria expert and member of our club who had walked a different path and found both *Fritillaria tubiformis* and the yellow *F. moggridgei*, which we have previously seen in this area.

From Casterino the following day we walked up the Fontanalbe circuit, now blocked for cars. At the roadside, there was *Pulsatilla apiifolia* and, when sun opened the flowers, we saw the dainty dwarf yellow and bronze *Tulipa australis*. Apparently, "australis" means from the south, not from Australia!

On wonderfully flowery turf banks there were chubby heads of primrose and red *Dactylorhiza sambucina* (fig. 151), accompanied by *Gentiana acaulis* and *Viola calcarata* in yellow, purple and white.

Boots off, we had to wade the river, then toil with difficulty up big snowfields to reach the little lakes at Gias de Pasteur. It was well worth the effort, and a bit of grumbling, when we were rewarded by the sight of perfectly flowered, gorgeous blue *Eritrichium nanum* on exposed slate ridges blown clear of the snow (fig. 152). The silver-haired leaves were still very small and apart from lichens, this was the only coloniser of the ridges, a plant that always stops you to demand a photo. Here we found a recently built hut securely locked beside a pond and a concrete viewpoint constructed on top of an eritrichium ridge! The prehistoric rock engravings, which we have seen in the past around here, were deep under snow on 23 May.

Then we visited Caussols where we saw lots of orchids in the limestone pavement, *Traunsteinera globosa*, *Orchis ustulata*, *Orchis morio* along with *Daphne oleoides* and an impressive, large-flowered, pink *Lamium garganicum*, but the fritillarias were all well past flowering. On the Pic de`lAigle there was no sign of the dwarf *Narcissus provincialis* which we had seen here 20 years ago, but there were extensive animal diggings, perhaps due to boar or deer eating the bulbs.

Fig. 151 *Dactylorrhiza sambucina*

Col de Cayolle – Ouvert

The Col de Cayolle, 2327 m, had been snow-ploughed through 3 m deep snowfields, but a little way down the far side an avalanche had blocked the road with deep snow just before our arrival. Our uphill group of motorists started to dig our way towards the group of motorbikers stuck on the downhill side of the snow.

Our group fortunately included a roadman with several shovels in his car. The opposing gang was joined by two cars with canoes and the paddles were used for digging. Everyone worked like fury hurling blocks of snow down the mountainside and after an hour there was a great cheer when the two groups of mixed nationalities met.

Our snowy adventure delayed until evening our arrival at our old free semi-wild campsite near l'Echalp in the Queyras valley. Supper was starting to cook when Margaret, gazing around in the gloom, spotted several brown 'blobs' only 30 m from our tent. The Primus was abandoned, plant hunting taking precedence over food (at times). We were camped beside several good flowering *Fritillaria tubiformis*! In good light next morning, we were able to admire the substantial rosy chestnut flowers with a plum bloom towards the top of the bell.

Fig. 152 *Eritrichium nanum*

Fig. 153 Queyras valley

This Queyras region is picturesque and excellent for flowers in late June, but we were a little too early to see it at its best this year. This is inviting hill-walking country with enticing side valleys on each side of the river which leads up to the pinnacle of Mt. Viso. We spent 11 hours climbing in the direction of the Col de la Croix finding plentiful *Fritillaria tubiformis*, *Primula farinosa*, deep purple *Viola calcarata*, good *Gentiana verna*, and at the edge of huge snowfields beautiful *Pulsatilla vernalis*. The pulsatilla flowers before the leaves start to grow, the pink-backed petals, and stems are covered with silver hairs that sparkle in the sun. Here we were seeing it in May, but in July, climb a little higher in the Alps and it can still be found in flower. Back down in scree within the woodland there were semi-double forms of the white *Ranunculus keupferi* (formerly *R. pyrenaeus plantagineus*). In addition, on an old terrace near the road we saw magnificent spires of *Orchis signifera*.

Then we had to head for home via the Col d'Izoard where *Viola cenisia* was already showing deep lilac flowers. Over the Col de Lautaret, *Narcissus poeticus* had started to open, which we have seen here at higher altitude still flowering in July.

We had achieved our aim of finding and photographing the three new European primulas but also saw many other choice alpines, most of them growable in Britain.

There is an excellent article by Fritz Kummert on these newly discovered European primulas with more botanical details in the *AGS Bulletin* for Sept. 2001.

Obituaries

BILL MACKIE died on 21st February 2002. He was an extremely active and well known member of the Edinburgh Group, where he served on committee, firstly as Librarian and latterly as Treasurer. At the time of his death he was also a member of Council.

Bill first dipped his toe into the world of exhibiting at the Edinburgh Show in 1996, and quickly made his mark on the scene. He promptly won two firsts, which fired up his enthusiasm. Between 1996 and 1998 he won 54 firsts in Section II, 42 of these being awarded in his final year in this section, which stands as a record. Like many others before him, he now found himself compelled to compete with the 'big boys' of the showing world in Section I, but such was the quality of his plants, that he was awarded the Bronze Merit medal in 2000. The pinnacle of that year was winning the coveted Forrest Medal with a fine pan of *Phlox nivalis* at the Aberdeen Show.

In addition to his talents as an exhibitor, he created a superb alpine garden with his wife June, which was opened on one occasion to the Edinburgh Group. Bill managed to cram an amazing number of plants into his garden as well as an alpine house, and numerous frames, to house his rapidly expanding collection. Many of these plants were surely destined to take yet more Forrest medals.

Bill was always cheerful and a pleasure to be with. His infectious enthusiasm for alpines was always evident – many a time we would walk into a show only to be accosted by Bill who would rush us over to admire some wonderful exhibit! He will be a great loss both to the Group and the Club. *J & A Thomson*

MERVYN KESSELL. For those of you who may not have heard already, I have the unhappy task of reporting the sudden death at the beginning of December 2001 of Mervyn Kessell, co-founder of the Meconopsis Group. It was Mervyn who first suggested the formation of the Group, the primary aim being to attempt to sort out the identity and nomenclature of the big perennial blue poppies in cultivation. He suggested this after reading the manuscript of the article I had prepared on *Meconopsis* 'Jimmy Bayne', and we jointly set about getting the Group started. In recognition of his vital contributions to the Group, we have decided to name a suitably fine clone in honour of Mervyn. *Evelyn Stevens*

Cypripediums in the garden

Anthony Darby

THE LADY'S SLIPPER ORCHID *Cypripedium calceolus* has been a special favourite of mine since I saw its picture nearly forty years ago in the Brooke Bond Picture Card book 'Wild Flowers' (series 3). The card read: "*This large, rare and beautiful orchid may still grow wild in a few places in limestone areas in the north of England. But, because of the covetousness of collectors, it is now almost extinct. The flower is more than twice as large as any of our other native orchids and has a large curious slipper-like lip. This plant requires sixteen years from the time the seed germinates to produce its first flower.*" C F Tunnicliffe's words painted a picture of a fabled flower that may still grow undetected in some part of Yorkshire, my home county. Many years were to pass before I was to come across reference to the plant again, and by then I was settled in Dunblane and trying to establish a garden which was to include alpine plants.

I have always been interested in gardening and in growing orchids. In 1994, I bought a copy of Will Ingwersen's *Manual of Alpine Plants* to give me an idea of what was available. I was very pleasantly surprised to see a section on cypripedium species. Unfortunately, the introductory paragraph was rather off-putting: "*these beautiful hardy terrestrial orchids……are lamentably scarce in cultivation……until someone discovers the secret of propagating them from seed or by some modern method of vegetative increase.*" Since the book was first published in 1978, much has been done to grow orchids, and propagation by seed is now well established, so much so, that one only needs to follow 'sterile procedure' and seeds can be germinated and plants grown on agar jelly in petri dishes, or even jam jars, until they are ready for potting up in the home laboratory (kitchen).

Fig. 154 *Cypripedium calceolus* (Fiona Hutt) (p.322)

It is important that plants are obtained from legitimate sources. Conservation of wild plants should be high on our agenda. It is the demands of plant-lovers which have led to wholesale collection in the wild and which has in turn led to the CITES legislation. If we don't behave well then a lot of other populations will follow the fate of the British native *Cypripedium calceolus*. There is one original plant left, closely guarded, and now seeds from this plant have been germinated and propagated at Kew and planted out in the original habitat. It took ten years for them to flower, but they can now be seen in June. Orchid enthusiasts can now obtain plants grown from seed just 'deflasked', or grown on soil for one or more years. I have not yet tried to grow orchids from seed in sterile conditions, but they can be pollinated easily and I intend to try this year.

Growing cypripediums is, however, not easy and you will lose plants before finding the way that suits plants in your garden. My first attempts failed miserably. The first, *C. acaule* bought at Lyle's Nursery in Leslie, Fife, just rotted away. The second, a hybrid seedling bought at the Stirling Show, never actually appeared, so must have suffered the same fate. A few years were to pass before I was to have another opportunity to buy plants. A colleague passed a Paul Christian catalogue on to me and I sent off an order. I received my first plant, *C. calceolus,* and planted it in a sheltered spot under an overhanging cypress hedge. In anticipation, I

Fig. 155 *Cypripedium* x *ventricosum* cross (p.322)

Fig. 156 *Cypripedium parviflorum* (p.322)

Fig. 157 *Cypripedium pubescens* (p.322)

Fig. 158 *Cypripedium parviflorum* (p.322)

waited the following spring, and – nothing. This was disappointing. Another chance to throw money away came at the 1997 Garden Festival in Strathclyde Park near Glasgow. John Amand had *C. pubescens*, a North American version of *C. calceolus*, in flower and sold me a plant. This time I prepared a large hole and filled it with a mixture based on Paul Christian's recipe: 1 part sieved loam; 1 part old leaf mould; 1 part perlite; 2 parts silica sand and "a good admix of crushed oyster shell". The plant was carefully placed in a hole without disturbing its roots. The following June, a beautiful single bloom appeared (fig. 154) – success! In the next year, I bought three more plants: *C. calceolus* in the autumn of 1998 at Christie's Nursery, *C.* x *ventricosum* x *C.* x *ventricosum* 'Album' at the 1999 Early Bulb Show, and in May a *C. parviflorum* (a small species also related to *C. calceolus* from eastern North America) with two 'noses' – all from Ian Christie, who grows cypripediums extremely successfully in his garden near Kirriemuir. Unfortunately a piece of grit, which lodged in the top of the plant, caused the flower of the *C. calceolus* to rot, but the other plants in the garden flowered. The *C.* x *ventricosum* cross had one stem with two flowers (fig. 155), the *C. parviflorum* two stems with one flower each (fig. 156) and the *C. pubescens* (fig. 157) also had two singled-flowered stems. I had "cracked it", or so I thought. The following year,

Fig. 159 Lily basket for sinking in soil (p.323)

2000, the *C. parviflorum* had four flowers and the *C. calceolus* had one, but the *C. pubescens* produced only leaves and these died early. Time to dig the plant up. Black around the crown and missing buds indicated rot and therefore the planting medium was too wet. Time to change the recipe.

By now I had found another supplier – Hardy Orchids Ltd – and they had a different planting medium: 1 part sterilised loam, 1 part fine bark, 4 parts Seramis®, 4 parts super-coarse perlite. I had also taken to planting my orchids in large water-lily baskets before sinking them into the ground (fig. 159).

I carefully washed the muck off the remains of the *C. pubescens* plant and carefully placed it into a lily basket and poured the new mix over, carefully positioning the top of the plant just less than an inch below the surface. I also watered in some fungicide (Paul Christian reckons mature plants in a garden setting do better without the associated fungus). 2001 and the plant produced three healthy, if none flowering, leafy stems. Other successes in 2001 were four flowers on the *C. parviflorum* (fig 158), three flowers on a large clump of *C. reginae* (aka "The Big Pink and White") and two *C. calceolus* plants in bloom – one from a small plant bought in 1999. I also had two flowers on a double-stemmed *C. tibeticum* (fig. 160), two on a single-stemmed *C. montanum* (fig. 161) and two on another double-stemmed *C. pubescens* plant. My *C.* x *ventricosum* cross produced only leaves, but I suspect it was due to being left in the more water retentive compost.

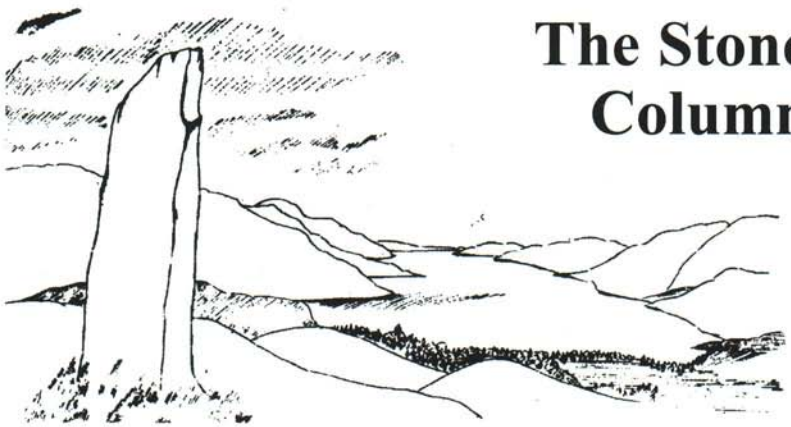
Fig. 160 *Cypripedium tibeticum* (Fiona Hutt)

As I said before, growing cypripediums is not easy, and it is certainly not cheap, but the rewards are great. Now one can obtain vernalised (cold stored to break dormancy) seedlings for as little as £5 and hybrids, such as *C.* 'Gisela', flowering

size for £15. These hybrids are much more vigorous and make good garden plants. Seedlings are more difficult, and may take four or more years to flower. The secret is in the medium and the care they receive. Plants need to be in free-draining compost so that when water is poured into the pot it comes straight out through the bottom, but the plants must *never* dry out. In cold, wet Dunblane drying out is rarely a problem, especially if using lily baskets sunk into the ground. It is important that the top inch or so, where the bud or 'nose' is, remains open so as not to encourage rot. I use pea gravel or coarse grit, which does not compact. The orchids are totally hardy, and only need protection from pests and late frosts. An upturned, wire, hanging basket is also useful in preventing cats and birds from disturbing the surface of the medium. Feeding should be done with quarter strength fertiliser, as they will not tolerate normal strength. The organic component can be varied, and success has been achieved with loam, beech leaf-mould, pine duff and Cambark®. Peat is best avoided as being too acidic. Only *C. acaule* and *C. reginae* like acidic conditions. The rest like a pH on the alkaline side of neutral and can be accommodated by adding crushed oyster shell (from pet shops supplying pigeon feed) or dolomite grit. If obtaining Seramis® is a problem, then replace with pumice or clay granules. You could also use entirely perlite as the inorganic part, especially in wet areas of the country. Ideally, grow your plants in a north-facing site, or in semi-shade. A situation that suits trilliums would suit these orchids, and as trilliums grow in full sun north of Yorkshire, there should be no problems growing in full sun in Scotland. If growing in pots, the pots themselves should be shaded. For more advice, see the Hardy Orchid Society web site: www.drover.demon.co.uk/HOS.

Fig. 161 *Cypripedium montanum* (p.323)

My thanks to John Amand, Paul Christian, Ian Christie and Hardy Orchids Ltd, New Gate Farm, Scotchey Lane, Stour Provost, Nr Gillingham, Dorset for plants, and advice.



The Stone Column

THE STONE COLUMN NO. 40, JUNE 2002

THE FUTURE IS THERE TO BE CHANGED.

The seasons march on relentlessly, the *Stachyrus praecox* is in bloom outside the office window once more, and, although it is a dry day, I must start the *Stone Column*, possibly the most difficult I have ever written these 20 years.

Throughout history all human organisations have had to balance the rights of the individual against the needs of the society as a whole. We are fortunate to live at a time when here in the West we do, within certain constraints, have some measure of control of our own destinies. Forever has no meaning, and we have always known, that as our physical powers inevitably decline, we shall not be able to continue indefinitely developing the Askival garden here by Loch Ness, while at the same time running the wholesale nursery which supports both it, and our plant explorations in the wild. Thus, we have decided that the sensible thing to do is to start looking for someone to take over from us now, before there is any real urgency. It may well take several years to find the right person; and in the meantime we continue sowing, constructing, planting, weeding, and harvesting as if we were immortal, so that they will be able to hit the ground running.

As to our personal ambitions, we have long wished it were possible for us to spend far more time out in the mountains looking at alpines in the wild. When hiking guides and floras become rather more

interesting than garden books, and the 'Backpacker' is a favourite magazine, it is past time for a change. Friends have enquired as to what will happen to our red Lakeland terriers, Grizzly and Dana, while we are away botanising. The matter is in hand; our elder daughter, Oonagh, and her husband are having a kitchen extension and utility room added to their house in Northern Ireland. This is also earmarked as potential canine accommodation while the old folk are away gallivanting in the wild. Although it is field botany which now really turns us on, this is by no means an abrupt switch, but part of a natural progression.

When we first started the garden over thirty years ago, we went through an acquisitive stage, raising from seed and growing as many alpines as we could. In fact, from 1978 to 1980, the first short series of articles I wrote for this journal were entitled 'Recent Acquisitions from the Seed Exchange'. In those days, whenever we planted out anything unusual, we always kept a reserve in a pot in the frames. As the collection grew, not only did this practice become quite impossible, but the plants out in the garden received less and less individual attention. When looking through seedlists we always tried to choose species from climates and habitats that were compatible with the environment at Askival. Minimum interference gardening became the order of the day (fig168 p.338); and, in spite of Poll's best efforts in collecting huge amounts of seed, many plants moved themselves around the garden, finding their own ecological niches. Some of these self-sown populations have prospered rather better than our deliberate plantings, the stand of *Cyclamen hederifolium* under the pine tree by the front gate for example. While some may see a naturalistic planting style as mere untidiness, we feel privileged whenever a species is sufficiently happy here to reproduce itself without aid. From an increasingly naturalised garden to nature itself is perhaps not such a big step after all. Let us indeed hope that whoever takes over is not the sort of person who must put a label on every plant; attempting that here has the potential to drive them mad. On the other hand, if they are sufficiently laid back then they will have great fun waiting to see what pops up.

In all the years we have been at Askival we have made very few deliberate crosses; one of the few resulted in *Meconopsis* 'Askival Ivory', alas no longer with us. On the positive side, many of the hybrids that just turned up here have proved to be much more durable. Although we do not propagate from cuttings ourselves, we have always freely distributed material to other growers. Some have proved to be excellent garden plants; *Cassiope* 'Storm Bird' (fig. 162) for example, which

Rick Lupp told us was the most free-blooming cassiope he grows at Mt. Tahoma Nursery. It turned up amongst seedlings from *Cassiope selaginoides*, probably pollinated by *C. lycopodioides*. Not all are shrubs: an interesting seed strain of *Lilium nanum* has developed quite by accident, which we call 'Bhutan Blue'; and a lovely lemon yellow form of *Fritillaria cirrhosa* has recently appeared (fig. 163). When raising plants from seed it is always worth remembering that many species are highly variable. Although we already had several dark brown forms of *F. cirrhosa* and a pure green one firmly established in cultivation, we sowed the further collection which gave us the lemon form just in case it was different.

Horticulture as a whole has always encompassed a very wide range of styles and aspirations, from gardens the aim of which is to demonstrate the owner's power over nature, such as Versailles, to ones which attempt to recreate nature, as in the traditional Symons-Jeune rock garden. The recreation of an ecosystem is probably most firmly established in the woodland garden with its layered planting of trees, shrubs and ground cover, but this approach has in recent years been extended both to meadow- and prairie-style plantings, and the gravel or Mediterranean garden. Of the two extremes, the purely geometrical design is by far the easier to realise. In avoiding straight lines, all too often borders have wavy or curved edges and end up simply looking contrived. While many of our plantings are natural in style, our beds are not, as the accompanying plan shows. However, we have always tried to set these artificial structures into the overall plan to give the impression of an underlying logic, the raised beds and terraces always follow the natural contours of the ground. Instead of banishing trees to the back of a border one can bring some prominent ones forward so the edge can curve around them for an obvious reason.

It is a tragedy that there is no true wilderness left in Scotland; indeed, in most of Europe's mountain ranges one is observing a landscape which has been substantially altered by human activity. Thus, there is little opportunity for the garden designer to study a natural timberline where the pattern of scree and rock, woodland and meadow is governed by underlying factors. Why is there an isolated clump of trees on that knoll for example? Perhaps because the snow melts there a little earlier, extending the growing season just enough for trees to establish. Answers to such questions are not always so obvious, which is precisely why we find the distribution and growth habits of alpines in the wild so fascinating. It could well be that the urge to explore has

Fig. 162 *Cassiope* 'Storm Bird' - a chance hybrid can be a good plant (p.326)

Fig. 163 Lemon form of *Fritillaria cirrhosa* - worth raising further wild collections even if you have the species (p.327)

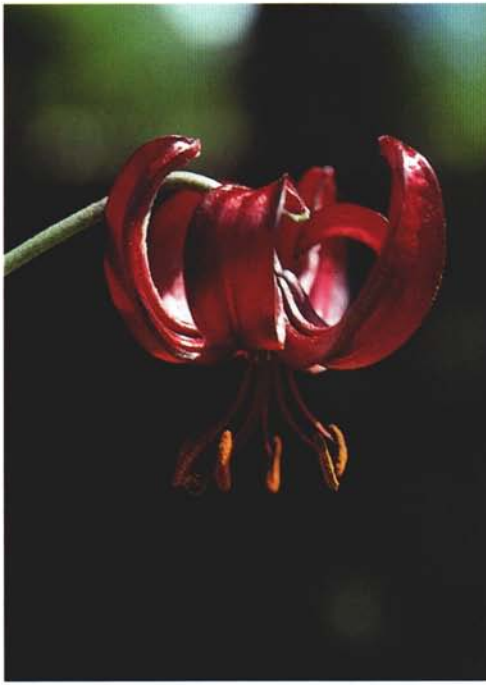


Fig. 164 *Lilium chalcedonicum* - an old species in cultivation but new to us (p.331)

always been genetically imprinted in modern humans, ever since they first dispersed out of Africa; or as Freebird puts it: *"Because there's too many places I gotta see"*.

THERE WERE TREES IN TÍR CHONAILL

As a consequence of the degree of uncertainty hanging over our remaining time here in the Highlands we have reluctantly determined that this is to be the last of this regular column. After 20 years it is perhaps appropriate to hand on the torch to someone with fresh ideas. Writing is in the blood, however, and I have every intention of continuing the family tradition. My great aunt, Alice Milligan, writer and poet, was an important figure in the Irish cultural revival towards the end of the 19th century.

She was an eloquent advocate of Irish self-determination at a time when British imperialism was at its height and such views were scarcely fashionable, especially for an Ulster Protestant! A constant thread evident throughout much of her work is a clear love of the Irish landscape, in particular the mountains, with which she was intimately acquainted. One poem which strikes a real chord in both Poll and me, starts :

> *There were Trees in Tír Chonaill of the territories,*
> *In Erin's youthful yet remembered days*

By lamenting the loss of ancient forest cover in County Donegal she was well ahead of her time; indeed the verses, written around 1890, were actually subtitled "The wilderness and the solitary places shall be glad for them", a sentiment we cannot endorse strongly enough. Perhaps my love of wild places also has a genetic factor. The poem ends on an upbeat note, prophesying that the forests will rise again one day. I wish that I could share her optimism, but most of the visitors to the Highlands we meet, including the hill-walkers, are not even aware that the mountain landscape they so admire is a depauperate one, degraded by centuries of overgrazing.

Sheep are of course a crop, and their removal and consumption by humans has slowly but remorselessly depleted the upland environment. This is but one example of a far more general principle, that much of the population in the developed world has in fact largely removed itself from the natural cycle. Our food starts life as growing plants and ends up flushed away into the sea. Of the major plant nutrients, nitrogen is recycled from the atmosphere, and this can be enhanced by growing

leguminous crops, but the bulk of the phosphate and potash are lost in the oceans. Fossil deposits are mined to replace these last two, for example much of the phosphate used in Europe comes from Morocco. We personally are as guilty as anyone. With our thin stony soil and relatively high rainfall, nutrient leaching is severe, and we have no choice but to apply fertilisers in order to obtain satisfactory growth. We have always tried, however, to recycle where we can; large compost heaps and leaf-mould pits were virtually the first structures added to the garden. In the early days the leaf-mould was used, as was the compost, to bulk up our soil; but now it replaces half the peat in our potting mix. Back in the early 1970s, long before such practices were common, we had three bins to confuse house guests: a compost heap bin for vegetable waste, a burning bin for paper and cardboard, and a refuse bin for the rest. The only change since then has been the separation of glass from the last. We burn only wood on the sitting room fire and save all the resulting ash. As much of the nutrient in this is soluble, we store the ashes dry over the winter and scatter them onto the tree and shrub borders once growth is well under way in spring. I cannot vouch for their efficacy as a fertiliser, but the process does make us feel better.

CHINA, IN WHAT HANDS

Regular readers of the *Stone Column* will be aware that I have always tried to tell the truth as I see it; even if it means going out on a limb. Before I go, there are two further matters which I deem to be worth raising. Both have been at the back of my mind for quite some time now. At the recent Edinburgh Show it was suggested that, if all goes according to plan, we should consider visiting China for a change. My reply that it was out of the question while the current regime was in charge, was met with some surprise. At the time of apartheid, in common with many people, we did not feel we should visit South Africa. If anything, China has a worse human-rights record; they drive tanks over students, torture animals for traditional medicines, and put unwanted infants into dying rooms; not to mention their treatment of Tibet. Make no mistake, in spite of superficial changes, China is still a police state which uses coercion to maintain control, and keeps a lifetime dossier on every citizen. Human nature being what it is, people allow themselves to forget all this when seeking out the latest novelty for show bench or garden, and our own policy towards plants from China is the inevitable compromise. If someone had given us a bottle of South African wine at the time of apartheid, we should certainly have drunk it; but we never actually bought any ourselves. We have the same

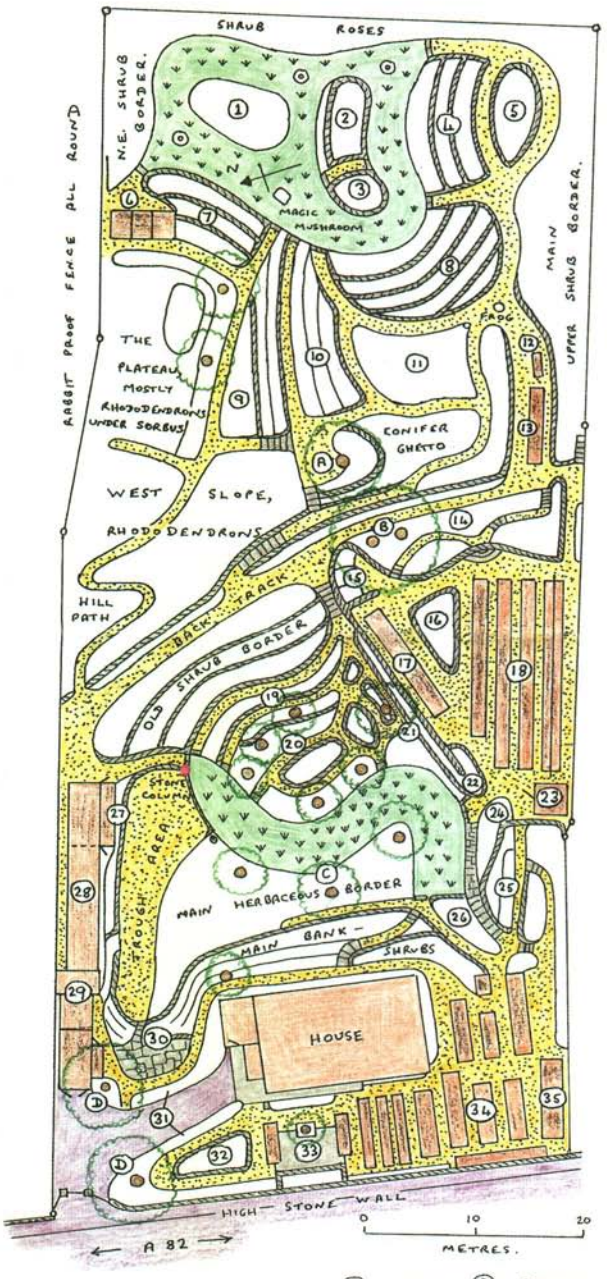
attitude towards the Chinese flora. If we are given seed or plants then we do our best to propagate and distribute them, but we do not purchase anything which has come, or will come, directly from China. There are many other places to visit such as Turkey, the Balkans, and the Caucasus which are settling down politically, and of course, the Drakensburg has an excellent flora. The last three areas also make wine, an interesting thought. In any case, novelty is of course a personal thing; we flowered *Lilium chalcedonicum* (fig. 164) for the first time last year, raised from wild seed, although it has been cultivated elsewhere for hundreds of years.

COMPETITION ISN'T EVERYTHING

Fierce competition has been used in the past as an indication of the health of our shows, and it does indeed play a large part in raising the general standard of exhibits. People like to win, and so competition also encourages participation. As I know from my rowing days, winning is like a drug, and it is all too easy to get hooked. However, in everyday life competition does have a down side, co-operation can be equally effective. One has only to compare the state of the railways in the UK with SNCF in France. An excessively competitive attitude to life can result in some undesirable consequences. In its extreme form, a "me first" approach can lead to such events as the few at the top of Enron making fortunes at the expense of the many. If one is not careful competition can also lead to the kind of 'ya-boo' one-upmanship which should have no place in the world of gardening.

There is no doubt that placing the emphasis purely on winning can sometimes be bad for plants, in more ways than one. What one finds attractive in alpines is of course a matter of taste, but I personally feel that the relentless drive towards ever larger and more floriferous specimens has on a few occasions gone a little too far. It is definitely possible to overstep the mark and produce a gross caricature of the way the species appears in the wild. The grower can always excuse this by saying, quite rightly, that they are actually realising the full horticultural potential of the plant, but I remain unconvinced on aesthetic grounds. In times past, the breeding of rhododendron hybrids aimed solely to produce magnificent trusses of bloom for showing as cut flowers, regardless of the habit and constitution of the actual bush. Happily, the aim of most current hybridisers is to produce attractive garden–worthy shrubs. Closer to home, I should like to recount a scenario which we observed at a show some years ago. An exhibitor arrived just before staging was due to end, and walked around the hall

ASKIVAL GARDEN



KEY.

- BUILDINGS AND FRAMES
- DRYSTONE WALLS
- GRAVEL PATHS
- GRASS
- STONE STEPS.

1. GRASS AND GENTIAN BED
2. UPPER BULB BED
3. GRIT SCREE
4. HORSESHOE (SMALL HERBS)
5. UPPER LILY BED
6. COMPOST HEAPS.
7. BLUERIDGE BED (ERICACEAE)
8. MT. SHERMAN, MAIN SCREE.
9. DWARF RHODO. TERRACES.
10. HAZE BED (AZALEAS ETC.)
11. UPPER HERBACEOUS BED (LATE)
12. SPHAGNUM BOG
13. WENDY CORNER COVERED SCREE.
14. ORCHARD TERRACES.
15. LEAF-MOULD PITS.
16. ORCHARD TRIANGLE (BULBS)
17. MAIN COVERED SCREE.
18. LOWER NURSERY.
19. SNAKE BED } WOOD-
20. MIDDLE, PARTS RAISED } LANDERS
21. CASSIOPE/SHORTIA BED.
22. LOWER LILY BED
23. TOOL SHED
24. OLD TRILLIUM BED.
25. OLD PEAT WALLS.
26. LIMESTONE SCREE.
27. BULB HOUSE
28. COMPOST SHELTER.
29. POTTING SHED, MIXING ANNEX
30. OLD SCREES AND PAVING.
31. DRIVESIDE ROSE BORDERS.
32. FRONT RAISED BED.
33. BULB FRAMES BY CONCRETE.
34. UPPER NURSERY
35. SUMMER LIGHT STORE.

(A) LARCH (B) BEECHES. (C) DAVIDIA (D) SCOTS PINES.

studying the opposition. He returned to his car and took out of the boot only those plants which he considered stood a good chance of a red ticket. The unfortunate remainder of his plants spent the whole day within the car, gently cooking in the sun. Not only was this detrimental to the plants, it also prevented the public from seeing them; which brings me straight to my main point.

The shows are the SRGC's shop window; and to add extra variety to the benches I would like to ask exhibitors to consider staging, not only their star plants, but also any interesting or unusual alpines they may have available in pots, even if they are not in perfect condition. If you have a passion for a particular group of plants then there is provision in the Scottish show schedules, under Section IV, for a non-competitive exhibit; one which can inform as well as give pleasure to the visiting public.

OLD HABITS DIE HARD

At the then Editor's suggestion, for the 10th anniversary of the *Stone Column* back in 1992 we produced a plan of the Askival garden which duly appeared in *The Rock Garden* 90. My ramblings around the world of alpines notwithstanding, the core of this column has always been the progress of the Askival garden, warts and all, and so a further 10 years on it is perhaps appropriate to include an updated plan. If readers have the previous plan available for comparison, then they can see that, although the basic design hasn't changed, there have been many additions in detail.

Plans do have their limitations, they cannot easily convey all the changes of level which we feel make the garden what it is. The rhododendron plateau, for example, is well above the height of the house roof. The complexities of the layout also make this a difficult garden to photograph. Be that as it may, no-one really owns anything, we only borrow it for a time; but while Askival is in our care there are still a few projects which I should like to complete.

People may wonder, if we are planning to leave, why we are continuing to develop the remaining uncultivated areas of the garden. The best analogy I can think of is that of an artist who, having completed 90% of a painting, wishes to finish the last 10% in order to see the whole picture. Gardens are not like paintings, they change relentlessly. There are parts of the garden where, for sentimental reasons, I cannot bring myself to carry out reconstruction, the need for which is becoming ever more obvious. A new broom should certainly have fewer qualms; but no gardener in their right mind would disturb

the 25 year old trough (fig. 165) containing as it does two daphnes as well as the original plant of *Paraquilegia grandiflora* that we obtained from Branklyn in the early 1970s.

Meantime, over the winter I was at last able to carry out one long overdue refurbishment in the upper nursery. Way back in 1977, the oldest raised frame in the garden, some 9 m long by 1 m wide, was built against the front wall, with conventional sloping lights. Filled with compost, the original intention was to use it to plant out petiolarid primulas, thus protecting them from winter wet. It was quite successful in this role for a number of years; but a series of severe winters, culminating in one down to –25°C eliminated much of our collection. The vacated space was gradually taken up by a number of ericaceous plants, such as *Cassiope wardii*, *Epigaea gaultherioides*, *Leucothoe keiskii* and *Gaultheria sinensis*, which benefit from a little protection from freezing winds. Netting lights in summer kept the birds off the gaultheria's deep blue fruits. As these shrubs grew it became obvious that the headroom in the primula frame was inadequate. Carrying out the necessary replacement of the wooden superstructure had a relatively low priority however, and just had to wait. Eventually, with the nursery virtually complete, there was time to completely remodel it on the lines of a small lean-to greenhouse. Each 1 m bay now has two removable lights, a front vertical one 0.6 m high, and a sloping top cover, raising the headroom at the back to over 0.75m. All are glazed with Correx twin-wall plastic for extra insulation. I also made a second set of lights, just timber rectangles to which I stapled black, plastic, fruit-cage net. Thus, we can open just the front, or uncover completely, as the occasion demands, while at the same time excluding fruit-eating birds. Three bays had been emptied of compost to make room for more pots; now I reversed this. Refilling required 17 large barrow loads of fresh potting compost, taking the mixing score on the annex wall past 250 since January 2000. This new section has a different *raison d'être*, to accommodate stock plants of such as *Ranzania japonica* and *Clintonia andrewsiana*. Here they can receive a measure of frost protection at flowering time, while later on Poll should not have to race the birds for the ripening seed.

At a recent SRGC get-together a common complaint was the past wet winter. Perhaps we are more used to such things; or it could just be that our soil is so free-draining that we can get back to work the moment the rain stops. I was able to dig out the amelanchier stump and finish laying out the revised pattern of paths in the middle bed. This area is now ready to receive the spent compost from this autumn's bulb

boxes, thus completing the series of woodland raised beds which I described last time. Before we started on the middle bed remodelling, used potting medium from previous years had been accumulating at the top of the shallow slope in the upper garden where we had planned our last completely new bed: the Horseshoe terraces (no. 4 on the plan). These are intended to provide homes for smaller herbaceous plants which are not robust enough for the main borders, but prefer a richer soil than that provided by the scree beds. Most, like *Synthyris missurica* and dwarf astilbes, will be rescued from around the garden, others are as usual coming on from seed and need planting out, but some are gifts from friends such as the collection of choice little hostas sent by Ullrich Fischer. This bed can also serve as an alternative home for autumn gentians. A low, curved, terrace wall was first built at the bottom of the shallow slope, paralleling the similar stone edging surrounding the upper lily bed, leaving a 1 m path in between. Then the space behind was infilled with a mixture of the two compost types: spent growing medium, and sieved organic matter from last year's heap. Once planted in April, it will be top dressed with our usual 5 mm grit, a concession to the small size of the plants.

When describing the construction of a pure grit scree, I mentioned in the *Stone Column* for January 2001 (*The Rock Garden* 106 p. 66) that this took up only half the area of an island bed in the upper grass (no. 3 on the plan). The second half is occupied by a stack of rotted turves intended to become yet another raised bed for bulbs. Recently we imported 5 tonnes of split boulder stones and barrowed them up to the top garden for this project. As soon as I escape from the computer, I plan to wall around the loam stack and plant it with dwarf bulbs, rescuing most of them from under our shrub roses. Moving them in the green ensures that we know what they are; no harm has come by treating them this way in the past. That done, I can start another sequence of ABCD jobs. The shrub roses in the remaining wing bed by the concrete area at the front of the house can first be moved to the upper shrub borders. This bed can then be de-soiled, recycling it to the plateau where any stray bulbs left in the soil are welcome to come up amongst the rhododendrons. Next I intend to fork over the fourth terrace of the main scree (no. 8 on the plan, and fig. 166), using the inevitable resulting stones to infill the hole where the transplanted shrub roses had stood (there are lots more not moved). Finally a second bulb frame, a twin to the one described in the *Stone Column* a year ago (*The Rock Garden* 107 p. 159), is planned for this position, turning the concrete floor of the one-room schoolhouse, which once stood here,

Fig. 165 *Daphne petraea* and larger *D. arbuscula* with *Androsace chamaejasme* in front - if it ain't broke... (p.334)

Fig. 166 Front of house with *Rhodothamnus chamaecistus* (continuity with 10th anniversary, and site for new bulb frame) (p.335)

Fig. 167 At work on Mt. Sherman, Corrieyairack Pass behind (the upper garden in its Highland context) (p.338)

into a little enclosed patio between the two bulb frames. This will also mean moving the sundial and the built-up trough beside it, which are in the background. Incidentally, the large *Rhodothamnus chamaecistus* in the nearer trough is the same one depicted 10 years ago. Many more years ago, far too many to contemplate, we inherited some huge clay pots from the late General Murray-Lyon, a past President of the SRGC. They have languished up in the loft/workshop ever since; but should make a nice feature on the concrete between the bulb frames, planted with sempervivums. They could be taken into the bulb house for the winter, thus avoiding to some extent the problem with moss which invades semps on our troughs, and hopefully the potential damage from frost which has deterred use of these pots until now.

As I write this at the end of March, the original bulb frame is still a long way from its peak bloom, but there are noses poking up everywhere. Completely open at the sides, this frame is much cooler than the bulb house and this suits many of the plants. The lovely little pink *Fritillaria alburyana* remained in good condition for over 10 days, while a group of *F. caucasica* from wild seed has lasted even longer. Most of the current colour is provided by the various forms of

Fig. 168 Grizzly and a self-sown *Pyrola rotundifolia* on the back track - minimum interference gardening (p.326)

Corydalis solida, their richness of hue enhanced by the cold. *Corydalis solida* 'George Baker' is a good red, 50B in the old RHS chart; while the more compact 'Askival' is a much richer crimson, 53A. The latter is an open pollinated seedling of our old *Corydalis solida* 'Transsylvanica' which we obtained from Munich Botanic Gardens many years ago.

Up on the main scree, Mt. Sherman (fig. 167), the penultimate terrace referred to above should provide more than sufficient space to set out all the suitable plants we are still holding in the frames. For once we could be ahead of the game, but then there are several hundred 7.5 cm pots in the seed frame. We intend keeping very few specimen pot plants, an exception being *Callianthemum kernerianum*, which for some strange reason sets seed more freely when potted. This season should also see the last of the big 1990s surge in rhododendron seedlings planted out on the plateau. I shall be very glad to be relieved of all these responsibilities, every plant one raises should at least be given a chance to show what it can do. There is only one other construction site which I haven't mentioned: the part completed steps in the back track wall. Whether I ever get to complete them, and the planned fern alcove around the Damocles boulder up above is in the lap of the Gods. But the boulder didn't fall.

KEEPING THE DREAM ALIVE

In trying to explain why we have devoted such a large proportion of our lives to cultivating alpines and wandering their mountain homes, I could perhaps draw a parallel with John Ford's allegorical Western: 'The Searchers'. On the surface, Ethan Edwards, played by John Wayne, spends five years searching for his niece, kidnapped as a child by the Commanches. The ending of the film always has me in tears. Having finally returned home with the young lady, Ethan turns away, framed in the doorway of the ranch house. He knows that his real quest, that for his own soul, can never be over; he is fated to remain outside the mainstream of society, forever searching. As the soundtrack implies, it is a tragedy of the human condition that those of independent thought can never find real peace of mind. It is impossible to fully understand this world, the best one can hope for is to come to a working relationship with it, occupying one's time and faculties with some real passion.

In this final *Stone Column* I have tried to demonstrate that taking our leave of Askival is not a break with the past, but the next logical step in the pursuit of our particular obsession. Everyone has to have a dream; ours is to wander the high and lonely places with the wind in our hair and alpines at our feet. If things get a little heavy then there is always music; a simple song to lift the spirits. So, in the words of Dobie Gray:

> *Give me the beat boys,*
> *and free my soul.*
> *I want to get lost in your Rock and Roll,*
> *and drift away.....*

Small Fritillaries - Yellow

Fritillaries come in all sorts of colours and sizes.
In this survey ***Ian Young*** looks at some of the charming smaller species.

This is what we [Margaret and Ian Young] call ***Fritillaria aurea* "Large Form"** although this is not a proper cultivar name. It has become the form most often seen on the show benches. The yellow flowers, beautifully marked with dark tessellations, are larger than any other we have seen.

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The first form of ***Fritillaria aurea*** that we grew has smaller, less tessellated flowers and is becoming less common now as it is replaced by the larger-flowered form and the clone raised in large numbers in Holland called ***F. aurea* 'Golden Flag'** (below) which has narrow tepals that flare outwards and is my least favourite of this charming species.

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As can be seen, ***Fritillaria latifolia*** has some similarities with *F. aurea* but the fact that *F. aurea* always produces masses of rice grains on the bulb and *F. latifolia* does not, is sufficient for me to always consider *F. aurea* a good species.

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Fritillaria collina is perhaps a closer relative of *Fritillaria latifolia* and shares much of the same distribution as well as the characteristic of not producing rice grains. On first impressions it looks like a large *F. aurea* but the tepals are more pointed and the inner three (the petals) have a fringed margin toward the top. This is the main distinguishing feature.

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Fritillaria tubiformis* ssp. *moggridgei again looks similar, but without the fringed margins at the top of the petals, and is the yellow form of the species.


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Fritillaria latifolia, which is confined to Turkey and the Caucasus, is a very close relative of *F. tubiformis* from the Maritime Alps of France and Italy, and but for the distribution they could be considered variations of the same species.


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Finally in this group, an interesting selection raised from wild collected seed that seems to be intermediate between *F. latifolia* and *F. tubiformis* ssp. *moggridgei*.


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Fritillaria minima, a snow-melt species that needs a cold winter followed by a sudden warm spell in the Spring to flower well, is not often seen in cultivation.

Another form of ***Fritillaria minima*** with shorter flared flowers held at 90 degrees to the stem. We also grow one whose flowers point upwards and while it multiplies reasonably well it is not the most attractive form to cultivate.


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Fritillaria pudica from North America is often compared to *F. minima*. This is a selection grown from seed collected in Washington. Note the red where the stem meets the flower on some of these forms. It can of course be easily distinguished by the typical American flattish rice grain bulb which makes it easy to bulk up.

Fritillaria pudica 'Richard Britten' is a large clone often seen offered now and being grown by the Dutch growers in large numbers. It can make very large bulbs when growing well.

Fritillaria purdyi has beautiful glossy flowers but the bulbs are almost as fascinating.

Another North American, ***Fritillaria glauca,*** can have yellow to brown flowers held over beautiful glaucous silver leaves. It is a real charmer but is very susceptible to botrytis on the leaves if the weather turns cold and damp.

Back to the Old World and ***Fritillaria conica***, native of Greece, is distinguishable by the very conical shape of the nodding flower.

Fritillaria euboeica, also from Greece, has more flared open flowers held at more of an angle to the stem.

Both the previous species are very closely related to ***Fritillaria carica*** a very variable species from Turkey. Shown here is my favorite form showing a good clear yellow flower with pleasingly flared tepals.

While the yellow form of ***Fritillaria carica*** is my favourite, elegant plants with varying amounts of brown, also regularly appear at our Shows.

Fritillaria kittaniae has been recently described from Turkey. It is a dubious species also showing varying amounts of brown usually down the centre of the tepals. It is thought that *F. kittaniae* is a hybrid between *F. carica* and *F. pinardii*. Fully fertile, the seedlings show some variation in the amount of brown markings, from none to substantial stripes.

Fritillaria pinardii is a widespread, very variable, species with a distribution that extends through Turkey, Trans-Caucasia, Iran, Syria and the Lebanon. Many forms exist in cultivation and I am always confused as to where *F. carica* stops and *F. pinardii* begins when removed from their native habitat to the garden. The yellow seen on the tips of this form continues on the inside of the flower and most *F. pinardii* forms have light-coloured interiors.

Fritillaria michailovskyi is another *Fritillaria* produced in large numbers by the Dutch growers and available cheaply at garden centres. I still prefer the illustrated form grown from seed collected in Turkey which shows a clear break in colour from brown to yellow, many other forms have a more random change in colour.

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Staying with the purple brown with yellow tip theme we have ***Fritillaria rhodocanakis*** from the island of Hydra in Greece, always distinctive, with the elegantly recurving tepals giving the impression that the flower is broader than long.

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Fritillaria argolica is believed to be a hybrid between *F. rhodocanakis* and *F. graeca*. It is often given specific status although it is sometimes listed as a subspecies of *F. rhodocanakis*. It is a fully fertile plant and resulting seedlings will show a variety of markings along the brown and yellow striped theme, the flowers always appearing longer than wide. All the bulbs of ***Fritillaria argolica*** that we have seen to date are long with the two scales so close together that they appear like one.

Fritillaria crassifolia* subsp. *kurdica is a delightful very variable plant that we have been trying to get as many forms of as possible. Usually they are a combination of green with a brown stripe or vice versa in varying degrees as seen from these examples. All are charming plants less than 9cm tall at flowering time.


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Fritillaria crassifolia* subsp. *crassifolia is very similar in flower pattern and colour range with perhaps less brown involved, it is the ratio of the length to the width of the lower leaf that is the distinguishing diagnostic between *F. crassifolia* and *F. kurdica*; short and fat in *F. crassifolia* and long in *F. kurdica*. Unfortunately these dwarf forms are not that common in cultivation and need to be increased by seed.

It is easy to see how ***Fritillaria hermonis***, seen here, was mistaken for *F. crassifolia* when it was introduced from south-east Turkey, the flowers are very similar to look at. This explains why there are so many plants of *F. hermonis*, which produces masses of rice grains, and is often seen masquerading as *F. crassifolia* which rarely produces a few if any at all rice grains.

Like all TV series there is a hook at the end that leaves open the opportunity to come back with a sequel so here is mine. ***Fritillaria mellea*** which has only recently been imported from China as bulbs shows a good range of yellow through to brown flowers on short stems. It is fully fertile and we have a large number of young bulbs now in their third year from our own saved seed. *Ian Young.*

DISCUSSION WEEKEND 2002 PROGRAMME

FRIDAY 4 OCTOBER

16.00 - 19.00	Registration
16.00 - 17.30	Show Hall open for receiving entries
18.15	Dinner
19.45	**President's welcome address - Ian Young**
20.00	**BULB GROUP LECTURE:** **New Ways with Bulbs - David Mowle**
21.00	Break
21.30	**Small Bulb Exchange and Bulb Sale** Donors to the Bulb Exchange will have priority in the first 10 minutes.

SATURDAY 5 OCTOBER

08.00 - 09.00	Show Hall open for receiving entries and Plant Sales
08.30 - 10.00	Registration
10.00	**Lecture: Hepaticas - John Massey**
12.00 - 13.45	Show and Plant Sales open
14.00	**HAROLD ESSELMONT LECTURE:** **Kirghizstan and Kazakhstan:** **the Switzerland of Central Asia** **- Vojtech Holŭbec**
15.30	**Lecture: Hellebores - John Massey**
19.30	Conference Dinner **An Entertainment from Adam Train** Raffle Draw

SUNDAY 6 OCTOBER

08.30 - 09.30	Registration
09.30	**WILLIAM BUCHANAN LECTURE:** **Dionysias - Michael Kammerlander**
11.00	**Lecture: Gone to Seed - Jim Archibald**
12.00 - 13.45	Show and Plant Sales open
13.45	Show closes. Plants may be removed
14.30	**JOHN DUFF LECTURE:** **Glenarn – A Garden in the Space Age** **- Michael Thornley**

Discussion Weekend 2002
Irvine, Ayrshire

Friday 4th October to Sunday 6th October 2002
Thistle Hotel, Irvine, Ayrshire

For the first time for almost 30 years, the Discussion Weekend returns to Ayrshire in 2002. This is Burns country and attractions within Irvine itself are the Scottish Maritime Museum, Eglinton Country Park, the Big Idea, the world's first inventor centre, the Glasgow Vennel, in one of the houses of which Robert Burns was apprenticed as a flax dresser, and a small Burns Museum. Contact Ayrshire and Arran Tourist Board (www.ayrshire-arran.com or 01292 678100) for more details. Glasgow (30 miles) is an excellent shopping centre with a range of world-class museums and art galleries.

The Thistle Hotel is on the outskirts of the town on the A78 near the junction with the A71. To quote the brochure: "Enter a world of fantasy on the West Coast of Scotland when you book into a hotel with more than just a hint of Eastern Promise. The Moorish splendour of the Thistle Inn will take you back to the Tangiers of the 1930s, with all the convenience, comfort and warm welcome of a modern hotel. There is a spectacular indoor lagoon kept at a constant tropical temperature with waterfalls, palm festooned walkways and a myriad of plants, inviting you to bathe in the warm waters and relax with a long cool drink beside the pool before sampling the delights of cuisine served lagoonside."

There is also a 9-hole golf course and Irvine is very conveniently situated for all the courses of the Ayrshire coast. Access is easy by road, rail, air or sea.

By Road

From the South, follow M74 to Junction 8 and take A71 to Irvine.
From the North and East, take M8/M77/A77 through Glasgow to Kilmarnock, then follow A71, or take M73/M74 to Junction 8, then as above.

By Rail

Irvine is on the line from Glasgow Central to Ayr and Stranraer.

By Air
Ryanair (www.ryanair.com) has low-cost flights to Glasgow Prestwick airport (8 miles) from London (Stansted), Dublin, Brussels (Charleroi), Paris (Beauvais) and Frankfurt (Hahn). Glasgow Airport is 26 miles away.

By Sea
Seacat ferries run to Troon (5 miles) from Belfast.

Accommodation is in double and twin rooms. There is a single room supplement. It would be appreciated if single members who wish to share a room could arrange this between themselves. **Please remember to give details of dietary or other special requirements.**

As usual, there will be a PLANT SALE, but a RAFFLE will replace the Plant Auction. Contributions to both will be much appreciated. We are also hoping for a large entry for the SHOW and the HOLIDAY PHOTOGRAPHIC COMPETITION (details in the Handbook). If you have lost your Handbook, ask for a copy of the Show Schedule when you book.

Bookings should be made by **6 September 2002**. **Please use the booking form enclosed with the Secretary's Pages if you can.** Applications for bookings together with the appropriate remittance (cheques payable to 'SRGC Conference') should be sent to **SRGC Conference, Gareth Williams, 28 Carrick Road, AYR KA7 2RB** (Tel: 01292 263132). Non-UK visitors should ask about alternative methods of payment.

COSTS

Residents	Friday evening - Sunday tea	£150
	Saturday lunch - Sunday tea	£120
	Single room supplement	£15 per night
Non-residents	Saturday	£45
	Saturday evening dinner	£25
	Sunday	£45

www.srgc.org.uk

If you enjoy *The Rock Garden* and have access to the internet why not visit our recently redesigned website which is packed full of pictures and information.

A system of drop down menus makes it very easy to navigate your way around the different pages and sections.

Enter the Shows folder and View the Forrest Medal plants hot from our Show benches, or click on a Show venue to view a good selection of pictures of plants and people, we try to get these on within days of the Show date. This is a great way for our overseas Members to get a glimpse of what is going on at our Shows.

The Photo library contains a growing selection of photographs of plants, with an appropriate brief text, this is also linked to our Seed List. If an entry in the seed list is underlined just click on it to view the picture; our ambition is to continue to expand on this until it is as complete as possible.

The latest addition is the Forum where you can take part and write in with a question or post a message about plants that you have or you would like to get. It is very easy to post a message and get the sage advice (not guaranteed) from the combined knowledge of our online Membership.

If you 'open an account' and register you can also post pictures on to the Forum pages; accounts are free you just have to contact a moderator to set this up for you.

Finally if you do visit the site take a minute to sign the Guest Book. It is nice to know who is visiting and what you think of our site.

Fig. 201 Jungle in Sarawak

In Search of the Ungrowable

The Clark Memorial Lecture
given at the
2001 Annual General Meeting in Dundee

Alastair McKelvie

THE SUCCESS RATE for the introduction of plants from the wild into horticulture is low, particularly when you consider just how much material has been sent back by so many collectors over the years. For example, in China in the latter part of the 19th century, Pére Jean Delavay, a French priest, collected without any native help and sent back to Paris 200,000 herbarium specimens as well as seed of more than 250 species which he thought would make good garden plants. George Forrest, who wrote slightly disparagingly of these French priests as botanists, sent back almost as many herbarium specimens from the same area but also collected prodigious quantities of seed. On his last trip he collected 300 lb of seed from over 500 species. Collections of some of the primulas consisted of 3–5 lb of seed of a single species. Ludlow and Sherrriff recorded over 21,000 specimens, much of it seed.

You might imagine that most of the introductions of collectors such as George Forrest, Kingdon Ward, or Ludlow and Sherriff have survived in our gardens, but not so. Harold Fletcher in a somewhat sad end to his book *A Quest of Flowers* about Ludlow and Sherriff noted: "At that time [1949] the effort of Ludlow and Sherriff to introduce by air, living plants to cultivation in Britain probably was the greatest one of its kind and was a fitting climax to their years of plant collecting. However, time has shown that their endeavours were not as successful as they had hoped. Many of the plants made but a fleeting appearance in British gardens, flowered and then were gone. And over 20 years later [1970] most of those which have survived have maintained but a tenuous hold on cultivation".

Probably the most successful plant collector in terms of garden success was Robert Fortune, but it is surely not a coincidence that most of his introductions came from Chinese nurseries and were thus plants which had already been adapted into cultivation from the wild. At the present day most of our successful garden plants have come from deliberate hybridisation from nurseries and laboratories in the USA and the Netherlands rather than direct from the wild. By adaptation from the wild I mean the process by which over the years plants in cultivation gradually become more attuned to garden culture as shown for example by quicker and more uniform germination, bigger and more colourful flowers (*Primula denticulata*), and longer-lived and more fertile plants (*Meconopsis punicea*).

THE PRIMULA STORY

Since 1970 the standard of cultivation has greatly improved, as shown for example by standards at Club shows, and we are now more

successful in keeping introductions in cultivation but, even so, we are singularly unsuccessful with the bulk of the plants we introduce. Just look at how we have fared with primulas over the years.

Total no. of Primula species	425
Species commonly grown	40
Species uncommonly grown	35
Species rarely grown	50
Species not grown	300
Primulas from McKelvie Himalayan expeditions	
Total species collected	33
Species currently grown by McKelvie	16
Species grown but died	14
Species with no germination	3
Total Primula species in McKelvie garden	
Total species attempted	90
Species currently grown	52
Species grown but died	38

These primulas range from the easily grown such as *P. denticulata, P. rosea* and *P. vialii,* through the difficult such as *P. buryana, P. cawdoriana* and *P. dickieana*, to the huge number which have never appeared in cultivation. One of the purposes here is to consider just why some plants are so much more growable than others.

Some primulas are so easy in the UK that A K Bulley, the nurseryman who helped to fund Forrest and Kingdon Ward, collaborated with Professor Prain of Kew to set up an alpine garden on Snowdon after World War I. They sowed seed of many alpines, including primulas such as *P. rosea* and *P. vialii* at around 2,000 ft. Not surprisingly the experiment failed, mainly because of competition from native vegetation. But undeterred, Bulley set out to do the same thing in the Caenlochan Glen in Angus in Scotland in the 1920s along with the landowner, the Earl of Airlie. Several species were sown, but Airlie died soon after the onset of the project and it petered out. A few species such as *Aquilegia pyrenaica*

grew for a number of years but soon everything vanished. In 1932, the Alpine Garden Society collaborated with Bulley and sowed a range of alpines on Snowdon but with the same results. This time, however, there was quite an outcry and the AGS suffered some bad publicity. Nowadays, of course, such projects would never get the go-ahead because of environmental considerations. Having said that, alpine gardens are popular on the mainland of Europe and are generally successful. The big difference compared with Bulley's attempts is that these projects are looked after as a garden and not just left to their own devices.

SUCCESS OR FAILURE

It is not easy to say why some plants are easy to grow and others are not. By and large the more widespread a species is in the wild the easier it is to grow. *Primula denticulata* covers a vast area of the Himalayas and is an easy species. It is not even true that British native species are easier to grow than introduced relatives. For example *Parnassia palustris*, our common Grass of Parnassus, is notoriously difficult to grow out of doors, but its Himalayan relative *P. nubicola* grows quite happily, although it is

Fig. 202 *Primula scotica* in wild (SRGC Slide Library)

somewhat short-lived. *Primula scotica* (fig. 202) is rather a miffy plants in our gardens but its mainland Europe relative *P. frondosa* is much easier. *Gentiana ornata* (fig. 203) is not the easiest of species to grow but is much easier than *G. depressa* (fig. 204), yet the two of them happily share miles of the same roadsides in central Nepal.

Fig. 203 *Gentiana ornata* (p.368)

Fig. 204 *Gentiana depressa* (p.368)

There is a general feeling that introduced species do best in our gardens if we grow them in as near their natural habitat as possible. There is a lot of sense in this. We would never dream of growing lewisias in a bog garden but since they come from semi-desert areas of western America we grow them instead where they can dry out after flowering and do not suffer from winter wet in their crowns. One reason, however, for a plant's natural habitat is the need to avoid unwelcome competition. *Pulsatilla vulgaris* is a plant of short calcareous grassland but if you try to grow it among grass in your garden it will soon be choked out. So, to grow it successfully, we grow it in border soil and keep it well weeded. As a result it becomes a much larger plant than it ever is in the wild which raises the vexed question of 'in character' that has bedevilled rock gardeners at shows for decades. A blousy pulsatilla on the show bench is certainly not in character compared with the tight little rosettes and short stems of plants seen on chalk downs (fig. 205).

LIGHT

If it is therefore not necessarily true that plants grow best when we give them the same conditions as they face in the wild, what then are the main factors in determining plant growth in cultivation? First and foremost must surely be light.

Less than 1% of the sun's energy is available for photosynthesis. The sun's radiation is in the wavelengths 0.3–2.0 μm. The long-wave infra-red component of the incoming radiation is filtered out by CO_2 and by water vapour, while the short-wave component is filtered out by ozone. The remaining radiation reaching the ground can be regarded as visible light. The blue and red wavelengths are absorbed by chlorophyll while the green is reflected, hence leaves look green.

About 45% of incoming radiation is of wavelengths that can be used in photosynthesis (PAR – photosynthetically available radiation). In the semi-arid high-light regions around the equator the annual PAR is 3500 MJ per sq. m compared with 1650 MJ in southern England and only 1050 MJ in Shetland.

However, very little of the PAR is actually fixed by a plant. At best only 75% of PAR falling on a crop is available for photosynthesis because 10% is reflected from the leaf, 5% is transmitted to the soil and about 10% is absorbed by non-photosynthetic tissues such as cell walls. The highest recorded arable dry matter yield in the UK is 20 tonnes per hectare for intensive grass which amounts to about 3.7% of the PAR received. Average crop yields, however, represent an efficiency of only around

Fig. 205 *Pulsatilla vulgaris* near Stamford, Lincolnshire (p. 370)

0.5%. The theoretical highest PAR has been calculated to be about 15% but no crop, no matter how well managed, can achieve more than 3% over a prolonged period. Such efficiencies have been achieved by temperate coniferous woodland. Interestingly, cereals only yield about 2.5 times as much energy in grain as they consume in the form of cultural energy in their production. Potatoes only achieve 1.5 times. When the energy to make tractors etc. is included, crops actually use more cultural energy than they produce. Nevertheless, in spite of the high energy cost of producing the food we eat, it amounts to less than 20% of the total energy cost of getting the food to our tables.

Another factor which determines how efficiently plants utilise incoming radiation is the angle of the sun's rays. In summer the sun's angle can be 60°, and on a sunny day the plant and soil may receive 40

times as much energy as in winter when the angle is only 15°. In winter a south-facing slope at 15° will receive double the light of a flat surface, so that a rockery with a sloping aspect is always a good bet, particularly up here in Aberdeen.

Light at high altitudes is very intense and contains a high proportion of UV. This UV has the effect of reducing the length of plant internodes so that plants remain compact. In contrast, when we grow them at or near sea level the plants become leggy. You just need to compare the free-flowering neat plants of *Waldheimia* in the western Himalayas at 15,000 ft and above (fig. 206) with the gaunt, straggly, shy-flowering things we can produce.

HARDINESS

Shade, sunlight aspect, soil, water, drainage and fertiliser are all factors we can vary easily in order to grow better plants, but cold is another matter unless we utilise glass. No matter how well we look after tropical plants we can never grow them outside in the UK (or even in the Netherlands – fig. 207). Hardiness is a major factor in determining which plants will survive in our gardens and so it is not surprising that many attempts have been made to assess plant hardiness on a numerical scale.

Hardiness zones were first devised by Alfred Rehder in 1927 in the USA, based on the idea of isotherms (temperature contour-lines) which was first developed by the 19th century explorer Alexander von Humboldt. It is a short-hand way of expressing cold tolerance of garden plants. Rehder devised eight zones to cover cold-temperate zones of the USA using 5°F isothermic bands based on the lowest mean temperature of the coldest month. The system has been changed several time since with the latest being that of the United States Department of Agriculture in 1990 with 11 zones to include Canada and Mexico and data from 124,000 weather stations. For many American gardeners this USDA map is a major factor in choosing garden plants, especially shrubs such as rhododendrons. The system is best used by postulating that a plant will survive in a garden in any area where the Z value is greater than that of the area the plant is native to. Thus plants will grow in Georgia where Z=8 if they come from Z1–8 areas in the wild.

A similar scheme was devised for Europe by Krüssman. His scheme was then modified by the authors of *The European Garden Flora*, but with reservations because of the complexity of European weather, so that for most of the species listed a hardiness code was given using a scale of H1–5 and G1–2.

Fig. 206 *Waldheimia glabra* (p.372)

The American and European schemes are compared below with American temperatures converted to degrees Celsius.

North America	Min temp (°C)	Europe	Min temp (°C)	Typical Area
Z1	<–45			Alaska
Z2	–45 to –40			North West Territories
Z3	–40 to –35			North Dakota
Z4	–35 to –30			Oregon
Z5	–30 to –25			Iowa
Z6	–25 to –20	H1	<–20	Central Russia
Z7	–20 to –15	H2	–20 to –15	Poland
Z8	–15 to –7	H3	–10 to –15	Germany
		H4	–5 to –10	UK
Z9	–7 to +2	H5	0 to –5	Mediterranean
Z10	+1 to +5	G1	Cool glass	
Z11	>+5	G2	Heated glass	

Fig. 207 Palm house, Botanic Gardens, Amsterdam (p.372)

The reservations of *The European Garden Flora,* especially with regard to the UK, are due to a number of critical agencies:

1. Oceanity and continentality are important factors in growth of plants in the UK but less so in America. For example, the oceanic species *Ulex europaeus* is often damaged in cold winters while the more continental species *Cytisus scoparius* can withstand the most severe weather. Yet these two species of broom grow together and have the same hardiness rating.
2. Genetic variation within a species means that some plants are hardier than others. For example, *Primula nana* from the western Himalayas shows a great range of variation when raised from seed, with some seedlings being much tougher and able to withstand winter cold and wet.
3. By and large, deciduous trees and shrubs are hardier than evergreens in exposed sites and in climates with higher summer temperatures. Evergreens prefer a sheltered site, more humidity and less extreme temperatures. These differences operate regardless of zone number.
4. Provenance is another important factor. Winter damage surveys reveal that many plants of the Chilean shrub *Desfontainea spinosa* are killed in cold winters while others survive even in the north of Scotland. These differences are due to the fact that the tender plants were mainly from collections by William Lobb in 1843 on the east coast at Valdivia, while the hardy ones were from collections by Harold Comber in 1925 in higher and colder areas.
5. Insufficient ripening of wood in summer can lead to unexpected winter deaths. For example, *Kalmia latifolia* comes from the eastern USA (Z6) where it gets hot summers to ripen the wood, but is unable to survive at Braemar (Z7) at 300 m in the Scottish Highlands largely because of poor ripening of wood in the cool, cloudy summers there.
6. As all alpine gardeners know, winter wet can be a real killer. You would expect *Pulsatilla vernalis* to be hardy in Aberdeen, but it rarely survives outside because of winter damp although it happily survives outside in much colder but drier areas of the UK and America. As Harold Esslemont pointed out in his Clark Memorial Lecture in 1966 the pulsatilla even rots in an alpine house in a damp winter. By prudent cultivation, however, one can grow things without artificial heat in the UK which on a zonal rating would seem unfeasible. Pleiones are a good example. They should not apparently survive our winters but by keeping them completely dry all winter they can survive temperatures around zero or even a bit below.
7. There are species that seem to prefer our damp winters. *Embothrium coccineum* can not withstand the dry cold of eastern USA winters although hardiness ratings suggest it should, but it can tolerate colder winters in the

Fig. 208 Frost damage, Aberdeen

UK because the damp cold is much more akin to conditions in its native Chile.

8. Hardiness at the individual garden level is very much dependent on microclimate. By suitable use of things such as shade, aspect, slope, stones, drainage and water control, conditions can be created for the growing of individual species that otherwise would be difficult. A good example is *Helichrysum milfordiae* from the Drakensberg Mountains which, in order to survive our wet winters, should be grown over a rock where drainage is good and where heat can be reflected on to the plant. Grown in an open border it simply rots away.

COLD AND FROST

It is important for plants to acclimatise to oncoming winter. In autumn, plants must acquire the ability to withstand chilly, then sub-zero temperatures. The gentle mists and mellow fruitfulness of autumn induce processes that gradually increase cold resistance. The year 2001 in the UK had the warmest October since records began which could have potentially led to much winter damage if some cold weather had not come along in November. If intense frosts come suddenly after a mild autumn damage can be severe. Away back in 1784 Gilbert White recorded the most striking damage at Selbourne in England when the temperature suddenly fell to –18ºC

on 8 December. Equally damaging can be a mild January followed by a severe March or, perhaps worse, a mild March followed by a cold April. The UK is almost the only country in the northern hemisphere where April is sometimes colder than March. It is not surprising therefore that so many plant introductions fail to adapt to our gardens and why we so often find that plants we thought were doing fine in March suddenly succumb in April. Frost damage in plants (fig. 208) is not too well understood, but there are two main processes. Ice crystals can form within the cells (intracellular freezing) or outside the cell walls (extracellular freezing). The former type is usually lethal with ice crystals dehydrating the cytoplasm whereas the second is usually tolerated. Cell lipid membranes are fluid during growth but solidify in winter and are more likely to rupture. One cold mechanism is for plants to accumulate lipids which help to prevent freezing damage. *Loiseleuria procumbens*, the creeping azalea, for example, can build up as much as 11% lipids on a dry matter basis. For many plants it is the freezing of roots that is much more damaging than freezing of the leaves. *Gentiana depressa* is a plant which seems to do best if the roots can be prevented from freezing. In its natural habitat it is covered by snow all winter which is bound to keep the roots warmer than if bare ground was steadily frozen. Kingdon Ward noted when collecting seed of *Rhododendron campylocarpum* that there was a large layer of air trapped beneath the snow roof over the plant and that the temperature was probably never freezing although the outside temperature was as low as –15°C.

Fig. 209 Snow cover, Aberdeen

Radiation frosts occur when heat is lost from the soil on a still night with a clear sky. On frosty mornings the ground beneath trees can often be free of frost because the trees reduce radiation loss from the ground at night with enough heat coming up from the soil to keep the surface warm. The same is true when there is cloud. The nature of the ground cover can also determine surface temperature. A fine tilth, a mulch or a covering of grass reduces heat transfer so that the soil does not heat up quickly down below although the surface layer will be much warmer and this will encourage seed germination. Such surfaces can lead to radiation frosts because the soil has not heated up much during the day and there is little transfer of heat to the surface at night. Mulches reduce evaporation by limiting the solar energy reaching the soil surface. When the surface is dry its temperature can reach 10°C higher than the air temperature. An air temperature of 25°C can give a soil temperature at two centimetres deep of 35°C, but with a mulch the two-centimetre temperature is only 20°C. In winter a mulch acts as a blanket and reduces heat loss from the soil at night which can be important if mulches are used to protect the underground parts of plants of borderline hardiness. Because dark surfaces absorb more energy than white surfaces, soil under black polythene warms up quickly in sunshine, but because it can radiate heat at night, frost can often form under black polythene. The lack of wind movement under polythene also helps to encourage frost formation.

One might imagine that supposed global warming would increase the range of plants we can grow in our gardens but this may not be true. For example, October 1998 was exceptionally mild followed by sharp frosts, then a very mild winter with little snow, followed by a warm early spring and then deadly May frosts which turned the flower shoots of *Lilium mackliniae* to pulp in a single night even though it is rated Z5. They also decimated tender shoots and flower buds in things as tough as *Rhododendron luteum* from the Caucasus (Z5). The dieback of young shoots of *Pieris forrestii* is an annual occurrence in my garden in April, but at least it has the merit of always producing fresh red growth unlike rhododendrons which fail to produce fresh flowers to replace the frosted ones.

You might expect the very early shoots of introduced species such as *Betula utilis* var. *jacquemontii* from the Himalayas to suffer more die back from bark splitting from late spring frosts than our native *Betula pubescens*, but this is not always so. It depends on the provenance of the *B. pubescens.* Clones from the south of England planted out in northern Scotland come into growth earlier than local adapted strains and suffer badly. This is of course all good news for the nurserymen of northern Scotland who claim to grow fully hardy plants.

The effects of cold and frost can be alleviated in several ways as all good gardeners know. Many tender plants such as *Fremontodendron californicum* can be grown successfully on walls. Tender tissues can be killed by frost, but shoots come away again from the base due to heat from the wall. Frost can also be alleviated by the use of correct aspect, buildings, water spraying, fabric fleeces and by late-flowering cultivars. One good aspect of living in towns and cities is that they are generally warmer than the countryside.

WEATHER PATTERNS

Phenology (the science of seasonal phenomena) confirms the obvious facts that cold, wet springs lead to late leafing and flowering of many plants while warm dry springs bring plants out earlier. This is not, however, true for all species because emergence can be controlled not only by temperature but also by daylength, which explains why the earliness of any given season depends on which species one is considering. Daylength effects tend to be more noticeable in trees and shrubs than in alpines, but that difficult alpine *Trifolium alpinum* is definitely influenced by daylength. Another interesting example of daylength effects is quoted by Forbes Robertson in his book *Early Scottish Gardeners and their Plants* where he describes the pea cultivar known as 'Scottish' (or 'Crown') in which the flowers and pods are confined to the tips of the stem. This characteristic is, however, only expressed in long-day conditions and is not seen if it is grown in the south of England.

It is still not clear for many plants whether temperature or daylength is the major factor in leaf emergence. In the UK, daylength more than doubles between winter and summer and in spring the days lengthen by about half an hour a week. Many native UK plants use daylength as a guide to safe emergence, but since most of our garden plants come from areas of lower latitude they receive less information from daylength. Daylength response can be very specific. For example, in the USA, soya bean cultivars are bred for optimum daylength response within a 50-mile radius. In the wild, potatoes produce tubers in response to short days, but years of breeding have produced cultivars which tuberise in long days. An easily observed effect of daylength can be seen when growing onions. Irrespective of the date when seeds or sets are planted the onions start bulbing in the first week of June.

CONCLUSION

I have looked at some of the reasons why introduced plants have often failed to adapt to our garden conditions and suggested ways of helping them

to succeed, but there are always going to be plants that are almost ungrowable. However, knowing how skilled are our experts and with techniques improving all the time, more and more plants are becoming growable. The folk who started the SRGC and certainly the Miss Clarks would be amazed at what we can now grow and their quality.

Perhaps I have forgotten to mention the biggest single factor in 'Growing the Ungrowable' and that is 'Green Fingers', but that is a major topic in its own right and one which could perhaps be the subject of a future Clark Memorial Lecture.

For many years Her Majesty Queen Elizabeth the Queen Mother expressed real interest as an Honorary Member of the Club. In 1983, on the occasion of the Club's Golden Jubilee she wrote that

I have always loved and admired Rock Garden plants, not only when beautifully exhibited in Horticultural Shows, but also when seen growing in the wild.

Often when at my home in Caithness I go searching for wild flowers, and it is a great joy when I find Primula scotica, Oxytropis halleri, or most important of all, Dryas octopetala, the emblem of the Scottish Rock Garden Club.

Her death is a sadness and a loss to us.

Meconopsis 'Lingholm' (Fertile Blue Group)

Evelyn Stevens & Christopher Brickell

This article first appeared in *The Plantsman* of June 2002.

DURING THE PAST FEW YEARS Meconopsis enthusiasts have realised that problems exist in identifying and naming different forms of the beautiful tall blue-flowered plants commonly known as Himalayan blue poppies. Some forms are extremely scarce as they can only be propagated by division. These can only be bought from a few specialist nurseries. Those available in large numbers through garden centres, nurseries and seed catalogues are seed-raised forms. For many years the commonest species has been the well-known blue *Meconopsis betonicifolia* which also has a white variant. In more recent years another seed-raised variant has been introduced, namely *Meconopsis* 'Lingholm' (Fertile Blue Group).

The Himalayan blue poppies were first introduced into cultivation from their native haunts in the Himalayas, Tibet and China at the end of the 19th century and the earlier part of the 20th century. For the most part, only two species are involved in the naming problems that this article addresses. These are *M. betonicifolia* and *M. grandis.*

There are several reasons for the naming problems. One concerns the promiscuity of *Meconopsis* in cultivation. This has resulted in hybrids cropping up by chance in gardens. These hybrids have not usually been produced as the result of conscious breeding programmes. As a result, over the years there has been a sad lack of adequate, or in many cases, any, written descriptions, except perhaps a few descriptive words in nursery catalogues.

Another aspect of the naming problems relates to the similarity amongst these plants after all, they may all be described as tall, blue poppies. For the most part *M. betonicifolia* does not present problems The problem areas concern the second species, *M. grandis* and the hybrids between this, *M. betonicifolia* and possibly other species, notably *M. simplicifolia.*

M. grandis appears to be more variable in the wild than *M. betonicifolia.* For over a century, seed of *M. grandis* has been introduced into cultivation on a number of different occasions and from a number of different locations in Nepal, Sikkim, Bhutan, and Tibet. Herbarium specimens and collectors' notes indicate that there is a considerable range of differences in the characteristics of these plants, e.g. in flower colour, leaf shape, plant height, bristles on the seed capsules etc. Many of the seed-raised introductions of *M. grandis* have not persisted in cultivation, although some, at least, of their hybrid progeny certainly have. Recent investigations indicate that at the present time the true species, *M. grandis,* is probably only available from a few specialist nurseries.

These investigations are being carried out by the Meconopsis Group. This Group was formed in 1998 in order to try to sort out the identities and nomenclature of the tall perennial blue poppies in cultivation. Many of these plants are sterile hybrid clones. They include certain individual plants that can be traced back for 4 or 5 decades or even longer, often with a story attached, having been passed down a family or to friends. Sorting out these sterile clones was the initial task of the Meconopsis Group and good progress has been made – but that is another story.

As we embarked on the studies just referred to, we soon became aware of problems relating to the identity and naming of the *fertile* forms of tall blue poppies. For the most part *M. betonicifolia* is not a problem to identify. It is quite readily recognised by a number of well-defined features and invariably produces copious amounts of easily recognised fertile seeds. It also breeds true unless *M. grandis* is also grown nearby. By and large, seedsmen from the seed companies, managers of the seed exchanges of the horticultural societies, nurserymen and wholesale growers of plants do not have problems with identifying this species.

The naming problems concern a second group of plants, which is now readily available to gardeners as seeds or as plants. Research has shown that these plants are, in fact, fertile hybrids. They are commonly seen under a variety of names. Many plants appear to be erroneously on sale under the species name *M. grandis.* Other names used are *M.* x *sheldonii*, *M.* x *sheldonii* 'Blue Ice', and *M.* x *sheldonii* 'Lingholm'.

Studies, so far, have shown that it is almost certain that these fertile hybrids arose due to a chance event. This event was the doubling of the chromosomes of a sterile plant rendering it fertile again, i.e. able to

produce good, fertile seeds able to germinate and produce a new line of fertile plants. However, these plants are *not* the species *M. grandis*. We have evidence that this process of chromosome doubling may have occurred on more than one occasion.

Further, the Meconopsis Group has also agreed that to give these plants the hybrid epithet x *sheldonii* is both misleading and inaccurate. This epithet is currently in use for two quite distinct types of plant. One type comprises the allopolyploid fertile hybrids of more recent origin just referred to and the second type comprises sterile clones of long-standing, such as *M.* x *sheldonii* 'Slieve Donard'. This misleading use of one epithet for two distinct types of plant is thus one important problem attaching to the use of the epithet x *sheldonii.* A second problem is that, while, according to the rules of nomenclature, the epithet only applies to hybrids between the two species, *M. grandis* and *M.* betonicifolia, it is acknowledged that other species, particularly *M. simplicifolia,* are probably involved in the parentage of at least some of the clones commonly currently labelled *M.* x *sheldonii.*. Therefore *M.* x *sheldonii* should no longer be used except when it is known definitely that only *M. betonicifolia* and *M. grandis* are the parents of the plant(s) concerned.

So what can we call these fertile hybrids? And are they all the same thing? Or do they represent a number of different forms? The answer to the first question is that by using the cultivar-group concept we should call them all Fertile Blue Group.

I [E.S.] am glad to be able to acknowledge that the Meconopsis Group has been fortunate to have the advice and guidance of the co-author of this article, Chris Brickell, (Chairman of the International Commission for the Nomenclature of Cultivated Plants (ICNCP)) to help sort out the identity and nomenclature of the big perennial blue poppies. He pointed out the benefits of adopting the cultivar-group concept for the task in hand. *"A cultivar-group is a taxon of cultivated plants that denotes an assemblage of similar named cultivars"* (ICNCP – 1995). These big perennial blue poppies can, under ICNCP rules, be assigned to one of a number of cultivar-groups with defined characteristics. Subsequently, after evaluation, clones or cultivars can be selected for naming from within these cultivar-groups. We have established cultivar-groups to embrace plants that are either i) not true species, or ii) are so distinctive that they do not need initial placement into a cultivar-group. Two cultivar-groups have been established to cover sterile hybrids (George Sherriff Group and Infertile Blue Group) and one cultivar-group to cove the fertile hybrids referred to in the

paragraph above (Fertile Blue Group). First reports of the work involving both the fertile hybrids and the sterile clones have already been reported in *The New Plantsman* (2001a, 2001b), *The Rock Garden* (2001) and also elsewhere, and publication of further work on the sterile clones is planned in the near future. The rest of this article is concerned with plants placed in Fertile Blue Group.

Meconopsis 'Lingholm' (Fertile Blue Group)

The Meconopsis Group decided unanimously at its meeting in December 2000 to call the fertile hybrids Fertile Blue Group. We decided this after full consultation with the membership that includes a significant number of nurserymen. However, the nurserymen and wholesale growers have not been too happy with this as a selling name as they do not think it will be popular with the public – despite the fact that it describes the plants well and indicates that you can collect your own seed and grow more plants for the garden! Fortunately, as a result of further study and discussions over the past year with some of the most experienced nurserymen, they have concluded that most of the plants being grown can be attributed to the cultivar *M.* 'Lingholm'. Therefore the Meconopsis Group recommends that many plants that logically could be ascribed to Fertile Blue Group, can for practical reasons, be labelled *M.* 'Lingholm' or *M.* 'Lingholm' (Fertile Blue Group).

However, we recognise that in using this cultivar name for perhaps the majority of the tall blue poppies currently on sale, batches of poorly rogued individuals and also plants that may in time come to be recognised as distinct cultivars in their own right, may, at least at first, be included. But we hope that by publicising the characteristics of *M.* 'Lingholm' and by encouraging growers and seed producers to rogue and select the best of their plants, unworthy plants will be gradually eliminated; other cultivars will undoubtedly be selected and named in due course and at the end of the day a uniformly fine cultivar, *M.* 'Lingholm' will be securely established.

The origin of *M.* 'Lingholm' was investigated by Mike Swift when he was Head Gardener at Lingholm Garden in Cumbria from the mid-late1980s. Both the results of Mike Swift's investigations into the origin of this cultivar and a description appeared in *The Lakeland Gardener* in 1998. This description is the only full description of a fertile hybrid tall blue poppy cultivar that has so far been published, as far as we are aware.

The following description is based on Mike Swift's original article,

and with his recent corroboration amended by Evelyn Stevens and others. The characteristics that distinguish *M.* 'Lingholm' are conveniently evident at three stages in the growth cycle, namely: i) the newly emerging leaves in early spring, ii) the flowers and mature leaves and iii) the seed capsule and seeds.

The newly emerging leaves of mature plants in spring are strikingly pilose, with a thick pile of prominent long soft hairs, both on the upper and on the lower surfaces, on which they are up to 0.5 cm and up to 1 cm long, respectively. These prominent hairs project more or less at right angles to the surfaces of the leaves. The hairs are bicoloured, being dark brown nearer the base with a conspicuous fading to colourless towards the tip, giving a pale fringe to the prominent pile of long hairs, standing out from both surfaces of the vertically directed leaf surfaces. These young leaves are lanceolate with an acute tip and with the base of the lamina merging gradually into the petiole. An unusual feature is that in a small proportion of leaves a break or kink may occur at some point along the mid-rib.

The flowers are large (10 cm diameter), with the broadly oval petals of thick texture and with prominent veining. They are deep sky blue in colour. There is also a dark purple-blue stained smudge at the base of the outer side of the overlapping petals. In the fully open flower they often appear to be somewhat disposed to one another in such away as to remind one of a child's windmill.

The mature leaves are lanceolate with coarsely and rather irregularly serrate margins and are also pilose, although the latter is a much less prominent feature than in the newly emerging leaves. A distinctive feature of the leaves is that they appear to be shallowly boat-shaped, rather than flat, with the mid-rib representing the keel of the boat. It appears that this appearance and the break in the mid-rib already referred to are associated with one another, and are due to tensions set up within the leaf tissues.

A highly distinctive and important feature of *M.* 'Lingholm' is that it is fertile. This is reflected in the plumpness of the very bristly narrow-oblong seed capsules which develop after flowering. The mature capsules contain abundant fertile seed (unlike the aborted dust-like infertile seed – with perhaps the occurrence of an occasional well-developed fertile seed which characterises the contents of the capsules of the sterile clones). The seeds are much larger, (1–1.5 x 2–3 mm), than those of *M. betonicifolia*, rather angular and kidney-shaped, dark brown

Fig. 210 *Meconopsis* 'Lingholm' with young leaves (inset)

in colour and pitted giving a rough-texture to the surfaces. In contrast, the smaller seeds of *M. betonicifolia* are nearly spherical (1 mm in diameter), pale brown in colour and the surfaces, although pitted, have a much neater and smoother appearance.

The seedlings show great vigour and sometimes a leaf tip may be bifurcate, but this latter feature has been found not to be completely unique. Mature plants appear to range in height from two and a half to three and a half feet, but it is appreciated that this may be affected by growing conditions and that in some situations they may grow taller than this. We believe that this applies to plants grown by one nurseryman in Alaska, for example.

As indicated, all the large flowered fertile hybrid big blue poppies *should* be placed in Fertile Blue Group. However, as also indicated, the Meconopsis Group has decided to compromise by recommending that they are all included, in the interim, under the name *M.* 'Lingholm'. So far, just this one cultivar has been described, validly published and established. It is believed that the majority of fertile hybrid big blue poppies being distributed through nurseries and garden centres are, in fact, *M.* 'Lingholm'. However, with careful selection we also believe that further distinct fertile hybrid cultivars will emerge from amongst these plants. In due course, these will then need to be described and validly published. Undoubtedly there are other plants that should properly be consigned to the compost heap!

In conclusion, in a perfect world, we would have preferred not to have compromised by recommending, as an interim measure, to include under the name *M.* 'Lingholm' plants that may not quite match up to the criteria required. However, we have decided, for practical reasons, that this is the best course of action. It would also have been preferable if we had been able to give ourselves another season to check the description and also to make chromosome counts on a bigger sample of plants than have been tested so far in order to confirm the chromosome status of these fertile hybrids. However, we hope to do this work and publish it in due course.

The main purpose of this article has been to try to show how we have been going about attempting to establish order and correct naming of the seed-raised big perennial blue *Meconopsis* available through seed catalogues, garden centres and nurseries. However, a word on cultivation may also be appropriate. These plants are woodlanders from high altitudes, which thrive in sheltered positions in rich, friable, humus-rich, well-drained yet moist woodland soil with a moist

atmosphere and partial shade. They are most suited to the cooler and damper parts of the British Isles, but if care is taken to provide the conditions just described, they can be rewarding even in the warmer, drier parts of the country. Given suitable growing conditions, good specimens should be soundly perennial, and persist for many years. The usual advice when purchasing is to choose specimens which show evidence of the presence of side-shoots and not to choose specimens which appear to have a single flowering shoot. Testing the validity or otherwise of this contention is at present being undertaken using sufficient specimens and suitable controls.

Sources of plants: The plants, which are the subject of this article, are quite widely available from garden centres and specialist nurseries. Lists of the latter may be found in The Plant Finder which also lists suppliers of the rarer vegetatively propagated sterile clones of big blue poppies. Information concerning sources of plants and on the Meconopsis Group may be obtained from Dr. Evelyn Stevens, The Linns, Sheriffmuir, Dublane, Perthshire, FK15 0LP, United Kingdom. Fax/tel. 01786 822295. Email: levelinns@btinternet.com

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Show Reports 2002

Dunblane Early Bulb - 16th February

- First show of the year
- Wealth of flowers

The first big event of the SRGC is the Early Bulb Display in the Victoria Hall in Dunblane. This popular event attracts a huge number of members and a lot of interesting plants. The RHS Joint Rock Garden Plant Committee met during the show but did not recommend any new awards. Some of the plants put up in front of the committee for consideration had already received awards in previous years. The wealth of plants in flower at this time of year can only be appreciated by seeing them together at a show like Dunblane.

Sandy Leven brought a large number of Galanthus cultivars – snowdrops. The collection is being built up mainly with plants bought at SRGC shows and gifts from members. SRGC gardeners tend to be very generous with their plants and their time.

The club plant stall brings in enough money to run the Dunblane Display and to pay for the lecturer and travelling fees and Hazel and Sam work hard with the team of members to ensure the success of the day. Very tiring work but greatly appreciated.

Thank too to all the exhibitors and all the members who travelled to see the plants and to hear "Galanthus" Matt Bishop lecture on snowdrops and eastern American woodlanders. Matt's new book on Snowdrops, a masterpiece on the cultivated forms has just been published. It can be bought at SRGC shows. *Sandy Leven*

Blackpool Show - 16th March

- Over the border Spring comes early
- Alan Spencely wins with Trillium nivale

Each year the Scottish Rock Garden Club cooperates with the Alpine Garden Society and holds two shows in the North of England. Gardeners in the north have historically had an affinity with the SRGC and with The Royal Botanic Garden in Edinburgh. The first of these shows is held in Blackpool [in previous years it was in Morecambe, which is a bit closer to Scotland]. The other is held in Hexham. For SRGC members in Cumbria, Lancashire, Northumberland these are their local shows. Exhibitors from north of the border travel to the shows to take part, to judge and to look at the plants. Often there are plants for sale at these shows which cannot be found 'up North'. For similar reasons, members from the south come to the Scottish shows with Scottish nurserymen Ian Christie and Ron McBeath selling plants at Blackpool.

Spring comes earlier to Blackpool than to Central Scotland. The show hall is about 35 minutes from the M6, in a school in a residential area, on the edge of Blackpool. There was a marvellous entry of plants from many parts of central and northern England. Alan Spencely took the Farrer Medal (in alternate years a Forrest Medal is awarded) with a super pan of *Trillium nivale*, the pot dressed suitably with moss. Judges like to see 'appropriate' dressing used in pans of alpines.

One of the most attractive plants on the benches was *Asarum maximum* shown by John Forrest. Stunning white and black flowers nestling under bright shiny leaves. Who says asarums are dull plants - this one was a smasher.

Some of the 3-pan exhibits which took my fancy were an entry with a nice *Tecophilaea cyanocrocus*, *Dionysia* 'Monika', and a good plant of *Helionopsis orientalis* in the centre, a plant I always associate with the late Joyce Halley, and three primulas: pink-flowered *P. vulgaris sibthorpii* the eastern version of our primrose, pale blue *P. whitei* x *P. bhutanica* and *P. irregularis*.

Jean Wyllie won both 'rare' classes. She had a white *Colchicum diamapolis* and a very new, New Zealand raised, narcissus hybrid *N. asturiensis* x *cyclamineus* with a short chunky flower. The hybrid is called 'Betty Mae' after its raiser. Two bulbs to covet! Mr and Mrs Brown staged the largest plant of the diminutive *Cyclamen parviflorum* that I can remember seeing. They grow cyclamen to an amazingly high standard. I was asking them for hints!

I apologise to those exhibitors whose names I have forgotten but on behalf of plant lovers I thank them all, for their early rising and for bringing their plants to Blackpool. *Sandy Leven*

Edinburgh and Lothians - 23rd March

- Forrest Medal to Fred Hunt for *Tecophilaea*
- Stunning display of Dionysias from Eric Watson

The cold, dreary and wet run up to the show did not bode well. However, on the day even the sun shone, giving the impression that spring had arrived at last. Entries were thin, particularly in Sections II and III, but there were still many superb plants on display. The mainstay of the show was the abundant bulbous plants, without which the benches would have looked distinctly sparse. It was notable though that there were relatively few fritillaries as yet. Nevertheless, there were charming arrays of Corydalis and Narcissus, and of early European primulas, mostly forms and hybrids of *P. allionii*.

Alf Evans is greatly missed by members of the Edinburgh Group and Club alike. In memory of his friendship and tremendous support over many years, the group has donated a new trophy, the Alfred Evans Quaich, to be awarded for the best pan of Ericaceae, other than Rhododendron. This was awarded for the first time to Bob Meaden (Penpont) for *Epigaea gaultherioides*. Bob also won the A. O. Curle Memorial Trophy as the winner of Class 5, for 3 pans rock plants grown from seed, including *Primula edelbergii, Cyclamen persicum* and *C. persicum* f. *puniceum* 'Tilebarn Karpathos'.

The Forrest Medal and the Henry Tod Carnethy Quaich for the best bulb, corm or tuber in Section I was awarded to Fred Hunt (Invergowrie) for *Tecophilaea cyanocrocus*. This was one of three splendid pans of Tecophilaea exhibited by Fred and was part of his Class 2 exhibit, along with almost equally magnificent pans of *Corydalis incisa alba* and *Fritillaria aurea*, for which he was awarded the Henry Archibald Rose Bowl.

Cyril Lafong (Glenrothes) was more than a little unlucky to miss by a very narrow margin, the vote for the premier award with his large pan brimming with the lovely yellow flowered *Sebaea thomasii* CDR992A (Class 66: Certificate of Merit). This African alpine is proving to be a splendid show plant. However, he did not leave empty handed, for his aggregate points total ensured that he received the Reid Rose Bowl (most points in Section I). Also, he was awarded the R E Cooper Bhutan Drinking Cup for the best Asiatic primula, *Primula* 'Netta Dennis'; this cross between *PP. aureata* and *gracilipes* was raised by John Dennis. The special prize of alpine plants for the best entry in the Junior section was awarded to Mark Tosh.

Without at all being partisan, it was a pleasure to see that local group members held their own against this high class competition. In Class 3, David and Stella Rankin (Lasswade) showed three, unnamed diminutive Chinese primulas for which they were awarded the Elsie Harvey Memorial Trophy. *P.* 'Clarence Elliott' (Class 13) was judged the best European or American Primula, and David Millward received the K C Corsar Challenge Trophy and a Certificate of Merit. The scent from Jane and Alan Thomson's (Edinburgh) floriferous *Rhododendron edgeworthii* pervaded the show hall throughout the day and they picked up the Midlothian Vase for best Rhododendron. The Boonslie Cup for the best miniature garden went to Ian McNaughton (Pencaitland). The Midlothian Bowl for the best plant in Section II, went to Watt Russell (Tranent) for *Narcissus* 'Tête-a-tête'. Watt was also awarded a Bronze Medal. For her arrangement of cut flowers and foliage of rock plants (Class 120), Winnie Milne (Edinburgh) received the Kilbryde Cup.

I have always greatly admired the skills of those able to grow cushions of that difficult genus *Dionysia* to considerable size and floral perfection. On the bench were several good plants of *D. aretioides*. But Class 22 was won by Eric Watson (Wideopen), the doyen among Dionysia growers, with *D.*

'Ewesley Sigma' justly awarded a Certificate of Merit. However, his stunning non-competitive display of eight plants included *D. bryoides* along with various hybrids between *DD. freitagii, viscidula* and *microphylla*. What perfection. What a start to the show season in Scotland! *David Millward*

Stirling Show - 30th March

- Ab-Fab Flowers in the new CITY OF STIRLING
- Cyril Lafong wins Forrest Medal

There were some fabulous (*Absolutely Fabulous*) plants on show at Stirling and these would have given any plant at any show in the country a run for its money in the medal stakes. Although some of the classes had small entries others were well filled. Over the years during which the show has been running we have tried to follow fashions in plant growing and have created new classes from time to time so that exhibitors are not unreasonably restricted in what they can put on the benches. To this end we have several general bulb classes and multiple pan classes to encourage the specialist and the exhibitors who grow a diverse range of plants. These 'mixed' classes are difficult for the judges but good for the public as they encourage 'unusual' plants. It also allows people to bring more plants to the show. The entry for Section II was very disappointing, *being the smallest ever at this show*. Group convenors if you read this please encourage new exhibitors by devoting some of your winter session to group shows or a lecture/demonstration on showing.

Show Supremos, Cyril Lafong and Fred Hunt met in Class 1, 3 pas rock plants. Their 6 plants had The Forrest Medal [FM] winner and four 'Certificate of Merit' plants. They included the FM winner at Edinburgh and FM winner at last year's show in Stirling. The one plant, which was not given high honours this year, had won a Forrest Medal in the past. This was one of the hardest to judge classes in recent years – imagine coming second with plants like these – six of the best pans of rock plants in Scotland!

Cyril's magnificent *Pulsatilla vernalis* in a 12 inch pan was awarded the George Forrest Memorial Medal and the Ben Ledi Plants Trophy (Best European Plant). As I wrote, it was part of his 3-pan entry. The other two plants being *Sebaea thomasii* and *Androsace muscoidea*. The Sebaea is a gentian relative from South Africa. We have seen it over the years as it slowly increases in size. *Androsace muscoidea* ex CR 188 was a fabulous white dome. Both are previous winners of Forrest Medals.

Fred Hunt showed *Tecophilaea cyanocrocus*, *Fritillaria davisii* and *Pulsatilla* 'Budapest'. The latter is the 'true' plant being a gift to Fred, many years ago from Dr Molly Sanderson who grew the original plant. His Tecophilaea won the Institute of Quarrying Quaich (Best Non-European Plant).

SRGC President Ian Young and his wife Maggie are very keen growers and showers of bulbs. They raise many of their own plants from seed often from seed collected from their own plants. They had a beautiful 3 pan Tecophilaea entry, all *T. leichtlinii* but all different. I thought that one, which was white one with just a hint of blue at the edges, was quite exquisite. Ian and Margaret won the Carnegie Dunfermline Trust Trophy for Most Points in Section 1.

Winners of the Jubilee 6 pan class were Barry and Cathy Caudwell. Their entry included two smashing *Corydalis solida* forms. James Cobb showed his unusual Hybrid *Corydalis* 'Persian Waif' which he grew from seed many years ago. One of its parents was *Corydalis persica* now known as *C. popovii*. Sandy Leven included *C. solida* 'White Knight' in his 6 pan entry. It is a good 'clean' white form of *C. solida* with a touch of cream in its buds from Latvian connoisseur Janis Rucksans.

There are several good blue bulbs. Glassford Sprunt's pan of *Chionodoxa sardensis* was a splash of blue light on the bench and was particularly splendid with the sunlight shining through it. Stella and David Rankin, who are often better known as growers of Sino-Himalayan plants showed *Chionadoxa* 'Bluetail' selected by Alan Dickinson and *Scilla sibirica*. Stella and David's seed raised *Primula minor*, a dainty little plant with a charm of

its own came from their own seed collection. More of the 'hit you in the eye' type of Primula were David Millward's luminescent *P.* 'Clarence Elliot' (Spiller Trophy for Best Primula) and *P.* 'Aire Mist', a super show snowball. Both of these have *P. allionii* in their parentage. *Primula* 'Murray Lyon' is named for the former President of the SRGC. It was shown by Jane Machin and Margaret and Henry Taylor whose Asiatics, *P. sessilis* and *P.* x 'Netta Dennis', were two of the ten different Asiatic primulas featured. Other notable Asiatics being Bob Meaden's *P. aureata* and *P. edelbergii* and Stella and David Rankin's *P. warshenewskiana*. I liked Ian and Carole Bainbridge's *Saxifraga andersonii* but where were all the rest of the saxifrages?

Narcissus is a very popular genus these days. Ian and Maggie Young showed several great pans including two pans of their own hybrids. I took the opportunity to photograph *Narcissus* 'Snipe' and *N.* 'Mitzy' at the show because there is some dispute as to their being different plants in cultivation in this country. 'Snipe' opens as a bicolour and fades to white. 'Mitzy' opens white. The flower shape is very similar but 'Snipe' is the more delicate. The true 'Snipe' was introduced to the UK by Ron Beeston from USA stock. Bill Robinson's pan of *N. bulbocodium obesus* sat on the bench like liquid sunshine welded into flower form. Johanna Leven showed her 12 inch pan of *N.* 'Rip van Winkle'. This old double hybrid is quite distinct and more attractive than some of the more modern double daffodils.

Crocus scardicus is a plant asociated with the late Harold Esslemont. Bob Maxwell and Fred Hunt cultivate it extremely well. It is a plant, which, definitely prefers Scotland to England and I think Aberdeenshire and Angus are its favourite counties. Jane Machin grows and shows some marvellous plants. We will miss her when she moves to Jersey but no doubt she will be able to send us all early daffodils for Christmas. A fine example of Jane's skill as a cultivator is this *Cyclamen persicum* - a beautiful plant. Elizabeth and Ron Smart showed a pan of *Fritillaria pudica* flowering to perfection. My other favourite frit was the majestic pink rhinopetalum, *Fritillaria gibbosa*. I like the rough leaves of allium-like *Massonia pustulata,* which has a less than wonderful name, recalling the Black Death and other pestilences but it is an intriguing plant. When it comes to silver leaves *Celmisia spedenii* is one of the best. I find it slightly tender but Ian and Carole Bainbridge succeed with it. Shown for the first time at Stirling was the beautiful *Prunus incisa* 'Kojo-no-mai'. It is a very hardy early flowering shrub, which incidentally has good autumn colour. Thank you to our judges, stewards, those who helped at the door in the hall, with the teas and meals and a special big thanks to Ron Bezzant for recording results and thanks lastly to all who participated. *Sandy Leven.*

Fig. 211 *Aubrieta deltoidea*

Unfashionable genera

Brian Halliwell

SEED EXCHANGES of horticultural societies world-wide have great attraction. They offer scarce and unusual species that are not easy to acquire from commercial sources. Many items are not rare but this is a chance, at little cost for an average, non-specialist gardener, to raise a range of different plants. Many gardeners belong to horticultural and botanical societies just so they can participate in the seed exchanges. Some, perhaps many of the genera, with their species, will be unknown so some research will be required. To begin with, use will be made of *The Bernard E. Harkness Seed List Handbook*. Useful as this is as a starting point, it only mentions plant type, height, ornamental features and country of origin. Other books will need to be consulted for additional information such as merit and cultivation. Some seed lists are very extensive and choice can be difficult. The first choice is easy for it will be species of genera in which one has a special interest. It is the second or third choices, or even second or third seed lists in a year, where one is looking for additional taxa to make up one's entitlement that are more difficult and there will always be certain genera which gardeners consider undesirable. This article reflects on some of these.

ALLIUM

Allium is a large genus of perhaps 700 species which occur in most countries of the northern hemisphere. Many species have beautiful flowers, but gardeners tend to avoid this genus for a number of reasons. Leaves of many species begin to die back as flower stems develop, making the plants look unsightly. These unattractive leaves can be hidden by underplanting bulbs. This condition of leaf die-back is to be found also in some genera of terrestial orchids, but this does not prevent enthusiasts from cultivating as many species of *Ophrys* as they can acquire.

In some species, the inflorescence consists of a few blooms and many bulbils. This condition is unattractive and spoils floral effect as well as resulting in unwanted increase. *Allium caeruleum, A. paradoxum*, and *A. roseum*, for example, all exhibit this condition. If these few species are avoided, there are still at least 680 species from which to choose.

The greatest disadvantage with this genus is the onion smell, but this condition usually only occurs when leaves are damaged. Most fritillaries emit an unpleasant smell if their leaves are damaged, but all species are eagerly sought.

CARDAMINE is avoided because of the notoriety of *C. hirsuta* which is hairy bitter cress, an invasive weed on many rock gardens. Although it is an annual, perhaps even ephemeral and so easy to remove, it seeds with such profusion that unless there is constant supervision, it quickly swamps desirable neighbours. There are a number of other species within the genus which are serious weeds. Even *C. pratensis*, Lady's smock, a British native, can be a weed on wet soils. This though is such a delightful weed that it is tolerated. When in flower en masse in spring, it is a joy. Selected clones of this species, which include the double, behave themselves and are interesting additions to a rock garden where the soil always remains moist. Botanists in recent years have moved the better species between *Cardamine* and *Dentaria* so there is uncertainty on how to classify these.

CAREX, a very large genus with perhaps 1000 species, has 75 native to the British Isles. Anyone who has a wet soil will find that rushes are serious weeds and difficult to control. Flowers are green, grey or brown and have no beauty. For many decades this genus has been shunned, but recent introductions from New Zealand have caught gardeners' interest as foliage plants because many of these antipodean species have colourful leaves. Some selections from Japan have colourful leaves, but the

colouring here is mostly as a result of variegation which is not produced in seed-raised progeny. This genus is beginning to climb out of 'undesirable' to, possibly, 'just fashionable'.

DORYCNIUM is a genus of southern European evergreen perennials which become woody with age; gardeners tend to consider them as shrubs. All are small enough for growing on a rock garden, but they have unattractive, small, pea-like flowers most of which are a dirty white. Only one species has any merit, *D. hirsutum*, not for its flowers but the grey, silvery, silky leaflets. This genus can be totally dismissed for botanists have transferred all species into Lotus. Beware therefore, if your choice is amongst species of this genus.

AUBRIETA

Aubrieta has 12 species, but the only one commonly grown is *A. deltoidea* (fig. 211) and some of its hybrids. The reason why this genus is ignored, is sheer snobbery. This is a popular alpine with general gardeners because it produces a profusion of blooms which are long lasting. The novice rock-gardener may allow it on his virgin rock garden and admire its spring flowers for a few years. But, as soon as cultural experience has been acquired and the newcomer has begun to climb the alpine ladder, *Aubrieta* species (cover and below) and cultivars are scorned as being common and too easy, and so are discarded.

Fig. 212 *Aubrieta canescens*, Turkey

LOASA is a genus of about one hundred species of Mexican and South American annuals or short-lived perennials. The genus provides plants for an alpine house for they thrive in summer heat which is far too high for most alpine plants. Easy to grow, these plants with bizarre flowers in strong oranges, reds and yellows are very showy. A gardener who chooses to grow any species of this genus from seed does so once only, for all species have leaves covered with stinging hairs.

CONVOLVULUS

Just thinking about this name can send unpleasant shudders through many gardeners. This attitude can be understood if anyone gardens on a clay soil. During cultivation any bit of rhizome that is missed when forking over the soil, will grow into a new plant. Even with systemic weedkillers, there is an endless battle trying to eradicate this problem, and yet there are only two kinds which can be classed as noxious weeds: bindweed, *C. arvensis* and greater bindweed, *C. sepium*, and this latter species has now been transferred to the genus *Calystegia*.

Most of the remaining 200 species of *Convolvulus* are delightful garden plants and some of the species suitable for a rock garden are considered as connoisseurs' plants.

Fig. 213 *Convolvulus althaeoides*, Cyprus

HIERACIUM is a large European genus of perhaps 250 species with almost half of these native to the British Isles. Height of species is very variable and some are rampant. They have multiple heads of yellow flowers of no special merit. One of my American friends refers to this and allied genera as DYC: "damned yellow composites". A few species have silky, silvery hairy leaves and, as rosettes, these have some interest. If they can be prevented from flowering, they may be tolerated on a rock garden. Of the few species which books recommend, the best is *H. aurantiacum* perhaps because of flower colour which is a reddish orange (below). Its height of 12" at flowering makes it small enough for a rock garden and it is floriferous, but it is also rampant. Although not native, it has escaped from gardens and is now established in a few places in the British Isles so this should be a warning to anyone who considers it might have a place in the garden.

Fig. 214 *Hieracium aurantiacum*, Maritime Alps

MUSCARI, a genus of small, floriferous, spring-flowering bulbs ought to have universal appeal. All are easy, showy, mostly blue and a few are scented. The whole genus is shunned because of the bad habits of two species, *M. armeniacum* and *M. neglectum* which increase so quickly that they achieve weed proportions. Botanists over several decades have been investigating species within the genus and some have been transferred to different genera.

ORNITHOGALUM is a large bulb genus with representatives in Europe, Asia and Africa. Considerable numbers of these are dwarf and so well suited to a rock garden. Others are taller and are better in a mixed border even though some are on the border of hardiness. In the years following the Second World War, the florist trade tried unsuccessfully to popularise South African chincherinchees, *O. thyrsoides* as cut flowers. It seems almost certain that this genus has never been highly considered because most flowers are white, one of the least popular of flower colours. Perhaps the most widely grown species is *O. nutans*, drooping Star-of-Bethlehem, in which the flowers are green, another unpopular flower colour except amongst flower arrangers.

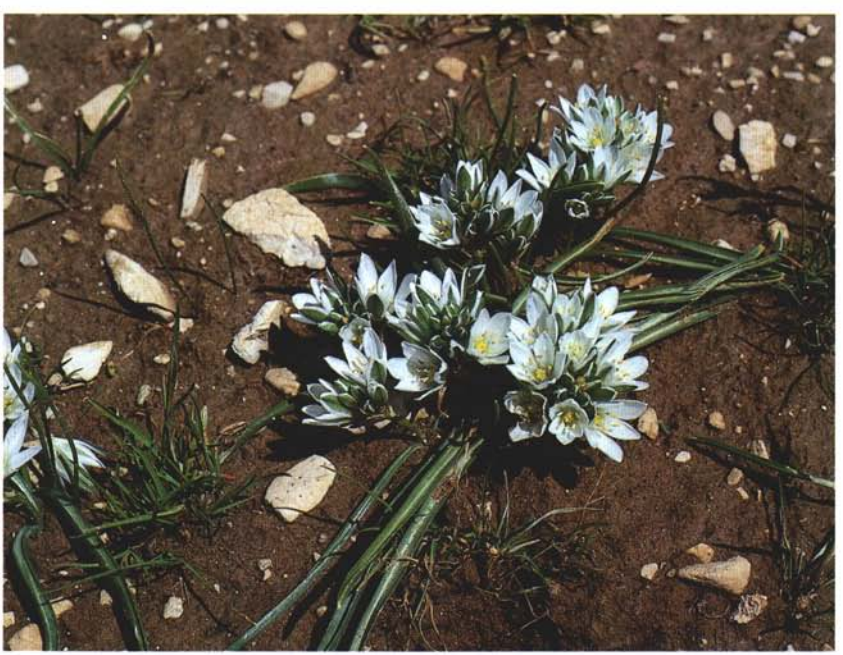


Fig. 215 *Ornithogalum orthophyllum*, Turkey

Fig. 216 *Campanula patula*, Pyrenees

CAMPANULA. This is another genus which I avoid, even though it contains many highly desirable and beautiful species, some of which are coveted by specialists. The reason I distance myself from this genus has nothing to do with flower form, colour, vigour or idiosyncracies of cultivation, it is purely on nomenclatural grounds. There are 300 species which are widespread in countries in the northern hemisphere. Whilst there maybe a botanical monograph, I am familiar only with those prepared for gardeners. None of these are complete and probably never can be, and a key to the entire genus may be an impossibility. Many seed lists offer considerable numbers of unnamed species. How does one identify a plant when it flowers, especially if it has merit? To consult every flora for countries in the northern hemisphere would be tedious, even if one had access to them and the language in which they were written could be understood. Over many years I have been asked, when visiting gardens, if I would put names to unidentified plants. I am always cautious to agree to such a request and I point blankly refuse, if there are species of *Campanula*.

Choice will always be arbitrary. What one person admires, another detests, as I do with the genus *Campanula*. People from different countries can view plants differently. South African, Bermuda buttercup, *Oxalis*

pescaprae is a noxious weed in many warm temperate countries, but can be highly desirable when containerised for an alpine house. When viewing new and rare classes on show benches, have you ever wondered as I do, why people have persevered with some of the newcomers? It is though, only by trying out unknown species, that merit can be determined. Readers, do continue to select one or two entirely unknown species from any seed list! It may be that your choice, by the next decade, will be what everyone wants to grow.

Photographs by Malcolm McGregor

Seed Exchange

Morris Wilson
Seed Distribution Manager

FOR MANY OF MEMBERS OF THE CLUB, the Seed Exchange is the most valuable part of their membership, but if you have never applied for seed before it can seem daunting. In fact, though, it is not really any more complicated than ordering anything else. I hope the following will help.

Fig. 217 Seed distribution: Morris Wilson and Margaret Taylor

There are two separate processes with which the Seed Exchange is involved.

A getting seed from donors and assembling a Seed List
B sending seed out to members

Most members are concerned with B – the seed-ordering side of the Seed Exchange – and that is what is outlined below. Like any mail order seed company this means that you need to get a Seed List and send in an order – as simple as that – but there is a deadline – the closing date for all applications is strictly the 31st January each year.

ORDERING SEED

Stage 1 - GETTING THE SEED LIST
This is sent automatically to overseas members and home donors. Home non-donors need to send a suitable (the Seed List is the same dimensions as this journal) stamped, self-addressed envelope to

Mrs Jean Wyllie
1 Wallace Road
Dunblane
Perthshire K15 9HY

The list is normally sent out in late November. If you have not received your lists by mid-December get in touch with Jean Wyllie immediately. You can write or telephone her (if you feel you must): 01786 822593

Stage 2 - APPLYING FOR SEED
This is the stage where the fun starts. A list of around 5000 things from which you can order whatever you want – and you only pay a nominal amount! All you have to do is work your way through the list and write the numbers onto the Application Form in the Seed List. If you want things that will be in demand then you need to work quickly but there is real pleasure in spending longer and searching out some of the items which are less obvious.

It obviously helps if everybody uses the same form and seed requests are only accepted on the forms provided in the centre of the Seed List. **Please fill in both address labels on the form**, we need one to send your seed and the other one for our records. **Adhesive address**

labels are most acceptable, my hard pressed helpers have plenty to do without writing out addresses. **You also need to include payment for your seed – see stage 3.**

Stage 3 - PAYING FOR SEED

- Overseas members cost of seed is included in their annual subscription so they do not have to send any extra money for normal application.
- Home members, both donor and non-donor, need to send their remittance with their application.

Cost is £2.50. Cheques should be made payable to "SRGC Seed Exchange".

Stage 4 - WAITING FOR YOUR SEED

Seed gets sent out around the turn of the year–the exact date varies slightly from year to year – usually distribution starts once Hogmanay is over. HANG ON TO YOUR SEED LIST – you will need it when your seed comes because the packets will be numbered – the Seed List lets you look up the number written on the packet to get the name.

EASY TEN for BEGINNERS

I know that some of you find the Seed List somewhat daunting. In an effort to encourage you to appreciate the pleasures of growing plants from seed, we offer you ten packets of our choice for just £1.00 or comparable value, apply to me:

Morris Wilson
Nydie
24 Hogarth Drive
Cupar
Fife KY15 5YH

SURPLUS SEED

Most years surplus is available at charges as shown in the Seed List. As this is a separate operation do not use the back of the initial order form for the surplus seed order. Although there is a form for surplus seed in the Seed List, sheets of plain paper are acceptable for this purpose. Give as wide a selection as possible as some species may be in short supply. Under no circumstances do we give substitutes, nor do we give refunds, again please fill in both address labels on the form. Payment,

is accepted in sterling cash or cheques, dollars cash or cheques, euros or major credit cards. If paying by credit card please give your card details on a separate slip of paper and attach it to your application.

Orders for surplus seed, and the payment, should be sent with your main order, but once it is received it will be treated as a separate item so please don't refer to your main selection – they have gone separate ways through the system.

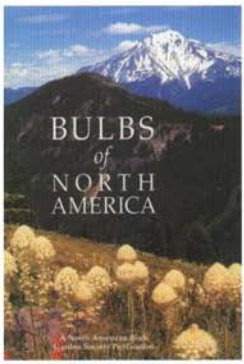
If you have never tried ordering seed then you're missing one of the great pleasures. There are all sorts of things – wild collected primulas rub shoulders with saxifrages. There are shrubs and bulbs, annuals, drought-adapted perennials, conifers and cushion plants. What a place to start a collection of something new – penstemons or alliums perhaps – or what about . . . now what was that I was trying to get last year?

And if you really get into this you could start saving seed from your own plants and contributing to the Seed Exchange as a donor - but more of that another time. Just a reminder as far as donating seed is concerned that seed must be sent to Jean Wyllie by the 25th October. The list goes to the printer on 5th November so nothing can then be added.

Fig. 218 Seed distribution: making up orders

Fig. 219 *Xerophyllum tenax*, bear grass, by the side of Mt. Hood Highway, Oregon

Book Reviews



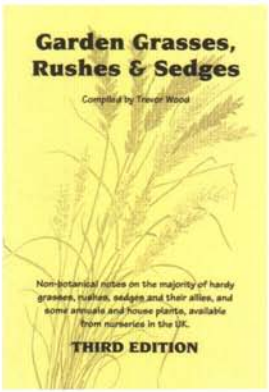
BULBS of NORTH AMERICA
edited by Jane McGary
251 pages. 102 colour illustrations
Timber Press & North American Rock Garden Society
ISBN 0-88192-511-X £25.00

This is a wonderful book. There are four dozen genera of bulbous plants in North America - this book describes them all. Every species is dealt with: 100 species of *Allium*, 71 of *Calochortus*, 24 *Erythronium*, 20 *Fritillaria*, through to genera with which the average rock gardener will have far less familiarity such as *Milla*, *Muilla* and *Schoenocaulon*. Comments on growing are sensible, understandable and highly practical. There are individual chapters on *Allium*, Amaryllidaceae, the *Brodiaea* "Alliance" (*Brodiaea*, *Bloomeria*, *Triterliea* and *Dichelostemma*), *Calochortus*, *Erythronium*, *Fritillaria*, *Lilium*, Irids of the southeast, and geographical chapters on Northwest, Southwest, and Eastern, North America. the last three chapters detailing over 70 species not otherwise covered. But this is not a book that should be confined to the grower of bulbs although the comments for the grower are very thorough with relevant comments on species throughout. Identification points are made clearly and will allow the reader to distinguish similar species very effectively.

As Brian Mathew points out in the Foreword, new species are still being found in North America – but others are going through the process of mass cultivation in Holland that will make them widely available. Most obvious in this way are *Calochortus*, *Ixia* and *Triteleia* which are now far more widely available than hitherto from the Dutch bulb growers. And seed is regularly available of even the more obscure species.

The range of illustrations is particularly valuable with the selection allowing the casual reader to get a fairly good idea of what they are looking at before checking with the detailed descriptions. It certainly enabled me to sort out a couple of small *Calochortus* I'd seen in the wild in southern Oregon which I had previously been unable to identify.

Everyone concerned should be congratulated. NARGS should expect demand for seed of many species to rise for the next few years, and a lot of growers can settle down again with their plants and sort out their identification.

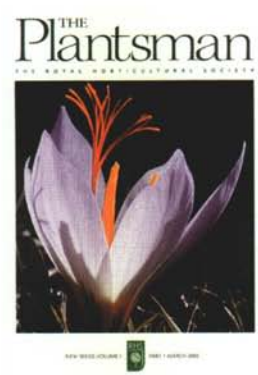


GARDEN GRASSES, RUSHES & SEDGES (3rd edition)

Trevor Wood

available from John Wood, 8 Wordsworth Road, Abingdon, Oxon OX14 5NY (price £6.00 incl. delivery)

This is a remarkable guide to those grasses, rushes and sedges available in the nursery trade in the UK. Two things stand out: the sheer comprehensiveness and the enthusiasm of the author. 144 pages of detailed notes, covering descriptive points as well as notes on cultivation requirements of individual species and cultivars are enhanced by 165 simple, yet very effective, line drawings which might make initial identification at least possible before the reader gets into the very thorough listings and notes. This is a guide by an enthusiast and it is this mixture of affection and thoroughness which illuminates the whole production. For such a detailed study Wood manages very well to make it accessible although I would personally have found a key to the genera helpful. Highly recommended.



THE PLANTSMAN

edited by Christopher Grey-Wilson

published by the Royal Horticultural Society £27 per year (4 issues), £20 per year for RHS members and members of affiliated societies.

Since 1994, *The New Plantsman* has set a high standard. Elegant production standards have been allied to the highest quality illustrations and articles on specialised plant-related topics. Detailed articles on particular groups of plants have been its stock-in-trade and even when the plants in question have not been a particular favourite, the journal has still been intriguing.

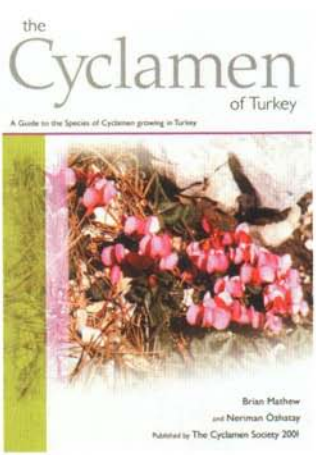
The renaming back to *The Plantsman* has been attended by a number of other changes which have made it feel somewhat less technical. A new glossy cover laid out like the new cover of *The Garden*, full colour contents, and some changes in layout of text allied to a new typeface, and page headers with article name, have all been introduced together. One of the more obvious changes has been the introduction of advertising which

is a pity in something that has managed without for so long: that the small ads at the back are headed "Emporium" gives it the same pseudo-heritage feel of those catalogues you get through the post (such as "Past Times"). But other elements remain the same: the generous page size allows two column text which works well. At heart though are the contents. In the March 2002 issue there are articles on "New Gingers from SE Asia" which gives descriptions as well as illustrations of three new species; on new lily hybrid types for the garden; an article by Brian Mathew on new insights on the genus *Crocus*; on Yakushima; on white rather than black containers (which is of real practical interest); and a profile of botanical artist Mary Grierson. There is also a very valuable plant forum by Rebecca Dunbar. The range of contents is not untypical of what has gone before. Illustrations range from excellently reproduced photographs to first-class line-drawings. Well worth looking at if you don't already subscribe. Make sure you get the discount for belonging to the Club.

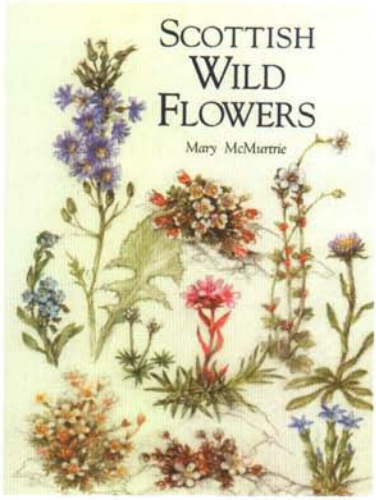
THE CYCLAMEN of TURKEY

Brian Mathew & Neriman Ozhatay

The Cyclamen Society
ISBN 0-9537526-1-5
£4.50



There are twenty-one species of cyclamen in all and ten of these come from Turkey largely from those provinces which have a coastline as is made clear by the excellent distribution map in this 32-page booklet. All the Turkish species are described and illustrated, each with 46 colour photographs of flowers, plants and habitats. The commentary is clear and accessible to the non-specialist. Comments on history, conservation, cultivation and the Cyclamen Society, are also useful and there is a very helpful listing of provinces where various species occur and the afore-mentioned map which makes clear their distribution across the country and which would be of real benefit when all I usually find in the wild are cyclamen leaves. I would definitely take it with on a plant trip to Turkey. There is also a Turkish language version available at the same price.



SCOTTISH WILD FLOWERS

Mary McMurtrie
Garden Art Press
over 350 individual paintings on 130 full page plates.
ISBN 1-870673-38-7
£25.00

There are probably more botanical artists of one sort or another working now than at any point in history. Most of them spend their time trying to get a high degree of detail – a formal accuracy which all too often robs them of some of the feeling for the plant. Mary McMurtrie is not working in this tradition – her paintings are accurate but what comes through her work is her concern for the feel of her subject which can be impressive. It is notable, and a mark of her knowledge of native plants and her sensitivity to her subjects, that it is in plants at which many would baulk that she shows at her best. This is most obvious in her treatment of groups of plants which include some of those subjects which would normally be thought of as humble ones: many crucifers, composites and umbellifers are wonderfully realised. Some of these are very complex but they are clarified on the page in ways in which any painter should be proud.

DOUBLE PRIMROSES : OLD LACED PINKS
DWARF RHODODENDRONS : ALPINES

Mrs. McMurtrie, The Rock Garden Nursery, Springbank Lodge, Craigton Road, Aberdeen

Descriptive List 3d

Telephone : Aberdeen 35228

This advert for Mary McMurtrie's nursery appeared in 1960 – a good address obviously – our President lives in the road now.

This is a formidable project and a handsome book with high quality plates. While not showing every Scottish native plant Mary McMurtrie goes a very long way towards it. The paintings are predominantly line and wash on slightly tinted paper with highlights picked out in body colour and on occasion this leads to rather muted colour. But it is form which is the centre of attention and her treatment of thistles – a good test – makes this very clear. A remarkable achievement.

Reviews by Malcolm McGregor.

The Index for this volume will appear in the next issue.

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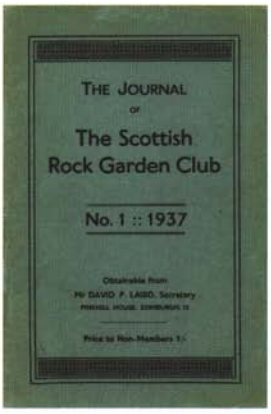

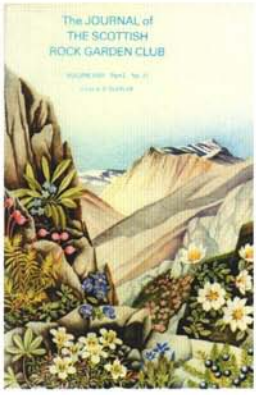

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