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The ROCK GARDEN

The Journal of the Scottish Rock Garden Club January 2003

Number 110

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Zdenek Zvolanek writes about crevice gardens





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COVER PHOTO: Ron McBeath at work on a crevice garden at his nursery (Zdenek Zvolanek) see p.81

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The Editor welcomes articles, photographs and illustrations on any aspects of alpine and rock garden plants and their cultivation. Articles, if submitted in manuscript, should be double spaced but it is hoped that authors will submit material on disk, either in Microsoft Word or some compatible software.

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These dates also apply for material for the Yearbook & Show Schedules.

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his piece is always written in the week before I take the whole set of slides, printouts, and computer files to the printer . . . it's really only at that point that the final shape of an issue finally gets settled. Before that it is like building a rockery - you spread all the stones out so you can see each one properly and then you start trying to envisage how they all fit together - let's just try that stone instead. These thoughts then are written at the very end of November so that the finished copy can go to the printers on the first working day in December. So for me this tends to be a late autumn issue with winter still to come. We've had a couple of light frosts but not enough to stop everything yet. Hostas got stopped by those frosts but the nerines are only just finishing in the brick bed outside the kitchen; many of the autumn flowering saxifrages are going well and I've brought a couple of the more choice ones inside to go on flowering on the windowsill; Crocus goulimyi is showing one flower in the alpine house (I haven't left the desk for over a week, so it was a nice surprise); and the couple of Central Asian irises I have under cover are nicely into growth.

There's only just a small space for an editorial this time so I just want to say that I'm really pleased with the range of material this issue. Design, philosophy and practice of rock gardens; some pieces on individual groups of plants - Erodium, Meconopsis, and wild saxifrages, the subject of the photoessay this time; an article on a great Scottish primula grower John MacWatt which is so beautifully complemented by his own photographs. SRGC Shows, awards, the new ferry from Rosyth, germinating Pulsatilla seed, book reviews, letters, emails, an update from Mike Brett on the Drakensburg. By the time this comes back through the letter box winter will be well set in, but the first flowers of the new season will be on their way. Since I measure out my life by saxifrages rather than coffee spoons, I'll be looking for the first flowers on the dwarf cushions of the Porphyrion saxifrages. Have a good year.

Editorial

1



1. Primula albocincta now Primula auricula var. albocincta

John MacWatt

Ben Wilson

SEARCH OUT YOUR CATALOGUES, turn to the sections on primulas and check for the following:

	PRIMULAS.		
rimul	la Algida. Very rare, Asia Minor.	2	6
"	Allioni. Large circular mauve flowers, with white		
	centre. March-May. Western Europe.	2	6
**	Alpina. Violet-purple. May-June.	1	6
33	Apennina. Crimson-purple. Piedmont.		6
"	Arctotis. Crimson. Early.	2	0
"	Auriculata. Rosy-purple. Asia Minor.	1	6
"	Balfouriana. A dark purple free-flowering seedling		
	from P. ciliata purpurata.	1	6
**	Balbisi. [Bellunensis]. Large green leaves, golden-		
	yellow flowers. Rare and good.	I	0
33	Belsiana. Velvety purple. Yellow eye. Free		1
	flowering.	3	6
23	Biflora. Mauve.	1	0
"	Bileki. Like Minima. Rare. Tyrol.	1	0
23	Bulleyana. Hardy and vigorous. From China. Flowers of an orange and apricot colour,		
	borne in whorls on long stems.	3	0
11	Cadinensis. From South Tyrol.	1	0
>>	Calycina [Glaucescens] Rosy-purple. Lombardy.	1	0

Villosa			***	0 9
Vochinensis	***			1 0
Winteri	***	***		10 6
Wulfeniana				1, 6

Interesting? What thoughts on the prices! Rarities selling for up to half a guinea. When 'Linda Pope' was listed in 1914 it was sold for ten shillings. Dr John MacWatt offered these, with hundreds of other primulas from all over the world, through his catalogues which were published from 1910 to 1915. Remarkably, these were not plants produced by a full-time professional nurseryman or supplier to the trade, they were the sideline of a full-time general practitioner with a practice that made great demands.

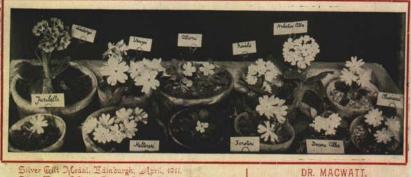
Dr John MacWatt will be no stranger to most readers. *Primula* 'MacWatt's Cream' is still widely available although it appears normally to be listed incorrectly as "McWatt's Cream"; his book *The Primulas of Europe*, published in 1923, is occasionally found in lists from second-hand booksellers. This book covered the same subject as his contribution to the Third National Primula Conference held by the Royal Horticultural Society in April 1913, when he shared the day with Reginald Farrer, Professor Bayley Balfour and Gertrude Jekyll. For more than twenty-five years he received prestigious awards: the Scottish Horticultural Association Silver Medal in 1911, the Diploma of Honour and large Silver Medal at the Royal International Horticultural Exhibition held in London in 1912, the Silver



™CATALOGUE

1912.





Silver Gift Medal, Edinburgh, April, 1911.
Silver Floral Medal, Temple Show, Condon, May, 1911.
Silver Medal, Edinburgh, November, 1911.



DR. MACWATT, MORELANDS, DUNS, N.B.

Cup for Primulas at Chelsea in 1913, Award of Merit for *Primula* 'Linda Pope' in 1921, the Gold Medal of the Royal Botanical and Horticultural Society of Manchester and the Northern Counties in 1932. At his last visit to the RHS

Spring Show in 1933, he received an additional Banksian Medal accompany Lindley Medals, Floral Silvers, and Grenfell Silvers awarded over the years. He faced formidable competition, particularly from such well-known growers and competitors as Lady Aberconway and H D McLaren from Bodnant. His displays always attracted enormous interest attention. At the Chelsea Show held in May 1935, The Times reported that the Queen was "particularly interested" in the rare primulas exhibited by Dr MacWatt. The Daily Sketch provides more detail: "While this was happening the Queen had discovered Dr MacWatt ... all unprepared for Royal attention, was standing by his small



Dr John MacWatt in his rock garden at "Morelands"

but extraordinarily beautiful collection of primulas. The Queen was enchanted. Diving under the table, the proud Doctor hastily collected a nosegay of choicest blooms, which the Queen smilingly accepted and carried for the remainder of the morning."



3. Delphiniums in one of the borders at "Morelands"

John MacWatt was born at Duns, Berwickshire in 1857. He received his early education in Duns from where he progressed to Wellfield Academy followed by Edinburgh University, and qualified as a medical practitioner in 1878. He then went to sea as a ship's doctor and his voyages took him all over the world and he doubtless widened his botanical interests during times ashore. Following this period of extensive travel, he returned to Duns and joined his father's practice which covered the town and a very wide surrounding stretch of robust countryside. In the early years, busy times were spent out on horseback for up to two or three days attending to the needy across the Lammermuirs. A carriage and groom came later, and this was followed by a motor car purchased by the grateful community. Throughout his life he was held in the highest regard and his medical skills were recognised across the region all his working life. This can be illustrated by a well-authenticated anecdote. A well-known (and prosperous) local urgently required complicated surgery.

GENUS PRIMULA.



Dr. MACWATT. MORELANDS. DUNS, N.B.

POLYANTHUS-continued.

SINGLE VARIETIES.

4/6 per dozen 1 aq/- per 100.

DELPHINIUMS - A Speciality.

Extracts from "The Garden".

"Dr. Macwatt sends us a very beautiful collection of Blue Prim-roses and Polyantinuses, the colour of these being remarkably good. Dr. Macwatt also included several of his beautiful Delphioium seedlings, to which we have already drawn attention.

"We commend our correspondent for his Delphiniums, they

"Dr Macwatt sends us more of his very beautiful Delphiniums, which are of much more than usual merit."

"Dr. Macwatt sends us a very fine lot of Delphiniums and other plants, all of which are of very high quality indeed,"

Seedling Delphiniums-Strong Plants, 10/- per dozen. . These are equal to the Best Named Varieties.

Seedling Dwarf Delphiniums-3/- per dozen.

Royal Caledonian Horticultural Society's Spring Show, April 13th and 14th, 1910.

EXTRACT FROM REPORT IN "THE GARDEN."

"Dr. Macwatt sent a large non-competitive exhibit of apring flowers. It consisted of what is probably the most extensive and varied but of Primula species and varrieds ever exhibit of agring one collection. Many or the plants were amais and some were not in full flower, but they were or great interest to the lover of such flowers and were of much educative value. There were some fine plants of the better-known trimunas. A variety of the Common Primrose called by Dr. Macwatt 'Hentiful was a mass or hower; the single plant shown was several feet across." [See Facte in Country Lips, April 30th, 1910].

THE GARDEN, October 15th, 1910.

"Dr. Macwatt sends a collection of flowers, which for the time of year are of unusual interest to us. The collection consists of Prim-ulas in great variety. Some of thum are quite new to us and are possible result of crossing well-known species and varieties, time Polyanthuses and Primcoss are particularly good.

THE GARDEN, November 5th, 1910.

"From Dr. Macwatt we have received a box ox wai-grown Fran-ulas in full those. We do not rememoer ever having seen Primutal Japonica with dower-steins so round as these. The intorescences are noteworthy not only for their vigorous growth, but, for the diversity of colour shown in the flowers. One variety we note has flowers to go colour shown in the flowers. One variety we note has flowers resembling in colour the well-known Duchess of the Siens-sis type, others are in varying shades of soft pink and bright car-mine red."

The Editor of Tim Garman in his notices of flowers received from Scotland says: "Dr. Macwart sends some interesting flowers and the filter Polyanthuses were of great merit, the colour as pure as anything we have seen, the same remark applies also to the

ALPINE AURICULAS.

Argus. (Keen) Dark plum, round white centre, good habit. Blue Bell. Large bluish-purple flower. Daralle. Purplish-marcon, white centre, very fine. Dean Hole. Marcon-erimson, gold centre. Ettrick. Deep claret, yellow centre. Ganymede. Reddish brown, cream centre. Marvellous. Large flowers, red, gold centre. Harge flowers, red, gold centre. Perfection. Large flowers, dark crimson, golden-yellow centre. D. Perfection. Large moderates.

Rosy Morn. Broazy yellow, gold centra.
Teviotdale. Illue-purple, white centre.
Uraine. Deep-red, yellow centre.
Ziska. Deep crimson, yellow centre.
Seedlings, 5'- per dozen.

SHOW OR EDGED AURICULAS. Green Edged Varieties.
(Douglas) Distinct green margin on black ground.
Diomed. (Simonite) Flowers good with distinct green 3 6 Love Bird.
Mrs 11 3 6 Love Bird.
Mrs Henwood. (Barlow) Very good.
Rev. F. D. Horner. (Simonite).
Shirley Hibberd. (Simonite) Very good. 6 6 Grey Edged Varieties. Amy Robsart. 6 Amy Robsart. George Rudd. George Lightbody. (Headley) Very fine. Marmion. (Douglas) Very good. Perseverance. Acme. (Read)

2 6 Dr. Kidd. (Douglas)

Bellona. (Douglas)

2 6 Richel. (Woodhead)

Conservative. (Douglas)

2 6 White Swan. (Douglas)

Selfs. (Douglas) Favourite. (Horner)

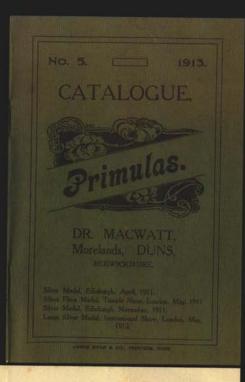
Very fine. 3 6

Gerald. (Boutley) 3 6

Lord of Lorne. (Campbell) 1 6

Seedlings, 5: per dozen. 3 6 Miss Barnett. 2 6 Ruby.

John MacWatt's catalogues give a great sense of the period and the enormous range of primulas he had on offer. These covers and pages are from his catalogues of 1911 and 1913.



	PRIMULAS—C	Continued	1,			
,	Kitaibeliana	898	***	.2	6	
	Leucophylla	-	***	7	0	
	Lichiangensis		***	.1	0	
	Lindsayi		***	2	6	
	Lissadell Hybrid		Take 1	2	6	
	Littoniana	144	807	5	0	
,	Longiflora	***	***	1	0	
	Luteola		***	1	0	
	Marginata	***	***	0	9	
	n Alba	***			6	
	Marven (Marginata ×	Venusta)	The state of	5	0	
8	Maximowiczii		-	7	6	
ii.	Megaseafolia	32.2	***	1	6	
	Minima	***	***	1	0	
	Mollis	1	0.0		0	
	Muretiana (Integrifolia	× Visco	sa)	T	0	
	Muscaroides	C444	***	1	6	
	Œnensis	Test .	***	1	6	
	Officinalis	CA 11		0	6	
	Palinuri			5	0	
	Parryi	2000		2	6	
	Patens		100	2	0	
	Pedemontana	(Alleria)	***	1-	6	
	Poissoni			0	6	
	Portenschlagi (Clusian	n × Mini	ma)	-2	0	
	Pubescens (Auricula ×			1	0	
	Pulverulenta	***	7.	0	6	
	Reinii	- Table 16.	-	3	6	
	Rosea Superba	1	-	0	6	

Salisburgensis (Glutinosa × Minima)

Serrata (Ser		(Minima	×		
Wulfeniana	1)	1000	***	1	0
Scotica	***	244		1	0
Siberica	-	100		1	6
Seiboldi	Cest	****		0	6
Sikkimensis		1994	2000	0	6
Spectabilis			***	8 1	0
Suffrutescens	200		***	3	6
Tyrolensis	100			1	0
Unique		111		2	6
Venzoi	144	***	101		6
Venusta (Auri	icula × C	Carniolica)	***	5	0
Viscosa				100	
" Cynor	glossifolia		***		6
, Latife	lia (Grav	eolens)	1.	2	0
Vittata of Gar	rdens (Se	e Angustic	lens)		
Villosa	1999		***	0	9
Vochinensis	-	The state of	77.	1	0
Winteri	500.	1949		10	6
Wulfenlana		***		1.	6

DOUBLE PRIMROSES.

Amaranthina Fl. Pl.	TaxeD.	Cestif		1	0
Burgundy	444	***	***	1	0
Croussii Plena	10.00	310	1000	0	0
Cloth of Gold	***	***	****	1	0
French Grey					6
Platypetala Plena (A.	Dumoul	llin)	0.000	0	6
Pompadour	Feet	1440	1000	- 2	6

Hospitalisation was out of the question but Professor Alexis Thompson, Professor of Surgery at Edinburgh University, was willing to carry out the operation and he required John MacWatt to assist — on the nursery table in the MacWatt household. Illumination was by gaslight and the town therefore knew something big was happening — bright lights across Duns that night! The patient made a full recovery. MacWatt was appointed Medical Officer of Health for Duns in the 1920s and a Justice of the Peace around the same

time. A very busy man. So what about his garden?

Following marriage and a move to "Morelands", MacWatt's married home in Duns, came the development of his rock gardens, large herbaceous borders, orchard, greenhouses and frames; an area that eventually covered three acres. He was fortunate to be assisted by Joseph Taylor who started as his groom, became his chauffeur, and proved to be an excellent gardener and plantsman. For fifty years they had a remarkable working relationship, with MacWatt always giving credit and full recognition of Taylor's skills. Taylor often attended the shows and during the 1930s assisted in judging at the RHS Spring Show and at Manchester.



4. Joseph Taylor with a specimen Eremurus

Showing plants has many variations, so what did MacWatt do for so many years at, for example, the Chelsea Flower Show? A table probably no more than 6 feet by 3 feet provided the space on which MacWatt presented the choicest European, Chinese and Himalayan primulas. Newspapers, gardening magazines, and journals regularly gave accounts of them, so we know of the displays of primulas such as *Primula rotundifolia*, *P. pusilla*, *P. rupicola*, *P. glabra*, *P. bella*, *P. gambelliana*, *P. maximowiczii*, *P. wattii*, his blue Border auriculas, *P. geraniifolia*, *P. heucherifolia*, *P. dryadifolia*, *P. clusiana* ("so easy to grow and so hard to flower") with three or four flower-spikes, and we know of Sir William Lawrence proudly wearing a buttonhole of a large and



5. Primula werringtonensis (now a variety of Primula obconica)

6. Primula fasciculata - this Chinese primula is from either the Farrer collection of 1915 or the Forrest collection of 1918.



fine form of a green primrose. Records reveal that MacWatt also showed such extreme rarities as *Primula purdomi*, *Primula pycnoloba* and *P. umbrella*. In 1908 he could describe the difficulties of growing *P. forrestii*.

John MacWatt had a keen interest in sharing knowledge and enthusiasms with the public and he used every opportunity to educate. Of outstanding value were articles he wrote for *The Garden* and *Amateur Gardening* on such topics as "The cult of hardy primulas", "Hardy whorled primulas",



7. Primula cynoglossifolia (now a form of Primula latifolia)

"Hardy Japanese primulas" and "Hardy Asiatic primulas". Descriptions, experiences as a grower, useful hints and tips for success are freely given; and all without "and as Farrer says". MacWatt wrote from his own experience.

One of the challenges for MacWatt was to transport so many plants such long distances to shows. The catalogues give a hint of his entrepreneurial skills and it may be assumed that Berwick railway station benefited, for the stationmaster arranged for his boxes to be placed in a special goods van which was then hitched onto a convenient passenger train to Kings Cross. There they were collected and with the indefatigable Joseph Taylor the show was staged.

MacWatt had many contacts who provided him with seeds and knowledge of the very latest introductions. Wm Wright Smith, during his period as assistant and then later Regius Keeper, was a friend as was R L Harrow, curator at the RBG Edinburgh, and they provided invaluable support. Walter Irving of Kew Gardens, Clarence Elliott, R Beamish and E Jenkins were lifelong friends from their shared committee days serving the short-lived National Hardy Plant Society from 1911–1913. Further contacts would have been with the Veitch Nursery during the first decade of the century, with A K Bulley, and many of the leading enthusiasts of the day. To cap it all his brother, Major General R C MacWatt was Director General of the Indian Medical Services and he had excellent contacts.

He was extremely active in Scotland locally and in the bigger picture. He was a great friend of Edith and Mollie Logan Home when they lived at Edrom House, and later when they set up professionally as Edrom Nursery, Coldingham' he was able to provide plants and considerable expertise, and R B Cooke of Corbridge, was another who benefitted from MacWatt's generosity in his early days of showing. However, it may be fair to say that as MacWatt moved into his late seventies, the Scottish Rock Garden Club was the greatest benefactor. He was on the Committee from the earliest days, contributed an article on growing ferns in the rock garden to the first issue of the journal, and yet it was to be his contribution to the SRGC's first show at the Waverley Market that merits a distinction. This was not a show as is seen today. It seems that in 1937, John MacWatt had been asked to introduce the public to what the SRGC was about, by providing a stand of plants. He staged literally hundreds of different plants. Some fifty primulas, various fritillaries, dwarf tulips, soldanellas, saxifrages, androsaces, narcissus, trilliums, dentarias, a wide range of ferns . . . and there are still some 250 plants or groups not mentioned here. Such a fantastic show and what a magnificent advertisement - staged by a man in his eightieth year.

So there we are — no more than a glimpse of a man who had then, and would have today, few rivals as a grower and educator. Another view? I'll conclude with this from Amateur Gardening 28th November 1931: "Among horticultural specialists there are instances of amateurs striding far ahead of the rank and file, leaving even the professionals well behind. When hardy primulas are the subject concerned, Dr John MacWatt of Duns, Berwickshire is the man whose name springs to mind as a chief among experts. But one thinks of more than that, for not only has the

doctor's enthusiasm and skill brought solutions to many problems concerning culture and propagation of various choice and somewhat difficult primulas but his generosity has enriched many collections, and enabled a host of other enthusiasts to carry on and attain success in a hobby that is fraught with difficulties as it is illuminated with fascinating charm.

John MacWatt died on 24th February 1938. 'MacWatt's Cream' carries his memory and a few continue with 'MacWatt's Crimson' and 'MacWatt's Blue' here in the Borders.

This article could not have been written without the generosity and patience of Mrs A Robson and Mrs F Farquharson, daughters of Dr J MacWatt. I wish to express my thanks and gratitude to them for allowing me use of family papers, photographs, pamphlets, notebooks, and, for their personal reminiscences. In addition, I thank Mrs J Thomson, member of The Borders Group of the SRGC for her information that led to this article.

Germination of Pulsatilla Seed

Alastair McKelvie

ANUNCULACEAE is a fairly primitive family of flowering plants in the Subclass Magnoliidae. The flowers are polypetalous with many free parts especially the stamens and the ovaries. The embryos tend to be minute and undeveloped when the seeds are shed and they then develop in storage with time. Like many small immature embryos, those of the Ranunculaceae germinate freely and quickly for a short period of time after the seeds are shed but soon go into a dormant period after which germination may be slow and irregular. Gardeners have known for a while that seeds of Ranunculaceae are best sown fresh while seed stored over winter in dry conditions may germinate poorly.

Pulsatilla seeds are often regarded as being difficult to germinate but over the years I have never had any problem with them provided I sowed them fresh. To quantify this observation I carried out a small experiment in 2001. I collected seeds of *Pulsatilla vulgaris* (which had flowered in mid-April) at the beginning of June while they were still soft and had to be cut off from the parent plant. I continued collecting seed weekly until early July when the fluffy seed heads were beginning to fall. I then harvested all the seed and stored it in a paper bag in a cool shed. I sowed 50 seeds on a weekly basis from early June in a seed compost, watered them and kept the pots in a cool glasshouse. I continued sowing until mid-September. The ungerminated seeds were then stored in a cool dry place and then sown as described above every week from mid-March until the end of April. The table below shows the germination achieved at the different sowing times.

It is obvious that freshly harvested seed germinates much better than seed stored over winter and that the best germination is achievable from the end of June until the middle of August. The seedlings grew quickly so that there were strong healthy plants for planting out in the autumn. The springsown seeds were of course at a disadvantage compared with summer-sown because of lower ambient temperatures but, even when the pots were kept throughout the summer, germination failed to get any higher than 20%.

My experience is that many species in the Ranunculaceae have a similar germination pattern to Pulsatilla. I therefore routinely sow all Ranunculaceae seed as soon as the seeds inside the capsules look to be fully formed even although not ripe and dry. The seed heads of the pulsatillas collected at the end of June were still soft and pliable but still gave 98% germination.

Date sown (2001)	Max germ % after 6 weeks	Date sown (2002)	Max germ % after 6 weeks
4 June	8		
11 June	16		
18 June	48		
25 June	98		
2 July	96	11 March	8
9 July	92	18 March	4
16 July	100	25 March	4
23 July	94	1 April	2
30 July	90	8 April	6
6 August	92	15 April	8
13 August	80	22 April	8
20 August	76		
27 August	64		
3 September	20		
10 September	6		

14 Pulsatilla



Europe by car the easy way

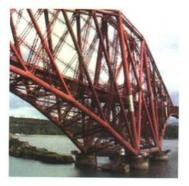
Sandy Leven

Scotland Is Now Part of Europe. It is no longer just northern Britain, the mountainous and hauntingly beautiful country north of England. Scotland now has wonderful air and sea connections to mainland Europe. For many years Amsterdam has had an airlink to many Scotlish cities. We have flown to Amsterdam from Aberdeen and from Edinburgh. Ryanair now provides direct links to many European cities including Paris, Frankfurt and Oslo. Critics say these flights are to airports distant from their stated destination but how many people really want to go to the city anyway? Many of us want to travel to parts of the country outwith cities. Landing outside Frankfurt at Hahn could suit you admirably if you are heading for the alpine resorts.

What has really excited me is the opening of the new SUPERFAST FERRIES route from Rosyth in Fife to Zeebrugge in Belgium. Travelling on this route brought out the European in me. We were warmly welcomed at Rosyth by a friendly lady in a kiosk who after, scrutinising the print-out of our email reservation, gave us our cabin keys, just as you would be given your hotel room key, and asked us to drive along onto the ship. We negotiated a circuitous circuit on the docks, passed a ruined castle (twice) and drove up the ramp and into the magnificent ferry. The vessel must be described in superlatives. It is brand new. It is huge. It is spotlessly clean. It is silent. It is extremely comfortable. It is our link to Europe! The crew members are friendly and helpful, many appear to come from eastern Europe. Our steward was Ukrainian. Perhaps because English is not their native language, but is the language which many of them use to communicate with travellers and with each other, the ship has an exotic feel. Judging by the cars on board our fellow passengers were a mixture of Scots, Dutch, French, German, Belgian, Swedish and Swiss.

Superfast Ferries is a Greek-owned company and this company obviously wants you to enjoy your trip. Our cabin had modern electronic

keycard locks, four comfortable berths, shower and en-suite facilities and a window – not a round porthole like the old Forth ferries but a decent sized rectangular window. Cabin decks are above the walkways along port and starboard sides of the ship, so no one could obstruct our view. View? "What view?" you might ask. One of the best short trips in Scotland – I would answer. Within minutes of leaving you sail under the Forth Road Bridge and then the Forth Bridge itself – the incomparable cantilever Rail Bridge. Everyone was on deck to see the bridges. The ship is so high that the funnel



seems in danger of scraping the underside of both bridges. I have crossed both bridges many times, looked at them from both shores and sailed past the Rail Bridge while the Road Bridge was being built. I was brought up in Fife and my granny lived in Edinburgh. To visit her involved crossing from North to South Queensferry. The bridges link Fife and the Lothians. The Superfast Ferry links Scotland and Europe.

While cameras are snapping, travellers posing, photographers dashing about to get as many angles on the bridges as possible, the ferry powers down the Firth of Forth opening up new exciting vistas — to starboard, South Queensferry, Inchkeith, Arthur's Seat with Edinburgh and its castle snuggling underneath. You could just make out the 'Britannia' at Ocean Terminal at Leith. Then onto the Bass Rock with its gannets backed by North Berwick Law. On the port side the Kingdom of Fife hidden, for a minute or two, behind Inchcolmbe whose priory was bathed in a shaft of sunshine as we sailed by. Then we were on past Inverkeithing, Aberdour, Burntisland, Kinghorn and Kirkcaldy. All the houses are built facing out to sea, so all these towns look friendly and inviting. So many white houses! As the ship veered south keeping parallel to the East Lothian coast the northern coastline stretched into the heat haze. The Firth of Forth is amazingly wide when you are sailing down the middle.

From 5 pm when the ship sailed until we retired at about 11 pm we were in sight of land. It would have been nice to be able to name more places. Next time I will have a map on deck. The last feature we saw was a large power station and chimney on the English coast.

The cabin was so comfortable and the experience so different that we had to spend some time indoors looking out at the calm sea (weren't we lucky!) and passing sea birds: gannets of course, cormorants and gulls. There were many other ships at anchor or chugging up towards Leith and Grangemouth. Dinner on board was a choice between a sumptuous à la carte menu in one restaurant or a fabulous hot and cold buffet in the other. We decided on the buffet and to accompany it a bottle of fine Chilean Merlot. There were several choices for each course and no one kept account of what you chose. When you go make sure you are as hungry as possible. A four-piece Greek band, playing a mixture of Greek music, Abba, and country music, provided the evening entertainment in the comfortable lounge. All the while the sea rolled past and we sailed along the English coast. The combination of Greek voices, passengers of many nationalities, and American songs, on a journey starting in Fife and ending in Belgium, reinforced our feeling of European-ness. Our holiday had already started.

The beds in the cabins were comfortable. The showers were hot. The gentle throb of the engines was comforting. No need to get up early; breakfast is served almost until the ship docks at Zeebrugge. Again at breakfast there is a choice from the buffet. It's amazing what a big appetite the sea air gives you. Some stalwarts were marching bravely into the headwind outside the dining room window while we scoffed our bacon and eggs inside. As soon as we had eaten, the windmills on the seafront at Zeebrugge were passing the window. Disembarking was easy and efficient. We were wished "bon voyage" and "haste ye back" in several languages. Then it was out of the port and on into Europe. Never before had we arrived in mainland Europe feeling so refreshed and with so little difficulty.

We planned to stay near Amsterdam for a few days then to visit Germany but it would have been equally easy to travel south-east to Switzerland or Austria, or south to France. Zeebrugge is quite close to Calais. Access to the European motorway network could hardly be simpler. Travelling in your own car has many advantages including the ability to take lots of stuff on holiday with you — just in case! You can easily bring wine back in the boot. Our gardening highlights on this holiday were our visits to Floriade in Holland, to Herrenhausen Gardens in Hannover and to Utrecht Botanic Gardens, Botanische Tuinen Universiteit Utrecht, which is superb.

The return trip is equally easy and comfortable, once you find the correct route to the ship in Zeebrugge. We could see the ship but the route



Prudent? Frugal? Careful? Canny?

You don't have to be Norman Lamont. You don't have to be an Aberdonian. You don't even have to be Scottish.

The Club's treasurer is retiring next year - so we're looking for someone to take over.

Interested? Want to know a bit more?

If you want to know a bit more ring or email lan Young - tel 01224 318617 email - youngs.aberdeen@btinternet.com

was insufficiently well signposted. Perhaps if we had allowed more time to travel from Utrecht to Zeebrugge the driver would have been in a better frame of mind and less panicky. Nevertheless, we did find the ferry and the quay and sailed off again at 5 pm. This time we were more blasé and had a pre-dinner drink with free crisps in the lounge. Service was as impeccable as before and the meal every bit as enjoyable. This time I concentrated on the herring starters and interesting desserts. They are having a sales push on herring throughout northern Germany this year.

As night fell, and we enjoyed the relaxed evening entertainment in the lounge, several bright lights appeared on the horizon. These got brighter and brighter until we realised we were sailing towards a huge oil field and the lights became huge rigs and platforms. I counted thirty-four as we sailed between them. As good as Christmas lights, they cheered us to our bed. When we awoke we were already at the mouth of the Forth. Just after breakfast we passed North Berwick and the Bass Rock. A little bit further up the coast tents for the Open Golf at Muirfield and Gullane Bay.

The return trip under the bridges was every bit as exciting as the outward. In the misty morning light and grey sky, they seemed to say, "Welcome to Scotland." The ferry docked on time by 10 am and then we were back in Rosyth. Superfast Ferries are to be congratulated on providing this wonderfully easy and civilised link with the Continent. We intend to use this crossing whenever we take our car to Europe and I hope lots more Scots will do the same, thus ensuring that the link is profitable and commercially successful. If you have not already tried it, do so. You won't be disappointed. In my head I am planning a Discussion Weekend on the ferry with trips to gardens in Belgium and Holland. Rosyth — Zeebrugge. The Scottish Driver's doorway to Europe!









Three of the hardy orchids from the Drakensberg photographed by Mike Brett:

- Huttonaea grandiflora
 Disperis renibractea
- 10. Brownlea macrocerus

Drakensberg Revisited

Mike Brett

HILST IN THE DRAKENSBERG IN FEBRUARY 2002, Hazel and I returned to Witsieshoek which we had previously visited in 1998 and 2000 (*The Rock Garden* 107 p121) for a very brief visit. Anyone considering visiting Witsieshoek may like to know that there are changes afoot. There is now a block-paved road from the tarred roads of Phuthaditjhaba to the Mountain Resort. Although rather narrow in places, this is a vast improvement on the earlier track. At present the paving does not continue the couple of kilometres up to the car park near the Sentinel but this extension seems inevitable.

It is sad to say that the Hotel/Mountain Resort itself remains badly in need of updating. Wind had taken the roof off one of the buildings which was yet to receive attention.

Possibly the new road, which has been installed by the South African Tourist Board, will provide impetus and inspiration for the desired upgrade of the Hotel. Of all the places that we have stayed in the Drakensberg, this remains our favourite for accessability to numerous walks both to higher ground as well as downhill. This trip, although later than any of our previous trips, revealed many rewarding plant sightings including a large number of terrestrial orchids including Satyrium neglectum, various Disperis species, Huttonaea grandiflora and Brownlea macrocerus.

On speaking to the rangers at the Sentinel car park, we learned with alarm that a cable car is planned to span the stretch from the car park to the chain ladder which gives access to the plateau and Mont-Aux-Sources. The two and a half hour uphill walk will be cut to minutes and presumably this will produce an influx of tourists to alter the solitude of the place forever. The moral here seems to be to go there sooner rather than later. We understand that it is hoped that the cable car will be operational by 2006.



Saxifrages of the Maritime Alps

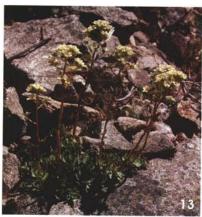
John Howes

Mid to late June is an excellent time for any plant lover to visit the Maritime Alps, but for the saxifrage enthusiast, almost heaven. There are a wide range of species, the vast majority of which flower during this period, and most of them are easily accessible. Even this small, crooked shrine in a roadside niche has saxifrage flowers, in this case an offering of those of Saxifraga callosa.

The Maritime Alps are on the border of France and Italy with the foothills starting just a handful of miles from the Mediterranean. The heart of the French Alpes-Maritimes is the Parc National de Mercantour and, over the border into Italy, the area is known as the Alpi del Mare with a number of specially protected areas including the Parco Naturale d'Argentera.

Using Nice as a starting point, the four locations depicted are easily accessible by road. The valleys of the Vésubie and the Roya provide excellent routes from which side roads can take you into the heart of the high valleys. The Roya Gorge and Col de Tende can be reached by rail from either Nice or Turin, which makes even a short trip well worthwhile.





The encrusted saxifrages are very well represented in the Maritime Alps.

Saxifraga paniculata is the most common of these Silver saxifrages throughout Europe, and it even occurs in North America. Normally growing on limestone in the Maritime Alps, the specimen at the top was a particularly robust one.



The Vésubie valley is the more westerly of the two main valleys we are going to look at. Directly north of Nice it leads up to Lantosque and St. Martin Vésubie. Above Martin, a road leads eastward, climbing rapidly through a wooded valley, reaching its destination of Madone de Fenestre just above the tree-line. Upward from this point by foot, a well defined path leads to Lac de Fenestre and, above it, the Cime de Fenestre at 2662m. Covering a wide variation of height and habitat over so short a distance (approx. 10 miles) provides this location with a particularly large variety of species. Saxifraga stellaris is a wide-spread, diminutive species, favouring mountain streams particularly in areas of acid rocks.



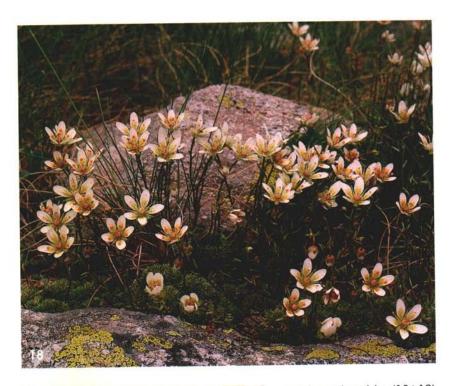




Saxifraga rotundifolia is a large handsome plant common to shady banks and damp woods. It can be raised from seed quite easily and is quite happy in a shady border.

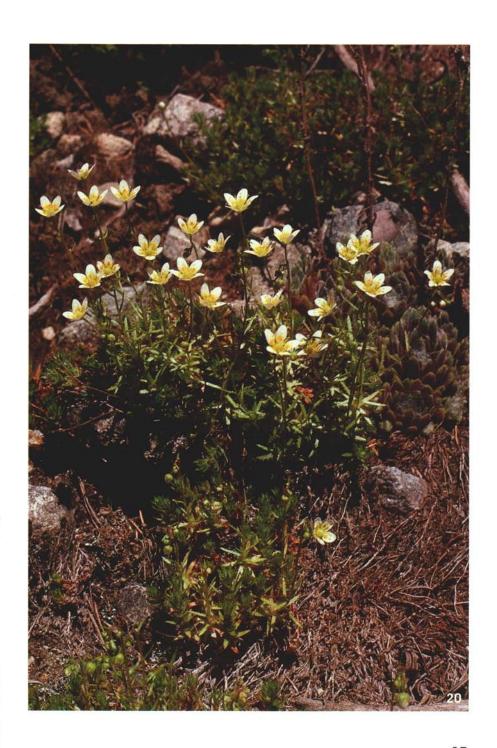
Saxifraga cuneifolia. This charming little plant is common to woodlands throughout the region.







Saxifraga bryoides (18&19) and Saxifraga aspera (20) are two very closely related both fairly saxifrages, widespread in the high mountains of southern Their flowers Europe. usually display a striking mixture of coloured spots. The flowers on S. aspera are slightly larger being about 11/2 cm diameter. The leaves of both have bristly edges, which are characteristic and can easily be seen in the picture of S. aspera.





Saxifraga exarata is a very variable species. The white flowered plants shown here are the type subspecies Saxifraga exarata subsp. exarata which is commonly found on exposed rocks (21, 22 & 24).



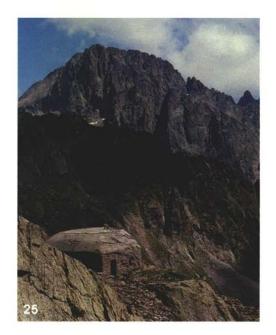




Saxifraga exarata subsp. moschata, with small yellowish petals, is the other subspecies found in the Maritime Alps although less common. This specimen is on limestone at the top of the Col de Tende (23).



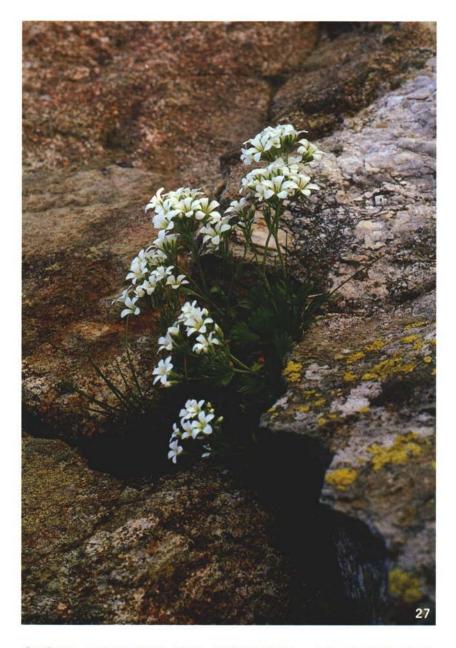




Cime de Fenestre: the French/Italian border often fought over – an Italian blockhouse on the French side. The French side is historic Savoie and the Italian side Piedmont hence "pedemontana"



Lac de Fenestre below granite cliffs with the col above. These high cliffs up to the col are the habitat of Saxifraga pedemontana subsp. pedemontana.

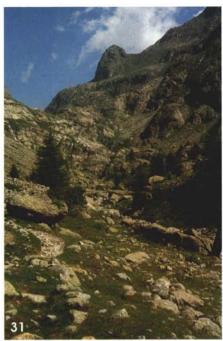


Saxifraga pedemontana subsp. pedemontana – a lovely plant whose fresh green foliage and pure white flowers defy the harsh growing conditions found at the top of the pass.

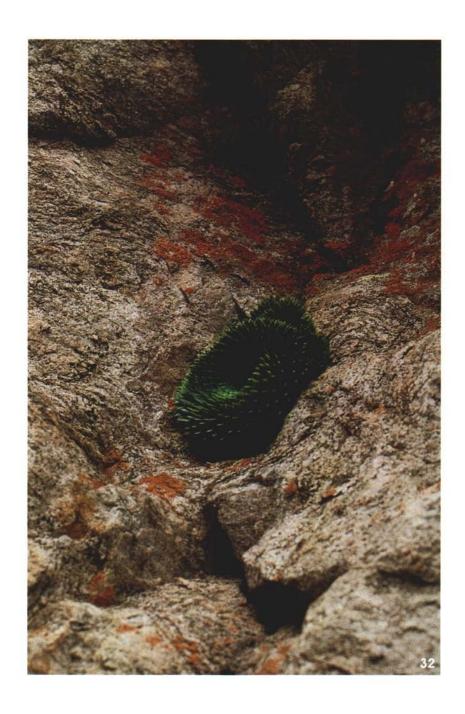


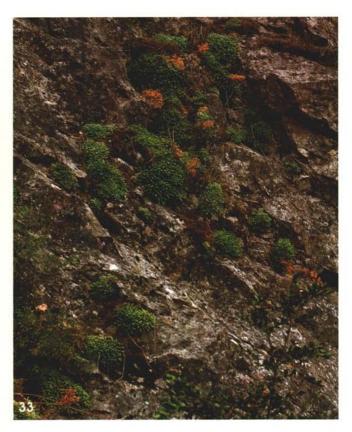






Saxifraga florulenta is confined to the high granite cliffs of the Maritime Alps. This monocarpic endemic can be found above the Lac de Fenestre and on cliffs such as these in the Gordalesque valley. Although not in flower until later in the year, the magnificent rosettes are enough in themselves.



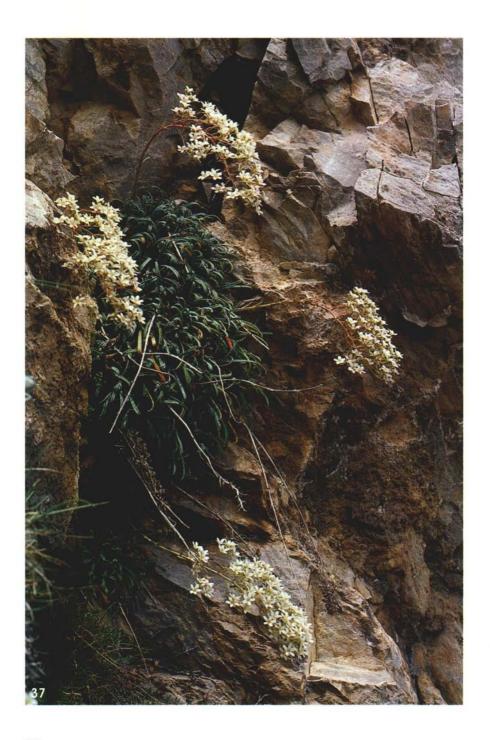






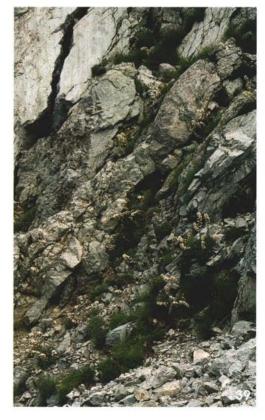
The small town of Lantosque, some twenty miles south of St. Martin Vèsubie, is the site of Saxifraga callosa lantoscana (as it used to be known) which can be found on the cliffs seen below the church. Selected by Farrer from the numerous forms growing here is the plant which is now known as Saxifraga callosa "Limelight" with small rosettes and pale yellowish-green leaves like that seen below. More typical of the plants of Saxifraga callosa var. australis seen at Lantosque are plants such as those shown opposite.





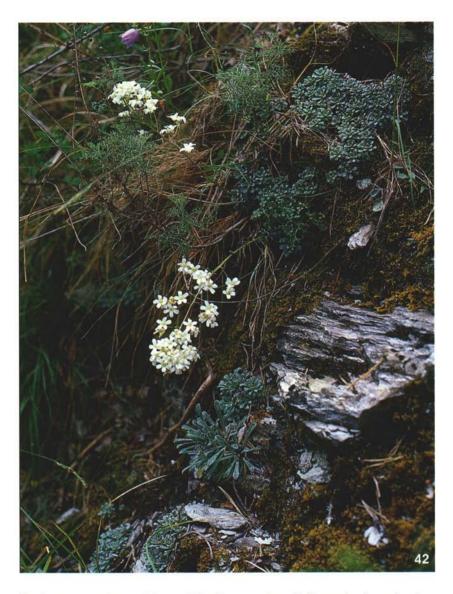


All the forms of Saxifraga callosa in the Maritime Alps belong to subsp. callosa. Unlike the variety seen at Lantosque, the typical var. callosa has narrow leaves up to 20 cm long and spectacular sprays of flowers. It grows on the limestone cliffs at the top of the Col de Tende, 1871 m, and by the roadside below which runs to Turin from Ventimiglia and Nice up the Roya valley.

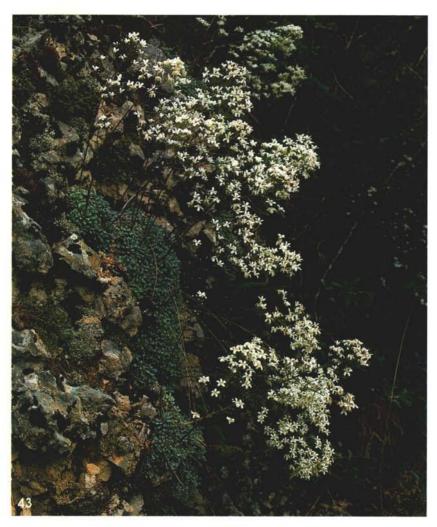








The long narrow-leaved form of *Saxifraga callosa* (left) can be found as low as 850 m near La Brigue growing by a waterfall at *Notre Dame des Fontaines*. Away from the waterfall, less exaggerated forms of *Saxifraga callosa* can be found growing with the more numerous *Saxifraga cochlearis* as seen above. Small numbers of *Saxifraga paniculata* can also be found here and it is unsurprising that the hybrids *S. x farreri* and *S. x burnatii* were both reputedly collected in this area.

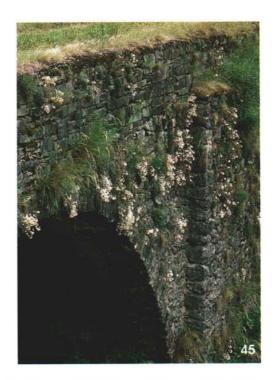


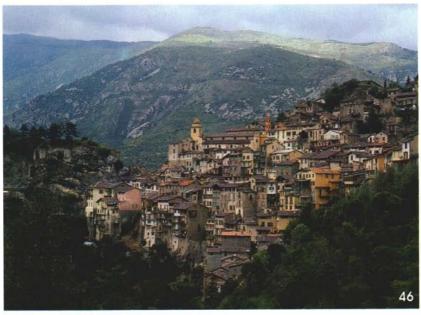


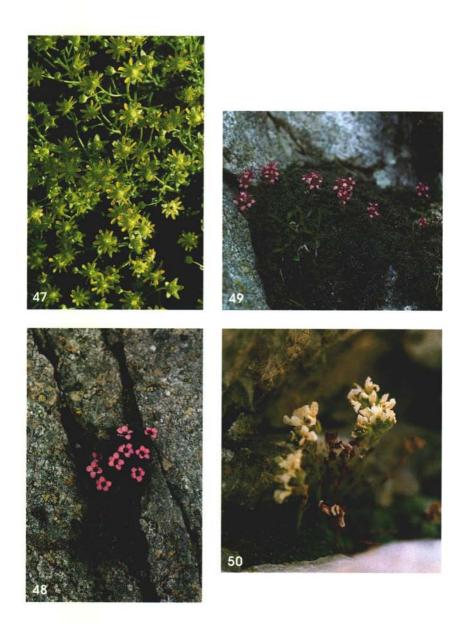
Saxifraga cochlearis is very local being largely confined to the area around La Brigue (left) and Saorge (right).

Saxifraga cochlearis grows in abundance on limestone exposures.

This beautiful plant also colonises walls such as the massive embankment of the railway at Saorge and the bridge above La Brigue (right). Perhaps therefore it is not so surprising that a plant with such a restricted distribution is so amenable in cultivation.







47. Saxifraga aizoides 48. Saxifraga oppositifolia

49. Saxifraga retusa50. Saxifraga diapensioides51. Sunset at Madone de Fenestre.



There are a number of other saxifrages in the Maritime Alps but most are well over by the end of June. Perhaps the most sought after of these is Saxifraga diapensioides but we failed to see this. Our discovery of Saxifraga cotyledon (52) in the Italian Parco Naturale d'Argentera, previously unrecorded in the Maritime Alps as far we know, was fair compensation and very exciting.



Photographs by John Howes and Malcolm McGregor except for the photograph of Saxifraga diapensioides which is by Nigel Hutchinson and the photograph of Saxifraga retusa by Richard Sampson to whom many thanks.

Show Reports 2002

Northumberland Show - 13th April

- 20-year old Fritillary wins for Fred Hunt

Hexham once again provided a splendid venue for the Northumberland spring show, which was well supported by both exhibitors and visitors. The packed benches of the open section were dominated by a wonderful specimen of *Trillium kurabashyii*, exhibited by John Richards of Hexham. The deep claret coloured flowers of this plant with its heavily marbled leaves rose 30 to 40 cm, taller than most of the colourful plants in the large open section, and acting as a reminder that it is not always the most strikingly coloured plants which are the most eye-catching.

In the Open section, the R.B Cooke Plate for the most first prize points, and the AGS medal for the large six pan class went to Ian Kidman of Ebchester. Two of Ian's notable plants from his six pan entry were an immaculate large specimen of *Veronica bombycina* var. *bolkardagensis* - always difficult to achieve in good condition - and to encourage the beginners amongst us, a fine plant of *Erythonium* 'Pagoda'. It did, however have over a hundred blooms rising from the one pot!

If anyone was wondering how long it took to produce such a display, Fred Hunt of Invergowrie was able to give some pointers: his fine clone of *Fritillaria graeca* ssp. graeca (53), which won the Sandhoe Trophy for the best



plant in a 19 cm pot, had started from a single bulb - twenty years ago. The dainty panful of twenty blooms, each no more than 10 cm tall, deep purple, and the size of a large grape, highlighted by a prominent green stripe down the centre of each petal. Fred also took the Forrest Medal back to its rightful home

in Scotland with another fritillary, Fritillaria tubiformis, with large, deep purple, pendulous flowers with a dusky bloom with the petals thickened near the tips.

The small pan AGS medal was awarded to John Mercer of Bradford with an entry of two clones of Daphne petrea, Primula forrestii, P. pedemontana 'Alba',

Narcissus pallidiflorus and a wonderful little Anemonella thalictroides in its double form. Also in the open section the E G Watson Trophy is awarded to a rock plant new or rare in cultivation, always a source of vigorous post-judging debate. This year the award went to Fritillaria przewalskii, exhibited by Ron McBeath of Lamberton. This small Fritillaria from Qinghai in China, had blooms at about 10cm of yellow with green tessellations, although the seed raised nature of the plants was noticeable with slight variations between flowers.

Sections B and C were well supported with entries, although as ever it would always be good to see more exhibitors. There is a continual loss of exhibitors to the open section, and they are likely to be joined soon by Tony Hamblin of Morpeth, who won the Gordon Harrison cup for the most first prize points in section B and the SRGC bronze medal. Section B had some very high quality entries with Darren Sleep, from Walney Island, exhibiting Ophrys bombyliflora, O. rheinholdii and O. helenae in one three pan class, and Ophrys lutea, Orchis tridentata and O. quadripunctata in the other. Section C, which was won by Mrs S Leighton of Wigton, had an interesting plant exhibited by Jim Willis of Ponteland which won him the Northumberland Cup for a first time exhibitor. The potful of Primula hybrids he exhibited was a third generation cross between Primula elatior and an unknown Himalayan species, ranging from 15cm high yellow flowers reminiscent of P. elatior, to 5cm high blooms of dusky pink with a yellow eye. The range of colours and heights in the pot had some purists grumbling, but I found the effect rather charming.

Amongst the more recent introductions, Ian Kidman had a fine specimen of *Pyrethrum leontopodium* as part of his three pan entry, grown from Vojtech Holubec seed. Another new introduction was Margaret and Henry Taylor's *Primula albenensis*, which is probably the best of the three new species recently described from Italy which were featured in their article in the last issue of *The Rock Garden*. A plant that was noticeable for its foliage was *Celmisia laricifolia*, exhibited by Carole and Ian Bainbridge, which had been grown in their Edinburgh garden from seed. This dryland species formed a small silvery spreading shrublet, with dainty, pointed leaves and was probably no more than 10cms across; apparently it had looked dead for about two years since germinating and had only recently begun to acquire its silvery sheen.

To finish, and prove that it is not only the rare plants which merit a mention, the class for one plant from the Americas was dominated by two lewisias. A lovely pink and white specimen of *Lewisia brachycalyx* shown by Lionel Clarkson of Blackpool was pipped for first place by another wonderful

plant from Fred Hunt, whose *L. tweedyi* formed a neat dome of salmon-pink that completely filled the 21cm pot. Thanks are once again to Alan Newton, the show secretary, and his team of helpers, for putting on yet another fine show in Hexham which was a wonderful advertisement for the club. *Peter Maguire*

Perth Show - 20th April

- Trillium wins Forrest Medal for Fred Hunt

The George Forrest Memorial Medal was won by Fred Hunt (54), for a plant which was not showy, but was particularly well grown – a fine pan of the low-



growing Trillium, *Trillium decumbens*. Fred has had the winning plant since 1986. He grows it plunged in a cold frame, where it is re-potted every second year into a mixture of JI 3, peat and grit. Members of the club admiring the plant noticed that it had rather a strange earthy smell, perhaps to attract pollinating insects. As part of a 3 pan class, it also gained the Dundas Quaich, together with *Pleione*

Shantung and *Fritillaria pallidiflora*. Fred Hunt and the Rankins (Edinburgh) were the joint winners of the L.C. Middleton challenge trophy as they shared the same total number of first prize points.

The Joyce Halley award for the best plant grown from seed, went to Cyril Lafong (Glenrothes) for Leucheria hahnii, an attractive little plant looking superficially rather like Edelweiss. Grown from Flores and Watson seed collected in Santa Cruz, Argentina, it has been grown in a well ventilated alpine house. Other interesting plants raised from seed included Betty Craig's Vaccinium nummularia which was grown from SRGC seed. Also grown from seed was Bryocarpum himalaicum, exhibited by Cyril Lafong, in the "new, rare and difficult" class. The seed was sown in 1999 germinated in June of the same year. This with the Leucheria were both awarded Certificates of Merit. Other awards included the Bulb Trophy which was awarded to David Millward (Edinburgh) for a very large pan of Narcissus, while the E.H.M. Cox trophy for best Rhododendron was awarded to Anne and Viv Chambers (Glasgow) for Rhododendron keiskei x spiciferum. The R.S. Masterton Memorial

Trophy for best Asiatic Primula was won by Margaret and Henry Taylor (Invergowrie) with a fine specimen of *Primula aureata* x *gracilipes*.

Corydalis melanochlora. a new introduction with grey-green leaves and electric blue and white flowers was exhibited by David and Stella Rankin. This comes from limestone screes in NW Yunnan where conditions are very wet in summer. It was grown in a cold greenhouse, kept wet in summer and quite dry in winter.

In Section II the Perth Salver and Bronze medal were awarded to local member Rae Paul (Perth) and it was good to see a number of new names competing in Section II. The John Duff Prize for the best plant in Section II was won by Jens Nielsen with *Cypripedium japonicum*. Well done to Mark Tosh (Aberdeen) who won the Georgina Blackwood Trophy for best plant exhibited by a Junior member, with *Ranunculus ficaria* "Brazen Hussy". *Cathy Caudwell*

Glasgow Show - 4th May

- Daphnes steal the Show at Milngavie Town Hall





Four daphnes from the Glasgow Show were *Daphne petraea* 'Grandiflora' (55), *Daphne cneorum pygmaea* 'Alba' (56), *Daphne* 'Michelle' (57) and *Daphne* 'Leila Hainer' x *D. arbuscula* (58)





Aberdeen Show - 18th May

- Stunning Silene from Cyril Lafong
- Mark Tosh wins Junior trophy

Shows are dependent for their success on the hard work of the Show Secretaries who make all the arrangements, their team of helpers who work hard to carry out the tasks but most importantly it is the Members that put their plants on the benches that make the event. Every year is a difficult season for gardeners and the plants that appeared at the Aberdeen show in 2001 were at the Glasgow Show in 2002 making the Aberdeen Show Secretaries very nervous. All turned out alright on the day with a very high standard of plants on the benches this was reflected by the Judges quickly selecting six plants to compete for the Forrest Medal.

From these six plants it was Cyril Lafong's Silene hookeri ssp bolanderi (59) that narrowly beat I & M Young's Tropaeolum azureum to the Forrest Medal.



The tropaeolum was awarded a Certificate of Merit along with Viv and Anne Chambers Rhododendron campylogynum, Carole and Ian Bainbridges Daphne petrea 'Grandiflora' and Bob Maxwell's Saxifraga pubescens 'Snowcap' all of which were considered for the Forrest Medal. A certificate of Merit

was also awarded to a superb plant of *Telesonix jamesii* shown by Edith Armistead. Bob Maxwell also won the Trophy for the most points in Section one having brought along a magnificent selection of beautifully grown and presented plants, often large specimens of some age.

The Esselmont Quaich, for three plants new rare or difficult was won by C & I Bainbridge with three recently introduced Celmisias . This class gave the judges a difficult time trying to separate C. Lafong's three pans of flowering plants from the winning three foliage plants, the rules and points for the new rare and difficult class were carefully adhered to and the Judges were correct in their decision. Many visitors were intrigued by the various Arisaemas on show, several grown by the Chambers, who are becoming as well known for these handsome, spooky-looking plants (61) as they are for

their rhodos. The 2001 Trophy for the best foliage plant was won by the Youngs with a stunning silver form of the Himalayan plant *Eriophyton wallichii*.

Section II had a large entry with many local Members showing for the first time. This, perhaps the strongest Section II of the year, was as a result of



a lot of encouragement and demonstrations during the Aberdeenshire Group's meeting season. There were excellent first-time entries from Cecilia Rogers, Johan White, Jean Evans, Rosemary Lupton and Doug Evans. David and Carol Shaw won the Craig Cup for the best primula in the Show with a very nice *Primula latifolia* (60) in Section II, the best plant in this section was *Omphalodes luciliae* shown by Fraser Beaton who had

many other fine plants on the bench which won him the Bull Trophy and a Bronze Medal. Andy Foubister won the Jubilee B class with a delightful six pan display.

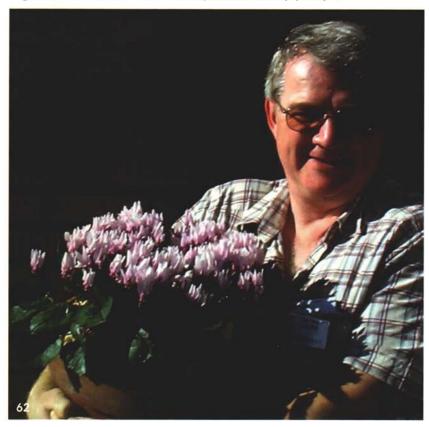
The Elizabeth Bowl for the best exhibit by a junior member was awarded to *Erigeron* 'Canary Bird' shown by Mark Tosh, who was in hot competition with Dundee's whizzkid, Peter Thomson. These two have again supported many shows this year and are great examples of our fine young exhibitors.

Although the number of plants on the benches was down a bit from previous years the standard was very good giving the many visitors who came along much to see and talk about most leaving with armfuls of plants bought from the plant stall and trade stands having enjoyed their visit. *I & M Young*



2002 Discussion Weekend - Irvine 4th-6th October

- great weekend, wonderful plants, lovely people



Stars of this year's show at the Discussion Weekend were Sandy Leven and his spectacular *Cyclamen africanum* which won the Forrest Medal. The plant is nearly 50 years old, coming from stock which originated in Algeria. Sandy bought the plant at the auction, 20 years ago, of the plants from Jim Archibald's nursery. Carefully tended and repotted it has grown in size till it now fills a 12 inch pot. The tuber is 11 inches in diameter. As well as the Forrest Medal Sandy's *Cyclamen africanum* attracted the attention of the RHS Joint Rock Garden Plant Committee who awarded it an FCC (First Class Certificate) and a CC (Cultural Commendation).



Bob Meaden with his superb pine (63), and President Ian Young with guest lecturer Vojtech Holubec (64).





One of the highlights of the show was Gentaina melandrifolia again from Roma Fiddes. electric blue flowers tumbling over the pot sides. Certainly something quite different and very desirable, it probably need Aberdeen weather to thrive. G. melandrifolia is from China as are most of the other species in this series, the others being from Indonesia according to Halda.

Newcastle Show - 12th October

- 8-year-old Toby Brown wins Newcastle Vase

The autumn shows are invariably dominated by two genera, *Cyclamen* and *Gentiana*. This year, for all sorts of reasons, gentians have produced few entries and the plants exhibited not as good as in previous shows. Fortunately cyclamen continue to be grown in ever increasing numbers and there were over 70 pots of them on display this year almost 20% of all plants exhibited.

As last year the Ponteland Bowl, for most first prize points in the open section, was won by Rannveig and Bob Wallis from Carmarthen with cyclamen playing a major role in this and their other awards. The Farrer Medal was awarded to Bob and Rannveig for a stunning exhibit of *Cyclamen graecum* ssp *graecum* with flowers of an eye-catching cerise pink. Additionally they were awarded a Certificate of Merit for what I felt was an even better *Cyclamen graecum* ssp. *mindleri*. This Cretan form of the species had white flowers stained from the mouth of the flower with streaks of beetroot red with the same hue backing the deep green, white marbled, velvety textured leaves. A third cyclamen of theirs, *C. mirabile* was awarded the Ewesley Salver

for the best cyclamen in a 19cm pot.

Crocus is another genus popular in the autumn shows and the two of the best on display were both forms of Crocus hadriaticus. Tony Rymer showed a pot where long white flowers were stained with darkest purple at the base, whilst the Wallis exhibit was of the variety chrysobelonicus with shorter white flowers but with yellow in the throat and on outer petal bases. The other noteworthy potful was one of Crocus banaticus in a dark purple form which formed part of the winning six pan entry in class 36, also from Bob and Rannveig Wallis, for the AGS medal, the other plants being Oxalis speciosa, Colchicum boissieri, Cyclamen mirabile, C. graecum ssp. graecum and C. graecum ssp. mindleri.

Foliage classes form an important part of all the autumn shows. The Millenium trophy, which is awarded for the best foliage plant in the show, was won by Eric Watson with a pristine and venerable specimen of Anisotome imbricata ssp.imbricata. Handsome and deserving though it was I felt that, visually at least, the Anisotome was eclipsed by a number of other plants shown for their autumn colour. The pick of that group was Martin Rogerson's large billowing potful of Epimedium grandiflorum nana with its slender, multibranched stems colorfully adorned with light yellow, rounded leaves flushed with pink and shades of brown. Providing a contrasting colour combination of dark green with red mottling through to dark red was Leucothoe 'Zeblid' shown by Brian Russ, and continuing the red theme was Ian Kidman's Saxifraga fortunei 'Mt Nachi' with a tight dome of small, serrated, palmate leaves turning multi-hued oranges and reds. Perhaps, in an autumn show, it is to such classes that any trophy should be directed.

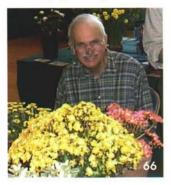
The autumn shows also give those who grow cushion plants the opportunity to demonstrate the form and structure of such plants; at flowering time in the spring such features are often totally obscured by flowers. At this show two of the best were not the biggest and both hail from New Zealand. George Young exhibited a pristine 13cm specimen of Chionohebe thomsoniiwhich formed a dark green, dense, rippling cushion of tightly packed, hairy leaves with only the tips protniding. This is a high alpine from the higher mountains of Otago and northern Southland. Another high alpine from the same parts of New Zealand was Ian Kidman's Myosotis pulvinaris This species forms a much more regular hemispherical cushion than the Chionohebe forming a hairy grey-green cushion. For myself both were suberb specimens; although the judges must have spotted something that I missed, awarding the Myosotis a Certificate of Merit: yet I have never seen such a good example of Chionohebe thomsonii in a show before.

Other Certificates of Merit were awarded to eight-year-old Toby Brown for a pot of the magenta purple *Allium thunbergii*, which helped him win the Newcastle Vase for the most prize points in section C, and to Barry McWilliam for *Pratia angulata*. This is another New Zealander (they grow well in north eastern England) that forms creeping and rooting patches of slender stems with shallow-toothed leaves which, in cultivation at least, regularly produces its white flowers and pink berries together. Margaret Orrick of Billingham won most first prize points in Section 6 and was also awarded the SRGC Bronze Medal.

Other flowering plants were rather thin on the benches. Jean Wyllie brought a nice *Townsendia parryi*, raised from SRGC seed, with five of its 5cm pale pink daisies, and Mrs S. Leighton exhibited in class 120 an attractive seed-raised *Campanula cashmeriana* which formed a compact mound of glaucous foliage studded with its mid-blue tubby bells. Whilst this is often a relatively short-lived species (a specimen did win the Farrer medal at the Wirral show not many years back) because it flowers for a long period in the latter part of the season it is a good plant to have for the autumn shows.

As always at our Autumn shows Aberconwy Nursery laid on yet another high class exhibit of alpines for autumn flower and colour for which they were awarded an AGS Gold Award and the local N E England group photographic display of alpine plants in different garden situations was deemed worthy of a Silver award.

No show can be a success without the considerable efforts of those who volunteer to labour long and hard in all sorts of situations, none more so than those who organize the Group plant stall and those who co-ordinate and dispense quality fare from the kitchen (some visitors only came for the food!). To all of those hardworkers and to Ian Kidman, the retiring show secretary, go our grateful thanks. *Alan Fumess*.



Many thanks to all those who wrote reports and the various photographers - many of the pictures are digital images, many are on the website as are many more. In particular thanks to Ian Young and especially to Sandy Leven for their pictures.

Left: Bob Edge, responsible for recording the scores at the Glasgow Show, one of the hundreds of members who contribute to the success of our shows.

RHS Joint Rock Garden Plant Committee

Recommendations made at SRGC Shows in 2002

Edinburgh – 23rd March Awards to Plants

First Class Certificate to

Tecophilaea cyanocrocus 'Violacea' exhibited by F F Hunt, Invergowrie

Award of Merit to

Primula marginata 'Napoleon' exhibited by F F Hunt, Invergowrie Primula 'Netta Dennis' exhibited by C Lafong, Glenrothes

Certificate of Preliminary Commendation to

Corydalis nudicaulis exhibited by C Lafong, Glenrothes

Leucogenes tarahaoa exhibited by C Lafong, Glenrothes

Dionysia 'Ewesley Sigma' exhibited by E G Watson, Wideopen

Recommendation for AGM assessment to

Primula marginata 'Napoleon' exhibited by F F Hunt, Invergowrie

Awards to Exhibitors

Certificate of Cultural Commendation to

F Hunt, Invergowrie for a pan of Tecophilaea cyanocrocus 'Violacea'

C Lafong, Glenrothes for a pan of Dionysia aretioides 'Bevere'

C Lafong, Glenrothes for a pan of Primula 'Netta Dennis'

E G Watson, Wideopen for a pan of Dionysia 'Ewesley Sigma'

Glasgow – 4th May Awards to Plants

First Class Certificate to

Daphne x hendersonii 'Rosebud' exhibited by C Lafong, Glenrothes Fritillaria liliacea exhibited by F F Hunt, Invergowrie

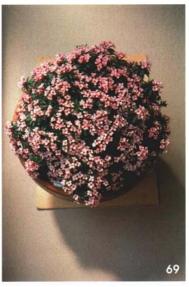
Award of Merit to

Fritillaria affinis 'Sunray' exhibited by C Lafong, Glenrothes Ranunculus amplexicaulis 'Pic d'Anie' exhibited by C & I Bainbridge, Easter Howgate









67. Primula marginata 'Napoleon' 68. Dionysia 'Ewesley Sigma' 69. Daphne x hendersonii 'Rosebud' 70. Corydalis nudicaulis Photographs: Carole Bainbridge

Certificate of Preliminary to

Daphne 'Leila Haines' x Daphne arbuscula exhibited by C Lafong, Glenrothes

Aceras anthropophorum exhibited by C & I Bainbridge, Easter Howgate Fritillaria affinis exhibited by C & I Bainbridge, Easter Howgate

Recommendation for AGM assessment to

Fritillaria affinis exhibited by C & I Bainbridge, Easter Howgate Fritillaria affinis 'Sunray' exhibited by C Lafong, Glenrothes

Awards to Exhibitors

Certificate of Cultural Commendation to

C Lafong, Glenrothes for a pan of *Thalictrum orientale*C & I Bainbridge, Easter Howgate for a pan of *Aceras anthropophorum*

Discussion Weekend – 5th October Awards to Plants

First Class Certificate (as a hardy flowering plant for exhibition) to Cyclamen africanum exhibited by A Leven, Dunblane

Awards to Exhibitors

Certificate of Cultural Commendation to

A Leven, Dunblane for a pan of Cyclamen africanum B Walker, Solihull for a pan of Cheilanthes eatonii

Note: all awards to plants; First Class Certificate, Award of Merit, Certificate of Preliminary Commendation are to a plant "as a hardy flowering plant for exhibition".

Open Day, 20th March 2003, RHS Trial of Small Blue Bulbs (Hyacinthaceae)

This is the last year of the trial of Hyacinthaceae 2001-2003 at RHS Garden, Wisley. There are more than 300 entries in this trial of small (up to 30cm/12in) hardy blue-flowered bulbs. On the 20th March the Society's Rock Garden Plant Trials Sub-committee will hold an Open Day at Wisley. Starting with coffee in the Garden Hall at 10.30am, visitors will be able to meet the sub-committee members and then observe them judging in the Trials Field. Afterwards there will be an opportunity to put questions to the experts about the trial and their work. Entry is free but by ticket only, to be obtained in advance. For further information and tickets call 01483 212331 or email trials@rbs.org.uk



Erodium for the rock garden

Peter Smith

T IS A GREAT SURPRISE TO ME how few people seem to grow erodiums. Erodiums are not prone to disease, have an extended flowering season, many have attractive foliage, and most are extremely hardy. However, sources of supply are rather few and far between, and usually, only a limited range of plants is available. The largest range I know is in the nursery of Jean-Pierre Jolivot near St Malo. Since many of the introductions are French this seems only appropriate.

Propagation is easily achieved from basal cuttings, taking whole shoots off at the base of their stem. They callus over well and will strike in sand. The optimum periods for taking cuttings are spring and late summer but they can be taken at almost any time. I have successfully rooted *Erodium carvifolium* cuttings taken in January in sand without heat, although obviously the strike rate is not so high as for those taken in spring.

Erodiums are easily cultivated, growing well in a well-drained substrate, generally happy if it is alkaline but less so in an acid one. The flowering season is a long one, often extending to the first frosts. Trough culture is suitable for some but they tend to be long rooted and a minimum depth of 10 cm is advised and 15 cm is better. Little maintenance is needed beyond dead heading, but they are averse generally to over-watering during the growing season and heavy autumn rain terminates flowering. Most of my plants get full sun but some of the hybrids can tolerate shade; 'Katherine Joy' for example, has happily survived in an almost sunless position, and 'Merstham Pink' has prospered with relatively little sun for over ten years.

Problems are frequently encountered with the naming of the species that are in cultivation. In part this arises from the fact that many of the attractive, smaller species are closely related and easily hybridise, so that the named species plant is, in reality, a hybrid. Just as importantly, revisions to nomenclature have mainly been carried out by European botanists and have

Peter Smith

not been widely translated and published in English. Examples include *Erodium chamaedryoides*, which is now *E. reichardii*, and *E. macrademum* (often incorrectly cited as *E. macradenum*) which is now *E. glandulosum*. The subspecies of *E. petraeum* have been split off into a number of discrete species such as *E. crispum* and *E. saxatile*, and the type species has reverted to its correct name *E. foetidum*.

Erodium reichardii and Erodium corsicum

These species are perennial but generally not long lived. Both *Erodium* reichardii and E. x variabile, the hybrid betwen E. reichardii and E. corsicum, are common in cultivation.

Erodium corsicum is a lax plant with entire, oval, hairy leaves. It is an attractive plant but not easy to maintain. There are pink and white flowered forms. There is a cultivar, *E. corsicum* 'Rubrum', but there is also a cultivar of *E. x variabile* under the name 'Rubrum' so care needs to be taken about the identity of an individual plant.

Erodium reichardii, from the Balearic islands, is prostrate, no taller than 1.5 cm, with entire, coarsely toothed leaves. It has palest pink or white flowers, always solitary and usually, although not invariably, veined. There is a particularly fine miniature form under the name 'Pipsqueak'.



71. Erodium x variabile

The hybrid, *Erodium* x *variabile* is an altogether bigger and laxer plant, with coarsely toothed, entire foliage on stems slightly more hairy than those of *E. reichardii*, a distinguishing

characteristic. Flowers are always solitary. A number of forms exist, usually with veined darkish pink

flowers. The most commonly seen is probably 'Bishop's Form' which has veined blooms a little paler than the normal type of *E. x variabile.* 'Rubrum' is slightly darker than the type and is probably not worth cultivar status, but darker still is 'Red Rock'. Among paler flowered forms are 'Roseum' with

veined, mid-pink flowers, and a white-flowered form which I find of little horticultural merit. Finally there is a delightful double, 'Flore Pleno', but it can revert.

There has been confusion over the status of a number of these plants with some people maintaining that they were forms of *Erodium reichardii* while others believed they were hybrids of *E. reichardii* and *E. corsicum*, and hence *Erodium* x *variabile*. Recent DNA analysis confirms that these are in fact hybrids between *E. corsicum* and *E. reichardii*.

Neither *Erodium x variabile* nor *Erodium reichardii* are hardy with me in the open in Derbyshire but it seems to be winter wet that is the problem rather than low temperatures in themselves. They are both among the easiest erodiums to propagate and they are such good plants and have such a long flowering season that I find it is worth regarding them as dubiously hardy and propagate them each year. Cuttings taken in June will easily fill a 7 cm pot by winter when they should be put in a cold frame for planting out in spring. At the season end 15-20 cm plants are not uncommon.

Species for the rock garden

There is a group of species from southern France, the Pyrenees and northern Spain which were treated as subspecies and varieties of *Erodium petraeum* but recent research has led to this approach falling out of favour. These carrotfoliaged species include some delightful species such as *Erodium glandulosum*, *E. crispum*, *E. saxatile* and the type species *E. foetidum*. Of these only *Erodium glandulosum* and *Erodium foetidum* are commonly found in cultivation.

Erodium glandulosum is particularly desirable with silvery foliage and with the strongly coloured, veined, purple flowers having dark blotches at the base of the upper petals. It is one of the species from which many of the popular hybrids are probably derived and is an outstanding plant for the garden. Erodium foetidum is far less intensely silvered and the flowers which are a strong pink lack the dramatic blotches of E. glandulosum.

Erodium chrysanthum is one of the most commonly listed species as far as the nursery trade is concerned. It forms large tufted plants of finely divided grey foliage with pale creamy-yellow flowers produced over an extended period. In a well-drained position it can be a quite long-lived plant but, as with most erodiums, its Mediterranean origin, this time Greece, can lead to problems with winter wet.

Erodium absinthoides stems from Armenia as well as Albania, Greece and Turkey. There are blue, yellow and pink forms. The flower stems elongate which helps distinguish it from *E. chrysanthum*. It has been suggested that most plants cultiavted in the UK under the name *E. chrysanthum* are probably *E. x lindavicum* which is a hybrid between *E. chrysanthum* and *E. absinthoides*. Similar to *E. absinthoides* is *E. amanum* which has very hairy silvery leaves with the pink flowers held on short stems.

Erodium celtibericum and Erodium cheilanthifolium are not exceptional plants as far as the gardener is concerned. Both are Spanish, with E. celtibericum being up to 40 cm with silvery foliage and 2 cm flowers, although a French form 'Javalambre' is said to have much larger flowers than the type. E. cheilanthifolium is smaller, up to 10 cm with white flowers with a purple blotch on each upper petal. Both species have led to a number of hybrids. Erodium rupestre is another Spanish species which I find unexceptional. It has small umbels of pale pink, veined flowers with the two upper petals being blotched.

Erodium guicciardii from Greece has silvery-green foliage and umbels of satin pink flowers with pointed tips to the petals. It is claimed to be a good garden plant although I think this is an overstatement. One thing is undeniable and that is that seed is the only way to propagate it, since it is probably not available from nurseries, and to get seed you need both sexes since it, in common with a number of other species, is dioecious.

Erodium guttatum is not hardy in the UK. It is confined to north Africa and Spain. It is somewhat variable, with violet flowers with black blotches at the base of the petals forming a dark circular "eye". The leaves are entire and the stems spreading. Seed is readily set and since it is not long lived this is useful. It will survive happily over winter in a cold tunnel, which again suggests that the problem is as much winter wet as actual absolute temperature. It is rare in horticulture but unfortunately E. glandulosum is often passed off as E. guttatum. The true plant is recognised because of the characteristic dark "eye", E. glandulosum having just the two dark blotches.

Some other species

There are many other species which would be worth growing. However, some are rare in cultivation, some are doubtfully hardy, and some are much larger plants more suitable for the border than the rockery. A species that is small

enough for the rock garden is *Erodium rodiei*, from the Maritime Alps, with umbels of mid-pink flowers. It is an attractive slow-growing plant, but is rare in cultivation.

The attractive robust annual *Erodium gruinum* is occasionally met with. From Sicily and the Greek islands it has from 2 to 6 flowers on each upright stem. The petals drop by midday. Fallen seed germinates readily and it is not a plant which becomes invasive.

Erodium alpinum from Italy, with stemless carrot-like leaves and lovely deep pink unmarked flowers, but it is probably too big for the modern rock garden and is not readily available.







73. Erodium manescavi

More remote taxonomically are two extremely floriferous species suitable for the border: *Erodium carvifolium* and *Erodium manescavi*. The former from western and central Spain has many-flowered umbels over an extended period. The flowers are violet and the two top petals each have a black blotch. *E. manescavi* has pink flowers with a lighter eye and is from the Pyrenees.

Erodium jahadiezianum is a beautiful plant with 3 cm purple flowers on extended stems. It is endemic to Morocco but it seems to be hardy if protected overhead, however all my efforts at propagating my sole specimen have been fruitless. The plant is now in a container from which the base has been removed. This has then been placed on top of another containing a loam and sand mix so that I can experiment with root cuttings once the roots have extended. It does not seem likely that this plant will become widely available.



74. Erodium 'Nadia'75. Erodium 'Natasha'



Hybrids

There are a great range of hybrid cultivars available these days but the most obvious way to divide them up here is between those with a blotch on each of the two upper petals and those without.

Blotched hybrids.

Of the three species likely to be involved in these hybrids it is usually true that hybrids involving *Erodium carvifolium* and *E. castelanum* are larger than those from *E. castellanum*. Many are probably only suitable for the larger rock gardens and some are really quite appropriate for the border.

Four plants can be seen as quite distinctive because the blotches on their upper petals are red or pink rather than the dark blackish-purple marking of the remainder. *Erodium* 'Ardwick Redeye' is vigorous enough to form a good-sized clump at the front of the border with almost white flowers with cherry-red markings on the upper petals. *Erodium* 'Rock et Rocaille' was raised by the French nurseryman Jean Poligné but it is not an easy plant to establish. It has pale pink, rather delicate flowers, with the blotch being darker pink. *Erodium* 'Julie Ritchie' again has pale pink flowers, has rather more silvery foliage, but for me it is straggly and the least desirable of this group. *Erodium* 'Robertino' is much more compact with white flowers, red blotches and attractive finely-cut foliage.

Erodium 'Pickering Pink' is probably the most well-known of these hybrids hybris with blotches n the petals. It is a compact, floriferous plant with a long flowering season. The small solitary flowers are held on upright stems. The three lower petals are pink and the upper two with the blotches are much more blueish. This was introduced by Rogers Nursery of Pickering.

Two other plants which are similar are *Erodium* 'Nunwood Pink' from John Ross and the French *Erodium* 'Fripetta'. Each has well-formed, almost semi-double, deep pink flowers with 'Fripetta' carrying them on elongated stems suggesting that its ancestry may involve *Erodium absinthoides* or *Erodium amanum*. A final plant here is *Erodium* 'Spanish Eyes' but here are some reservations as to the strength of its constitution.

Hybrids with blotched petals probably containing *Erodium glandulosum*

This group involves some very attractive smaller hybrids which are always popular on the sales table and which generally perform well in the rock garden.

A group with obviously very similar parentage are *Erodium* x *kolbianum* and its cultivars 'Nadia' and 'Natasha' and *Erodium* 'West Acre Seedling'. All these have silvered foliage with the veined pink petals having a tinge of blue

and a heavy dark blotch on the upper petals. 'Kolbianum' and 'Nadia' are both rather straggly and I observe little difference between them. I prefer *Erodium* 'Natasha' which forms a rather more compact, tufted plant with rather darker flowers, held upright and with a tendency to double. Like the others here they fairly quickly form tufted plants of about 30cms. I have not had 'West Acre Seedling' long but it is said to derive from 'Natasha'. It has much larger flowers.

Another group which are clearly similar are *Erodium* 'Bidderi', *Erodium* 'Emma' and *Erodium* 'Stephanie'. 'Emma' and 'Stephanie' have white flowers with large dark blotches, those of 'Emma' being much larger. 'Bidderi' has palest pink blooms with less dominant blotches but is a less desirable plant than the other two which are outstanding and have long flowering seasons. They form plants of about 30-45 cm reasonably quickly.

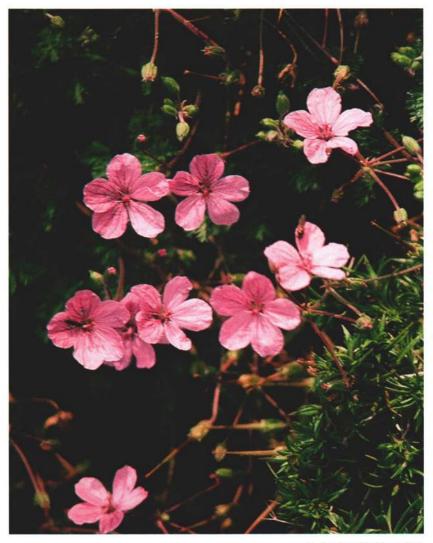
Two others before we move on. *Erodium* 'Frans Delight' was raised by John Anton-Smith in 1991, has rich pink flowers with small blotches, flowers well and is a handsome plant which is worth a space in any collection. *Erodium* 'Katherine Joy' has the advantage of tolerating heavy shade. White flowers are heavily veined and blotched and like 'Pickering Pink' is suitable for a large trough.

Hybrids with blotched petals containing Erodium castellanum

These are the largest and strongest of the hybrids with blotched petals. Flowers are either violet or deep pink on long stems. To quote Richard Clifton, most are "stemless like a dandelion" which means that there is often little material with which to work when it comes to propagation. My favourites in this group are *Erodium* 'Almodovar', *Erodium* 'Cupidon' and *Erodium* 'Logroños Real' which can be quite spectacular with clusters of up to 8 flowers per stem. Other cultivars that belong here are 'Dujardin', 'La Feline' and 'Robespierre'. None of these are as yet available in the trade in the UK.

Some hybrids without blotches

Erodium 'Merstham Pink' deserves a place of honour. Vigorous, long-lived and extremely floriferous, often flowering for 6 or 7 months at a time, it has good-sized medium pink flowers, slightly veined, with the top two petals



76. Erodium 'Merstham Pink'

being rather darker. It tends to have a trailing habit and is magnificent tumbling down a wall in the rock garden. A seedling of this *Erodium* 'County Park' is compact with upright flowering stems.

Erodium 'Eileen Emmett' is a favourite of mine. It is said to derive from E. foetidum, has very pale pink blooms, delicately laced on the top two petals. Knowledge of the other parent would be interesting as E. foetidum lacks this

veining. I have found it hard to keep in good condition over an extended period. The French plant 'Parma' is similar to 'Eileen Emmett'.

Four plants, all French which would be suitable for troughs are *Erodium* 'Couvé', *Erodium* 'Pequenito', *Erodium* 'Robertino' and *Erodium* 'Sarck'. Of these 'Couvé' is, for me, the most attractive with blueish-violet veins, and 'Robertino' has attractive dull green, hairy foliage.

A plant which I have recently introduced is *Erodium* 'Maryla' which is an eye-catching chance seedling from alongside a plant of 'Pickering Pink'. It forms a good clump and is endowed with many lightly veined purple-pink blooms about 2 cm diameter and has attracted very favourable comment.

Erodium 'Carmel' and *Erodium* 'Robin' are excellent plants with good-sized flowers, the former of a lovely cool shade of pink, lightly veined, not unlike those of the extremely beautiful *Erodium alpinum*; and the latter is an introduction from the USA, the flowers clear pale pink not unlike those of *E. foetidum* but larger.

Of the others I would mention two. *Erodium* 'Caroline' is special because its flowers are peach-pink but it has not been easy to propagate and experiments with root cuttings may be the answer. Finally, *Erodium* 'Cézembre' which has attracted a number of buyers at the sales table. This has elongated flower stems which shows its *E. amanum* parentage, and small flowers with a shade of mauve. Care needs to be taken with dead-heading because each stem develops several flower-bearing branches.

Erodiums have a long flowering season, have attractive foliage and often beautiful flowers. Most are quite easy to propagate, and in relatively drier regions most are full hardy. Among the species and hybrids are delightful plants that would fit into a small trough while others would grace the front of a border. They are wonderful plants for the rock gardener.

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Highland Discussion Weekend Elgin 2003



Friday 3rd October to Sunday 5th October 2003 Eight Acres Hotel, Elgin, Moray

THE MORAY AND INVERNESS GROUPS bring the 2003 Highland Discussion Weekend to Elgin, the capital of Moray, and give members the opportunity to experience a new northern venue. The City and Royal Burgh of Elgin is on the main A96 road, 67 miles west of Aberdeen and 37 miles east of Inverness. From the south, it is accessed from the A9 via Aviemore and Strathspey. There are rail links from Aberdeen and Inverness. The nearest airports are Inverness and Aberdeen.

Elgin has historic links with the past with the Cathedral and Bishops Palace, and Ladyhill Spynie Palace. Elgin is at the entrance to Speyside's whisky industry and has two distilleries (as you can see from the programme, a visit has been arranged). There is good High Street shopping and a saturday farmers' market as well as a 24-hour Asda supermarket (one of the top ten in Britain). Of garden interest are the Cooper Park, the unique Biblical Garden and nearby (about 5 miles) Blackhills Rhododendron Garden.

The Eight Acres Hotel is set in 8 acres of manicured grounds on the western approaches (A96) to Elgin. Facilities include a pool, spa-bath, sauna, solarium, gymnasium and squash courts, all to be found in the leisure club.

Elgin 2003 **Programme**



SATUE	RDAY 4TH OCTOBER
08:00	Registration
08:00 -	- 09:30 Setting up plants for show
09:00	Distillery Tour
11:15	Ericaceous Shrubs Easy or Difficult
	Graeme Butler
12:30	Show Opens
14:00	The Harold Esslemont Lecture
	Searching for Alpines in The Pontic Mountains
	Erich Pasche
15:30	Twenty-four Years on - Older and Wiser in New Zealand
	John Richards
19:15	Dinner
22:00	Plant Auction and Raffle

SUNDAY 5TH OCTOBER

08:00	Registration
09:30	The William Buchanan Lecture
	And Recover the Rest exotic Asiatic Primula.
	John Richards
11:00	Himalayan Androsace and Saxifrages
	Tim Roberts
14:00	The John Duff Scottish Lecture
	Ian Christie

Highland Discussion Weekend Elgin 2003

Accommodation is in double, twin and single rooms. There is no 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 any other special requirements.

Star attractions will be the PLANT AUCTION, RAFFLE and 50-50 PLANT SALE. Contributions for these would be most welcome. No Discussion Weekend would be complete without the PLANT SHOW, so come on, show us what you can do and support the Plant Show and HOLIDAY PHOTOGRAPHIC COMPETITION. Details are in the Year Book. If you have lost your copy ask for a show schedule when you book.

Members should have their bookings made before 22nd September 2003. Applications for bookings together with the appropriate remittance should be sent to

The Registration Secretary, Mrs. Lorna Milnes, Dunbarney, Myrtlefield Lane, Westhill, Inverness IV2 5BP (Tel. 01463 791605)

Members wanting further information should write to Davie Sharp, Kincraig, 4 Walker's Crescent, Lhanbryde, Elgin, Moray IV30 8PB. (Tel. 01343 843111)

RESIDENT	PRICE	
Friday Dinner - Sunday Afternoon Tea	£165	
Saturday Lunch - Sunday Afternoon Tea	£110	

NON - RESIDENT	PRICE
Saturday (morning coffee, lunch, afternoon tea)	£30
Saturday evening Dinner	£21
Saturday (morning coffee, lunch, afternoon tea, evening dinner)	£51
Sunday (morning coffee, lunch, afternoon tea)	£30

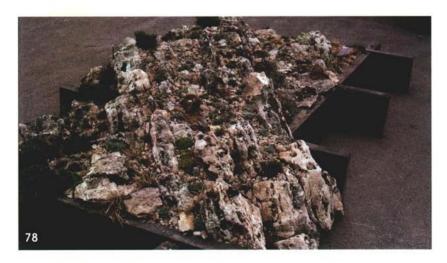
Please use the booking form enclosed with the Secretary's Page.



Crevice Gardens

In defense of rock

Zdenek Zvolanek



77. Faces of layers in limestone crevice garden in Wuppertal (Zdenek Zvolanek) 78. Ota Vlasàk's skill shown in this garden at Erfurt Show (Vojtech Holubec)



FTER the great manifestations of the inner power of our planet, when beautiful mountains and rocks are raised, we can see a long process of erosion trying to wash down our rocks to flat lands and oceans. Growing population pressure has been helping Nature to destroy rock formations for thousands of years, but some gardeners in China, Japan and the western countries have done

the opposite. They reclaim rocks and create more or less natural rock formations. This blessed movement of friends and lovers of rock has its own erosion: there are more and more reformists, revisionists and agent provocateurs in our societies who try to weaken our belief and exchange our adorable and holy Rock for holy Grit. For example, in the Special Millenium Issue of the AGS you can read the following opinion about rock in a rock garden: "it is expensive, can be unsightly, is often inappropriate, wastes precious space, rarely provides good growing sites and its removal from nature is often environmentally disastrous". It is interesting that these people do not attack the aesthetic qualities of rocks, they target the value of classic horizontally stratified rock structures for growing true alpines in some winter-wet islands. In this article I would like to support the plea for rock gardens which was written for this journal by the late great Reginald Kaye.

URING THE LAST TWENTY YEARS in the heart of Europe, where the love of natural rock gardens is most intense, a new design of rock formation has emerged. It is correct geologically, aesthetically acceptable, and suitable for growing true alpines. This kind of formation offers plenty of comfortable crevices and is known, among English-speaking growers, as a crevice garden. After years of careful observation of crevice gardens on the continent and abroad, there is a feeling that crevice gardening is the "best modern practice" for the outdoor cultivation of alpines.

HISTORICAL BACKGROUND

The origins of this growing technique are more than a hundred years old and I must admit that the idea of the superior function of vertical crevices has a British origin. William Robinson in Alpine Flowers for English Gardens (1870) included the observations of a rock-garden designer, James Backhouse: "comparatively few alpines prefer or succeed well in horizontal fissures . . . vertical fissures suit many rare alpines best of all . . . in the superficial arrangement of rock there is no rock for roots to feel". James Backhouse published his successful method of

growing rare alpines in deep fissures in the catalogue of his nursery in York in 1875. Fifty years later, B. Symons-Jeune built a massive, vertically stratified rock garden for the Chelsea Show of 1923, and explained the principles of steep stratification in his *Natural Rock Gardening* (1932). This professional landscape architect constructed geologically correct rock gardens, usually with gently inclined, horizontal stratification with a minimum of suitable crevices, and preferred planting common rock-garden plants in the open spaces around his bold features. I am obliged to him for many good ideas about landscape rock gardening and the appearance of a rock exposure. Symons-Jeune did not get permission to read his papers at the first International Rock Garden Plant Conference in London, but it was here that Swiss plantsman Henri Correvon explained his successful growing method for the most difficult high alpines in "layers of slate".

About forty years later, the principle of steep stratification appeared in *Rock Gardening* written by my friend Harry Lincoln Foster. It was probably this book which gave Josef Halda inspiration for laying his flakes into small rock exposures in which the layers are tilted from 30° to 45° with rounded shoulders known as "grannies". More recently we have seen crevice gardens constructed from thin slates by Josef Holzbecher, and the good designs of Vojtech Holubec and Ota Vlasàk using limestone, and their invention of granite formations with modified rules of steep stratification.

The conversion of horizontally stratified rock gardens into vertically stratified ones is moving slowly to the west. Harry Jans included crevice gardening in his lecture "Twentyfirst Century Gardening and Growing Techniques" for ALPINES 2001, and the well-known plantsman Dr John Good wrote about his current fascination for his crevice garden in North Wales. His conclusion is that, "it enables me to grow many more plants outdoors in a wet climate than I could ever have imagined".

GEOLOGICAL BACKGROUND

In the past, when we tried to build a rock exposure that appears natural, and to follow geological laws for horizontal stratification, or jointing with igneous rocks, we were in great trouble. With poor choice of suitable rectangular stones we had to control the height, back tilt and side tilt, primary joints, secondary joints and proper returns, in every bed or layer. On the contrary, geological laws for steep stratification, which are followed as rules for building crevice gardens, are simple. But before setting down the rules the



79. Milan Halada's limestone crevice garden (Zdenek Zvolanek)

80. granite crevice garden at the Prague Show (Joyce Carruthers)



reader must understand the formation. The best way is to show a picture of genuine steep stratification and to explain its origin and the terminology.

My illustration (opposite above) is a large rock exposure in the Czech Karst (near Karlstein Castle). Incidentally, the sequence here is of international geological significance because the international division the Silurian and Devonian periods is placed between layers numbered 45 and 46. Readers will understand that sedimentary rocks of this sort were originally laid down in ancient seas, which is called horizontal stratification. In our example the layers of stone (strata) were then tilted and folded by strong tectonic forces into their present position. The broken part of the uptilted formation is seen as faces of layers (beds) with relatively similar thickness, having steep return down to ground level. The left part of the picture shows exposed bedding planes (sides of layers), forming miniature cliffs which are ascending to the left (or if you wish, descending to the right). Primary and secondary joints are not seen here. For all descriptions that follow in this article it is important to have a clear terminology for the faces of the blocks used: the relatively short fronts, or ends, of a particular layer are called here the FACES OF LAYERS and the long sides, the bedding or splitting planes, will be called SIDE-CLIFFS.

RULES for PLACING ROCKS

- 1. One layer, stratum or course, has to be the same width throughout its run in the crevice garden; all layers should be parallel to each other.
- 2. The dip, tilt or inclination of all layers is vertical or gently tilted towards the body of the formation.
- 3. Functional crevices should be a maximum of one inch wide.

ACTUAL PLACING OF ROCKS

The size of the pieces of rock available will make a difference both to the scale of the project that can be attempted and also to a number of practical aspects.

A. REALLY SMALL FLAKES. These are the easiest to obtain, they are cheap and cheerful, but their abilities to insulate are not as good as larger ones. You can make miniature crevice gardens in troughs with them and fill the top of old frames. If you stack them one above another – in each layer – to obtain deeper crevices, an old scree can be partly fortified with them. A few extra-



81. Uptitled strata in the Czech Karst (Joyce Carruthers)

82. Igneous rock garden showing northern exposure (Zdenek Zvolanek)



low ledges or one ridge copying the surface of the scree can be decorative and very functional.

B SMALL FLAKES. In a flat garden, after some excavation, you can prepare a couple of low mounds and cover them with standing layers of flakes. From the side-view the outcrop has two ridges under an imaginary low curve: miniature side-cliffs ascending step by step to the level of a ridge and descending to the lowest level at the opposite side. The faces of layers are gently tilted from the highest point to ground level in long returns.

C. SLABS AND FLAKES. Narrow slabs, on edge, give maximum height for minimum weight. They are placed first to erect a side-cliff at the highest point of an outcrop, or the side-cliffs of a series of ledges at different levels. They are well anchored into a mound and fixed with some wooden supports to a slightly back-tilted position. Later they are well supported by other layers behind them. To get the optical illusion of a solid cliff, we often overlap the slabs, hiding the vertical joints. Furthermore, two overlapping rocks can be of different thicknesses because overlapping places them in two or more different layers. To have natural returns of an outcrop in a flat site, the upper surfaces of the slabs in the side-cliff must be tilted down to follow an imaginary arc above the crevice garden. All layers behind them must be curved down in the same way. Every good design for a crevice garden incorporates variety in the pattern of layers and variety in the elevation. So in practice we pack narrow layers behind broader side-cliff slabs towards a layer of slabs which are forming a side-cliff at the opposite side of the outcrop. So, remember that it is natural and practical to have slabs forming the edges of ledges, and behind them layers from flakes.

When we work with igneous rocks we are invariably short of nice slabs with two parallel sides. Our tactic is to use good slabs only to create the sides of a block of rocks. First "a frame" is made, where longer sides, from slabs, are connected at their ends with courses of flakes. After that the inside of the block is filled with soil and covered with courses of smaller more irregular flakes.

D. CREVICES AND FISSURES. To keep all layers parallel, a string line is useful. Flakes selected for each longer layer are never all exactly the same width. To compensate for this failure one edge of each rock is placed directly under the string line concealing any irregularity of the opposite edge in the crevice, where it can be disguised by plants and stone slivers of surfacing. In



83. Side cliffs of crevice garden of sandstone sheets in Dortmund, Germany (Vojtech Holubec)

84. Pieces of igneous rock (diabas) (Zdenek Zvolanek)



this way every crevice has one straight edge and one irregular. During construction of the rock work the vertical position of the flakes and approximate width of crevices is fixed by chock-stones, pieces of kneaded clay, or a small amount of heavier soil. One English builder fixed crevices between large sheets of sandstone using one-inch thick boards with excellent results. When a portion of rock work is completed and adequately anchored, crevices are tightly packed with soil.

Special care must be given to closing the steep crevices at the faces of layers properly. In some designs, they are in the form of a vertical front cliff. These can be quickly and temporarily closed with kneaded clay with chock-stones hammered through. During permanent planting, starting from the bottom of a steep crevice, we use chock-stones between saxatile plants and a minimum of clay. The gently inclined crevices are entrances (and exits) for water so they must not be completely closed. I suppose that in a wet climate tighter closing improves the function of the surface drainage of the crevice garden.

Slate splits into parallel sheets, suitable for making fissures. After construction of a deep, one-inch-wide crevice, we pack it with soil mixture and later fissures are made with extra thin slate slivers. A good chisel and hammer are perfect for making top dressing from slate. All purists agree that top dressing needs to tone in with the rock used.

MATERIAL

We must adapt what we can get to suit our purpose, but generally speaking, we have to select rocks with two parallel sides. Sedimentary rocks like limestone and some sandstones, slate and metamorphosed mudstones, are the best. We have good experience with quartzite for our rockwork at an altitude of 3000 m above sea level with the Panayoti Kelaidis project at Mt Goliath, Colorado. With careful selection of approximately rectangular rocks we can use igneous material such as granite, granodiorite, basalt and dolerite. Perfect crevice gardens are possible from hard sandstone that was cut for pavement. With good luck you can obtain broken pieces for a reasonable price. In British Columbia I enjoyed rock work with tufa slabs. In England, with Ron Beeston and Joyce Carruthers, I made "frames" from tufa and the space inside was filled with layers or old bricks connected with sphagnum moss and with hidden deep vertical crevices packed with soil. The top was a surface of crumbled tufa. Holland is a land with little obvious rock, and that is naturally hard, and local rock gardeners there are very active using suitable substitutes:



85. Granite crevice garden of Ota Vlasàk at Boranovice near Prague (Vojtech Holubec)

86. Crevice garden from large slabs built for late Bernt Wetzel by Czechs Ota Vlasàk and Josef Holzbecher (Zdenek Zvolanek)



they make crevice gardens from hypertufa slabs, flat pieces of concrete and recycled tiles. I know that hunting rocks is exciting like hunting alpines. Under the leadership of Ron McBeath, and with the agreement of the farmer, we collected rocks from the edges of fields in a January gale, when everybody got flu. Rocks were exchanged for beer and I was close to a brave death. I have seen enormous old abandoned quarries full of jolly good slate in North Wales, inviting a society to organise a big contract to provide material for their membership. What a poor nation that has the only available flakes stacked in dry walls dividing sheep. Many a cash-poor farmer would willingly sell some stacked stone from broken walls for it is financially impossible to repair them.

SOIL

From experience, there is no need to worry about drainage or preparing a special mixture. The excavated material, free of perennial weeds, can be used. All soil mixtures with a mineral content and with water retentive qualities are suitable for crevices but a good loam is the best. The economic way is to screen some excavated material and improve it with mineral ingredients. In our dry, steppe climate in the Czech Republic, with wet winters, we never mix in leaf-mould or peat. We prefer heavier soils with a clay content, because they hold moisture and are richer in mineral nutrients.

LOCATING THE CREVICE GARDEN

Should a crevice garden be exposed to the scorching sun? Well, the less the better. For giving details and reasons why, we must refresh the old and excellent observations of James Backhouse who wrote before 1870: "I believe the best location for very high alpines are narrow fissures catching the sun for several hours each day, but having a gentle slope to the northward. If the rockwork can be so arranged that a high range or "crag" at its eastern end may cut off the sun till near noon from the great fissures above alluded to, so much the better. Screen from heat is worth double as much in the morning as it is in the afternoon. An eastern exposure is dried up at a very early hour during hot summer days while the dew often lingers on plants having a western exposure (or a northern one screened to the east) till near noon, and the great heat is cut off for four or five hours, the day (as a time of endurance) being curtailed practically by so much. The fact of eastern exposure being screened in the afternoon from the hot rays is of comparatively little advantage. The air is roasted all the day and there is no more reviving dew till late in the evening. So that from "dew to dew"

a west aspect may have its day of 16 hours practically reduced to 10 or 11 hours, while an east aspect has the whole day to contend with". This is good advice for builders on how to orientate the sides of a crevice garden and how to utilize the effect of the high ridge and ledges screening crevices under them.

If the ideas of James Backhouse are translated to the terminology of crevice gardening we arrive at the following design. On a flat site the crevice garden should have the shape of a short rectangle with the longer side facing south. Layers are orientated in an east—west direction. The southern third of the rectangle is a high ridge with high side-cliffs having a southern aspect and lower side-cliffs facing north. The eastern third is a high ridge with very steep faces of layers. So we have a high ridge in the shape of an L, screening some crevices behind them and giving support for layers in a sheltered cool cauldron facing north-west. Here, the faces of layers tilt down to the western ground, but there are also small side-cliffs stepping down to the northern ground. For a full understanding you can make a model from plasticine.

Of course, if you have at your disposal a gentle slope down to the north, the design should be different. The "rectangle" of this crevice garden should face to the east, with layers orientated in a south–north direction. The eastern third of the "rectangle" is a lower ridge with low side-cliffs with an eastern aspect and deeper side-cliffs with western aspect. The southern third is a ridge with steep faces of layers facing south. The rest of the "rectangle" has a long return of faces of layers to the ground northward and a series of small side-cliffs stepping down to the west.

The screening possibilities in a crevice garden projecting from a southfacing slope are minimal and could be improved only after digging at the northern part of the outcrop so that the faces of layers form a cliff with a northern aspect.

LANDSCAPING

On flat ground it is important to undulate the chosen site by digging soil in a larger area to have very gradual slopes to the ground level. The deeper you go, the more soil you get and the more imposing the side-cliff will be if it rises from low ground. In the Lamberton Nursery the soil for a mound under the rock work was excavated from in front of the side-cliffs and the large hole became a place for a pond (see front cover). I would have preferred to dig deeper behind the rock work to get a longer slope to the north.

The excavated material must be smoothed into a firm mound with steep slopes under screening ridges and gradual slopes behind them. I agree with Mr Symons-Jeune that the best view of a rock formation is facing the highest cliffs and that the best feeling of a viewer is when those cliffs run diagonally across narrow gardens. He inspired me to use the human hand to show natural returns of a rock exposure to the flat ground. Fingers represent the top part of rock layers and the spaces between them are crevices. Put one hand, palm downwards, on the table and when you raise your knuckles, you can see how the faces of layers are getting steeper and tiny vertical side-cliffs will rise. Then place your other palm flat against the side of this and you will have a simple ridge and layers screened behind.

ADVANTAGES OF A CREVICE GARDEN

There are two major advantages to be considered:

1. CREVICES. In narrow crevices, between deep vertical walls, the roots of young plants are led down deeply underground and the plants do not form shallow root systems. "Deep rooting is the main secret of successful cultivation for plants from high alpine regions. The roots descend to very great depth in fissures where they find nearly or quite unvarying moisture and unvarying temperature", wrote James Backhouse in 1875. In deep, only one-inch wide crevices, and under them, soil is cool during hot days and warmer during cold winter days. With their insulation effect, crevices prevent sudden swings in soil temperatures, so reducing heat stress for plants and co-operating soil organisms, and ensuring more continuous metabolism in both. In cooler soil, the aggression of pathogens is minimized. Plants make a dense network of fine roots adpressed to rock where their white root tips collect microscopic particles of water from condensation and absorb nutrients. I presume that at surfaces of stones condensation is more effective than in the soil of open space. James Backhouse and Son of York informed that their "plants, in their correct structures [deep fissures], have roots with opportunity to descend among congenial material to the depth of two or three feet - out of the way of the uncertain fluctuations of their fickle climate - and no artificially supplied moisture is needed." Ron McBeath, in the front of his crevice garden, with Stellera chamaejasme var. chrysantha in bloom, informed visitors that he never waters this formation. I water only freshly planted seedlings - plants with first true leaves and three-inch-long roots are pricked directly into crevices and shaded for two weeks.

Evaporation of water from soil in crevices is minimal. Plants in crevices have their root system separated from the roots of their neighbours in another crevice. If some plant needs less intimacy it is easy to hammer two deeper slivers (flakes one inch thick) into a crevice to separate the plant from some competition in its crevice.

2. SURFACES. The plants live practically "on the rocks", which dry rapidly after each rainfall. The most sensitive part of an alpine - the neck - is kept dry by the effect of higher temperature of the rock surface and by quick surface drainage. Plants harden their tissues and produce more fungi-toxic substances at the hot surfaces of rocks. Correct ripening of stems and branches (lignification), and hardening of leaves is effective against pathogens, insects and frosts. Heavier soil with a good clay content, under careful surface dressing of crevices, has great effect on inclined surfaces: during continuous rain the water stops soaking into the crevices and surplus water runs off "like water off a duck's back". This perfect function is called sheet or surface drainage, and occurs on mountain slopes. Fertility is not reduced by leaching with excessive water, and the soil in crevices does not become "sour". Compaction of the soil is minimal. These stony structures bear the gardener's weight without soil consolidation, so maintenance is easier and safer for plants. The more vertical surfaces the more spaces there are for planting per square metre of your property.

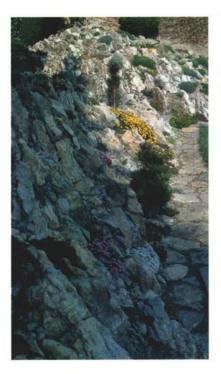
The principles of steep stratification make it possible to erect quite a high rock garden on a small piece of ground without the need for machinery as slabs and flakes are manageable from the point of view of both size and weight. The screening qualities of high ridges and plenty of tiny side-cliffs are a boon in scorching weather. Where there is more rock surface than soil surface in an open situation there are fewer weeds, mosses and liverworts. During dry periods the water retention of the whole crevice garden is the greatest advantage of this structure. There is no need to water during tropical days when the combination of high temperatures and wet foliage is ideal for fungi and foliage diseases. This is the best time for a rock gardener to be in the mountains.

Crevice gardens are luxurious rock gardens. They need plenty of rocks to form their stony bodies. Investing money and time to have this modern, well-functioning structure will enable your alpines to live in luxury and, you will have more leisure because of less weeding and no watering.

Zdenek Zvolanek is a leading Czech rock-gardener who is particularly concerned with the design and function of rock in the rock garden. He was one of the lecturers at ALPINES 2001 and this article is a more detailed consideration of some of the issues that were outlined in his report in the Proceedings of that conference.

87. Small flakes used superbly by Mr. Cepicka in his garden in the Czech Karst (Joyce Carruthers)

88. Ridge of granite in garden of Ota Vlasàk (Vojtech Holubec)





Distinguishing Meconopsis betonicifolia from Meconopsis 'Lingholm'

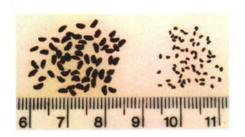
Evelyn Stevens

S MEMBERS who have read the June 2001 and June 2002 issues of The Rock Garden will be aware, the Meconopsis Group, formed in 1998, has been seeking to sort out the identities and nomenclature of the big perennial blue poppies in cultivation. To help with this, the decision has been made to use the cultivar-group concept and three cultivar-groups have been established for the hybrid forms. Two cultivar-groups have been agreed for the sterile forms, namely, George Sherriff Group and Infertile Blue Group. These plants can only be propagated by division. The third cultivar-group is Fertile Blue Group and this was the name recommended by the Meconopsis Group to be applied to all the hybrid big perennial blue poppies that set large amounts of fertile seed and are widely available from nurseries and garden centres. We have concluded that the majority of these plants are attributable to the cultivar M. 'Lingholm' (Fertile Blue Group). However, other names in current use for these plants include M. grandis, M. x sheldonii and M. x sheldonii 'Lingholm'. The reasons these names should no longer be used, as they are both erroneous and misleading, were discussed.

In order to help confirm the validity of our conclusions regarding *Meconopsis* 'Lingholm' (Fertile Blue Group), Ken Mellows, who was Seed Exchange Manager for the AGS Seed Distribution until his recent tragic death, kindly volunteered to help the Meconopsis Group. He gave us small samples of each of the donations of seed submitted for the 2001/2002 distribution under the names, *M. grandis*, *M. x sheldonii*, *M. x sheldonii* 'Lingholm', *M.* 'Lingholm' and *M.* Fertile Blue Group. Two dozen individual seed lots were received. We were interested to check the identities of the big perennial blue poppies which members have been growing under these different names by sowing the various seed lots and raising the plants to maturity for identification.

We said in the June 2002 article that for the most part *M. betonicifolia* is not a problem to identify. However, on receiving the seed lots from Ken Mellows, it came as a surprise to find that this was not the case, at least for some gardeners. Even before sowing the seed an interesting observation was made. About half of seed donated under the names *M. grandis*, *M. x sheldonii*, *M. x sheldonii* 'Lingholm', *M.* 'Lingholm' and *M.* Fertile Blue Group, was, in fact, *M. betonicifolia*. There should be very little difficulty in distinguishing the latter from other fertile big perennial blue poppies and the purpose of this short article is therefore to try and clarify the defining features.

Starting with the seeds, *M. betonicifolia* regularly produces capsules filled with viable seed. These seeds are readily distinguished from other fertile big blue poppies, even without a hand lens. In particular, difference in size is a very good diagnostic feature. The seeds of *M. betonicifolia* are 1 mm in diameter, near spherical in shape, brown in colour and although the surface is pitted when viewed under a hand-lens, it has a rather smooth appearance. In



89. Seeds of Meconopsis 'Lingholm' (left) and Meconopsis betonicifolia (right) Scale is in mm.

contrast, the seeds of *M*. 'Lingholm' (Fertile Blue Group) and of *M*. *grandis* are rather irregularly angular, oval to kidney-shaped and are significantly larger (1–1.5 x 2–3 mm). They are dark brown in colour and the surface pitting gives a rough-looking surface. Unfortunately, I do not think it

is possible with the naked eye or under a hand lens to distinguish the seeds of *M. grandis* from those of *M.* 'Lingholm'. This, however, does not, at present, pose too much of a problem as true *M. grandis* is not common in cultivation, the majority of big blue poppies grown and sold being safely attributed to *M.* 'Lingholm' if they are not *M. betonicifolia*. It is worth emphasising here that on occasion, presumably due to unfavourable weather conditions at the time when the seed should have been pollinated, aborted, non-viable seeds may be produced. The mature seed capsules may appear "normal", but on inspection, their "seed" contents are found to be dust-like with no "body" and are even smaller than the plump viable seed of *M. betonicifolia*. This dust-like seed is sometimes mistaken for viable seed and this should

be guarded against. Similar nonviable, aborted seeds are also characteristic of the sterile hybrids.

The seed capsules of *M. betonicifolia* are obovoid, with the emphasis on rotundity and shortness, and they are covered with a dense pile of short bristles. On the other hand, the seed capsules of *M.* 'Lingholm' are almost always longer (oblong or ellipsoid) and are covered with significantly longer bristles, usually less densely packed. The style is also longer than in *M. betonicifolia*.



91. Meconopsis betonicifolia



90. Seed capsules of Meconopsis betonicifolia (left) and Meconopsis 'Lingholm' (three on right)

The habit of the plants also differs. In both, at the apex of the flower stem there is a false whorl comprising a few stem leaves all arising from the same point. At intervals below, a number of stem leaves arise individually from the main flower stem. In the case of M. betonicifolia, pedicels, each of which bears a single flower at its apex, arise both from the axils of a number of the leaves borne along the upper part of the main flower stem as well as from the false whorl. In M. 'Lingholm' the flowers almost invariably arise from the false whorl only.

The flowers of M. betonicifolia are

significantly smaller (around 8 cm in diam) than those of *M*. 'Lingholm' (12+cm in diam). The broad, often roughly circular petals, usually four in number, frequently have a wavy, frilled or crimped appearance and are rather shallow-saucer-shaped and flattish thus giving the flower a rather "flat-faced"



92. Meconopsis 'Lingholm'

appearance, unlike the more bowl-shaped flowers of *M*. 'Lingholm'. The conspicuous and densely packed central boss of golden-yellow stamens, large relative to the size of the flower, is another noteworthy feature of *M*. betonicifolia. The stamens appear to be a less dominant feature of the flower in *M*. 'Lingholm'.

Flower colour is obviously another pertinent feature. In *M.* 'Lingholm' the flowers are a deep sky-blue, typically with purplish smudge at the base of the outer surface of the petals. Flower

colour in M. betonicifolia is more variable. This may range from sky-blue to pale blue and to mauvy-blues. Also commonly available is pure white M. betonicifolia 'Alba'. Instances of white-flowered forms of M. 'Lingholm' have only been reported on a very few occasions.

An interesting "arrival" in more recent years has been M. betonicifolia 'Hensol Violet'. This is a rich plum-coloured form illustrated in The Rock Garden 107 fig. 81. Apart from the colour of the flowers another distinctive feature is the prominent black or very dark brown hairs on the young leaves as they emerge in spring. Full details of its provenance are not known but I will outline what we have been able to ascertain. Sometime in the 1980s, Lady Henderson of Hensol House, Kirkudbrightshire, obtained seed labelled "M. betonicifolia x M. x sheldonii" from the SRGC Seed Exchange. Most of the plants she raised were blue in colour, but there were also about half a dozen plum-coloured ones. Lady Henderson planted these out in a group at the edge of her planting of blue flowered poppies where they were noticed and admired by Les Newby. About 1987 she gave seed from these plants to Les. In 1995 he showed a photograph of plants he had raised to Bill Chudziak of Craigieburn Classic Plants at Moffat. Bill was impressed, thought they were name-worthy and introduced them to commerce as M. betonicifolia 'Hensol Violet'. Since then this cultivar has become well-established in gardens. It was featured in the AGS displays at the Chelsea Flower Show in 2000 and 2001. This cultivar has shown itself to be soundly perennial, forming



Leaves of Meconopsis betonicifolia (93) and Meconopsis 'Lingholm' (94)



substantial clumps — at least, here in Scotland. It also appears to come true from seed even when grown in the presence of blue and white forms, but further testing of this contention would be desirable.

The leaves are also very useful to distinguish betonicifolia from M. 'Lingholm'. The overall shape is distinctive, but particularly so is the shape of the base of the leaf-blade (lamina) at the point where the latter joins onto the leaf-stalk (petiole). This is heart-shaped or truncate in M. betonicifolia, whereas in M. 'Lingholm' the bases of the leafblades merge gradually with the petioles. The leaves of the latter are more elongated and are covered with long hairs which almost invariably terminate with striking white or colourless tips. In contrast, in M. betonicifolia the hairs, which form a uniform covering on both the upper and lower surfaces of the leaves, are not strikingly long and prominent and do not have white or colourless tips. Other striking features of the leaves of M. 'Lingholm' are that they are usually rather boat-shaped in cross-section, and this seemingly sometimes results

characteristic break or kink in the mid-rib. The shapes of the mature leaves as just described in large measure also apply to seedlings and it is not usually difficult to distinguish *M. betonicifolia* from *M.* 'Lingholm' at this stage either.

Further information on the Meconopsis Group and its work may be obtained from Dr. Evelyn Stevens, The Linns, Sheriffmuir, Dunblane, Perthshire, FK15 0LP. Tel 01786 822295. Email: levelinns@btinternet.com. A fact-sheet (295mm x 210mm) on M. 'Lingholm' is also available. Please send sae plus 3 first class stamps.

Book Reviews

HARDY GERANIUMS

NEW EDITION

by Peter Yeo

ISBN 0 7134 8500 0

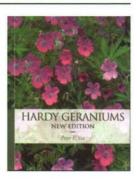
BT Batsford

56 colour plates and numerous

b & w illustrations

Normal price £25.00 (special offer to members

at end of review)



WENTY-FIVE YEARS AGO, hardy geraniums were an almost forgotten group of plants. True, most gardens had one or two cranesbills somewhere in a border, but few people were interested in them any more than they are today in Michaelmas daisies. However, during the intervening period, the situation has been revolutionised and, today, the genus is one of the most popular in cultivation: indeed, according to members of the Hardy Plant Society, it is their most popular genus.

Changes of this type are most successful where they are supported by the development of an underlying academic framework. In the case of hardy geraniums that has been provided by Peter Yeo, an academic taxonomist who worked until his retirement at Cambridge University. Over the period, he has produced a succession of papers and articles developing our knowledge of the genus Geranium. His key work, as far as we non-academics are concerned, has been his book *Hardy Geraniums*.

First published in 1985, the book encompassed all hardy geraniums then in cultivation in the British Isles and their known cultivars, including the wild British species. In total, some 110 species and 60 or so cultivars. With the growth of interest in hardy geraniums, geraniophiles have been awaiting with bated breath for the completion of Peter's latest work, the total revision of *Hardy Geraniums*.

His new book comes with the sub-heading "New Edition" and the first thing to confirm is that it is, indeed, a new edition, not a re-print. It has been revised from start to finish, reflecting the explosion in the numbers of plant taxa in cultivation. Since the earlier edition, some 40 species have been introduced or re-introduced to cultivation, mainly from South Africa, South East Asia and China and these are all covered in the book.

In his earlier edition, Yeo carefully considered possibilities of hybridising hardy geraniums: at that time, there were a number of well known hybrids, but there had been few new ones since the Second World War. However, since then, work carried out (particularly by Alan Bremner in the Orkneys) has shown that many species hybidise easily, often producing fertile offspring. As a result, the number of hybrids has grown fast and there are now a few hundred available. Thus, Yeo has been forced to compromise in this area, only considering a limited number of the more interesting examples.

The main sections of the book cover the main aspects of the plants of interest to most horticulturalists and gardeners. They include their use as garden plants, nomclature, plant structure and terminology, structure, chromosome counts and identification: this latter area includes detailed identification keys.

However, the main meat of the book consists of a description of the genus, organised by Sub-genus, Section, Sub-section and Species, Nothospecies and their sub-divisions. For each species, there is not only a description, but also useful notes on its origins and history, culture and important cultivars/hybrids. The black-and-white illustrations, both line drawings and silhouettes of leaf-outlines are exemplary of immense value. Included in here (and elsewhere) is an interesting discussion regarding the identity of a well known plant enigma known as "Geranium species from the Pamirs".

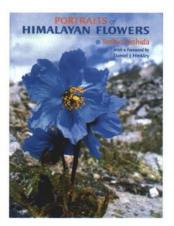
As far as all geraniophiles and most gardeners are concerned this will prove to be an indispensible book, providing a wealth of knowledge and useful advice on this favourite genus in a highly accessible form. *David Victor*.

David Victor is the International Registrar for Geranium cultivars and the Secretary of the Geraniaceae Group and was of help to Peter Yeo in the preparation of this book.

Members can obtain copies of *Hardy Geraniums* at £23.00 (incl. P & P) by ordering direct from the publisher. Either ring 020 7697 7295 with credit card details or send a cheque to B T Batsford, 8 Blenheim Court, Brewery Road, London N7 9NY, quoting reference CB/02/42.

PORTRAITS OF HIMALAYAN FLOWERS

by Toshio Yoshida ISBN 0 88192 551 9 Timber Press 124 pp, 108 colour photos £29.99



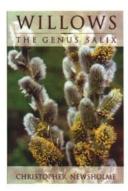
Often, the cover shot of books are selected from vast picture libraries to try to entice the customer into parting with their cash but in this case that was unnecessary. Staring up at

you from the cover of this new book from Timber Press is *Meconopsis horridula* with its glorious blue petals, golden stamens and wicked spines. The back cover is no less impressive with *Saussurea gossipiphora* nestled below snow-covered peaks. The book contains a further 108 images of plants both familiar and unusual with brief but informative notes on each one. Among my favourites are *Meconopsis sherriffii* growing with *Rhododendron anthopogon* and *Rhodiola crenulata*; *Thermopsis barbata* in Northern Bhutan; *Primula wollastonii* clinging to a vertical rock face and *Notholirion macrophyllum* with its violet flowers almost glowing. I could go on but you would simply end up with a list of the entire contents.

Most of the photographs are taken using a wide angle lens at very close range, allowing good landscapes behind the plants, but occasionally he uses other approaches as for example in the sumptuous view of Rhododendron arboreum and the staggering display of primulas being browsed by yaks in the Jaljal Himal.

Toshio's brief introduction gives us an insight into the difficulties encountered in taking these photographs over a ten-year period and his passion for this grandest of mountain chains. At a time when the sharing of information on cultivation around the world, the availability of plants and ease of travel to see plants in the wild is at an all-time high, this is a dangerous book for your bank balance and your marriage but anyone with a love of Himalayan plants will welcome it. Scott Cook.

Scott Cook has taken over the Club's publications sales.



WILLOWS - The Genus Salix Christopher Newsholm ISBN 0 713 48759 3

B T Batsford - paperback £17.99

224pp

The genus SALIX is both large and complex, comprising around 300 woody species, ranging from large trees to completely prostrate creeping shrubs.

It is found on all continents except Australasia but largely in the cooler latitudes and altitudes of the northern hemisphere and it consequently includes a large number of alpine and arctic species many of which are appropriate to the rock gardener.

Christopher Newsholme's long-established book on the genus WILLOWS: The Genus Salix has now been reprinted in paperback and provides a large and detailed source of information, the only one available which covers the whole field of species, hybrids and garden forms all being considered. The description are conveniently being divided into four sections:

- 1 trees and shrubs for large gardens;
- 2 ornamental trees and shrubs for small gardens;
- 3 dwarf often prostrate species suitable for rock gardens;
- 4 very small species suitable for sink and trough gardens.

The structure of the species is considered and listed in detail, giving information that is also of great value for the identification of garden and wild specimens that are not otherwise described. The geographical region in which the plants grow is also described, information that is sometimes valuable in cultivation. In addition to this information over 150 species are illustrated by structural drawings. These drawings depict the foliage, male and female catkins, and other details adjusted to appropriate scales. In addition over 50 coloured photographs provide attractive illustrations of some of the plants and their character.

The leaves of willows are deciduous, variable in shape, entire or toothed, usually short stalked and, with rare exceptions, arranged alternately along the twigs. The inflorescence is dioecious having separate male and female plants Each is in the form of a cylindrical, or occasionally globular, vertical catkin in which the male or female flowers are arranged around a central axis. There

are no petals. The male flowers consist of stamens (usually 2 but occasionally 9 or more) and one or two small glands or nectaries which may be united in a ring. In the female flower the stamens are replaced by a flask-shaped ovary with style and stigma. When ripe the ovary divides into two small parts (carpels) discharging numerous small seeds each with a tuft of silky hairs. The colour and degree of hairiness of the catkinscales and ovary and the colour of the anthers in the plant contribute to their characteristic appearance and to the garden value of a species.

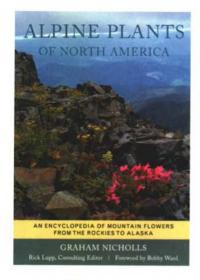
Salix seed has a very short period of viability so that it is difficult to propagate species by individual action sowing seed. Hybridization between species coming together in the wild is however very frequent giving rise to numerous hybrids some of which give rise to further hybrids. An example of this phenomenon is shown by hybridisation between *Salix fragilis* and *S. alba* giving numerous hybrids, among them *S. x bashordiana*. Propagation of hybrids is generally effected by means of cuttings either of soft wood taken in early summer or of hard wood taken around leaf-fall in early autumn. New hybrid species can however be raised by bringing very fresh male pollen into contact with ripening female catkins. This interesting procedure gives rise to hybrids the nature of which depend on the known male and female species involved.

The cultivation of willow forms an essential part of Newsholme's study since its use and importance go back to very early times. Its uses include or have included coracles, fish traps, hurdles, windbreaks and basket work. The basket work although having lost its nation-wide importance having been replaced by mechanical means still holds a developed artistic skill. For this reason several species have a great number of forms arising from interbreeding leading often to varied and striking colours.

Newsholme deals in a generous way with his subject: origins and distribution; management and cultivation; propagation and plants for specific sites; are all dealt with alongside his description of the species.

This new paperback edition is a new and, in part, revised edition. The original edition has been of great value since it was first printed, the drawings are very valuable, as are the photographs, and this paperback edition is, if anything even better to handle than the original hardback. All round this is a great guide at a good price. *Philip Harris*.

Philip Harris gardens in East Yorkshire where he has grown and studied a very wide range of the smaller willow species over many years.



ALPINE PLANTS OF NORTH AMERICA

An Encyclopedia of Mountain Flowers from the Rockies to Alaska

Graham Nicholls

ISBN 0 88192 548 9

Timber Press

495 colour photgraphs, 344 pp.

£35.00

At first sight, it might seem perverse for an encyclopedia of western North American alpine plants to be written by an Englishman. And yet Graham Nicholls has

so clearly fallen in love with the mountains and plants of western America - he writes with the zeal of a convert.

Those interested in the North American flora have been served very well lately – that this does not treat bulbous plants means that there is no overlap with the wonderful *Bulbs of North America* (reviewed last time) although some plants fall through the cracks – so that irises for example do not appear in either.

Graham Nicholls is well known to many Club members: his lecture at ALPINES 2001 displayed his enormous enthusiasm and his nursery and catalogue are full of treasures. For anyone interested in growing North American alpines this book is a must: 650 plants from 54 genera, which represent for the author the signature plants of the Rockies and western alpine habitats, are treated fully. The species are described and propagation and cultivation dealt with thoroughly and with the knowledge and enthusiasm of a true plantsman. Most genera are illustrated, many very thoroughly, with excellent photographs of plants in cultivation and in the wild, with some pictures of the mountains, although the occasional gap left me slightly frustrated, why no pictures of Ivesia for example? Overall there are some truly encyclopedic treatments of genera — those of Aquilegia, Astragalus, Phlox, Penstemon, Castilleja, Eriogonum and Townsendia stand out immediately and the section on cultivation of Castillejas should make them a popular request in future seed exchanges.

There is an introduction on the geography of the mountains and habitats involved, and a chapter on cultivation which looks at approaches in the garden and soil mixtures and an appendix listing signature plants from the different mountain states.

Definitely a valuable addition to anyone's library. Malcolm McGregor.

Letters and emails



From Merv Holland, New Zealand, July 2002

Reading *The Stone Column* no 40 June 2002, compels me to put pen to paper regarding China trips. I will not argue with the author's reasons for not wanting to visit that country but after two trips to South Western China I feel people should not be put off any chance to see the wonderful flora available.

On 7th July 2002 as part of a mixed group of New Zealanders' we returned from a two-week botanical tour under the guidance of Professor Guan Kaiyun, one of the world's leading botanists. With his knowledge of the area we were able to step out of a 40-seater coach at 4000 m, walk a short distance and look at Meconopsis (red, yellow and shades of blue), Primula, Anemone, Rhododendrons, Fritillarias, Incarvillea and many other plants too numerous to mention. Large areas are vested in public parks, reserves and wilderness areas with chairlift and gondola access to many delightful spots and at higher altitudes there are often ponies as an alternative to trudging up slopes.

We have now spent 5 weeks in China and have found the people happy, polite and many speak enough English to help you. We have never seen a policeman or a militiaman and there has been no sign of the arms that are visible in many other countries. We were never hassled, harried or harangued at any stage. On the streets there are no signs of beggars, drug addicts or drunks. We saw no graffiti as in Western cities but who knows what those Chinese characters meant! Many signs are in English, some with amusing translations. The hotels are first class. The downside is you may have to spend a few pence to use some of the world's worst public toilets but don't let this deter you from visiting a botanical wonderland. It would not be wise to attempt to go alone as a guide with local knowledge is essential. To join a New Zealand group during June/July would be a good option.

From Kari Wang

In the latest edition of The Plantsman (Page 129) there is a small notice about caffeine repelling slugs. I thought others might be interested in my experience this summer with slugs, snails and coffee-grounds. I had acquired

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a very nice plant of an alpine Hymenoxys, which was lovingly planted out in the open ground on a sloping site, covered in small grit to prevent snail attack. This was done during a dry period, but nevertheless, within 2 days, small snails had braved the grit and gnawed the plant down to almost nothing. The ordinary slug repellent I had used the first day was to no avail. I do not know if I heard it on the radio or read it somewhere, but somebody suggested coffee-grounds, in a circle around the attacked plant, to keep the problems away. I was willing to give it a try, and sprinkled wet grounds around my Hymenoxys, making sure there was no holes anywhere where a attack might take place. Today my plant has recovered and looks very nice. I have also tried it out for two small Dahlias that I have in pots, I decided to keep them in pots to avoid attack by slugs. However, even in pots they were eaten up, so I left them in a bed where the ground was literally covered in coffee-grounds to 5 cm outside the bottom of the pot. And I made sure, of course to pick of the offending slugs before the treatment. After the grounds were sprinkled, no more slug-attack. Next year I shall again order seed of small Campanulas, hopefully I might get some flowering plants as well.

Kindest regards, Kari Wang

Letter to the Editor of the Bulletin of the Scottish Rock Garden Club

That was a wonderful article by Anthony Darby on *Cypripediums in the Garden*. Perhaps some personal experiences can be added. Cypripediums like all terrestrial orchids grow to an adult plant underground feeding on fungal mycelia so that the first thing to appear above ground is an adult plant. Thus they are totally dependent on certain fungi. However, other species of fungi are fatal pathogens.

Within a few miles of us there are four Scotch Pine woods. *Cypripedium acaule* is the dominant plant and in fact is about the only plant growing on the forest floor. Is it really the difficult plant as so widely touted or is it our failure to understand its specific needs. Also near here is a large colony of hundreds of yellow lady slippers with very large blossoms but always one to a stem. This form does not survive in our grounds but a form with small flowers and two flowers to a stem is permanent and increases vegetatively at a good rate. It also sets abundant seed. No seedling has appeared on our grounds as yet but a plant or two appeared in nearby woods.

Over the years a number of other lady slipper orchids have been grown on our grounds as well as other terrestrial orchids. It has been the same story. They thrive for a few years, bloom beautifully, and then suddenly die. *Cypripedium andrewsii* had been increased to four large clumps and then we had a summer where the temperature reached 98°. F on three occasions. One clump barely survived but succumbed a year later. Fred Case wrote that this hot summer also decimated this orchid in the wild in Michigan. It was a similar story with *Cypripedium reginae*. It was vegetatively increased to fifty blooming stems and then total death in a few months.

These experiences show that it is not a simple question of soil or nutrition. These orchids love our soil. Rather it is pathogenic diseases that get them. This is true for wild colonies of the some fifteen species of orchids that grow nearby. One year there will be a stand of hundreds of *Spiranthes cernua* and none five years later. *Spiranthes cernua* seed was broadcast over a wet sand bed. Three years later rows, of the orchid flowered, but the plants grew only over the rotting corms of an *Iris versicolor* that had died of Iris borer and nowhere else. Then the colony died.

As we have had warmer summers and winters in recent years, the range of *Cypripedium reginae* has moved northwards. Only a colony or two remain in the northwest corner of Pennsylvania in a sphagnum bog. It is evident that the antifungal chemicals produced by the sphagnum are protecting the lady slipper. Years ago I visited a garden in Massachusetts where many lady slippers were growing in great clumps of forty stems or more. The grower sprayed them every two weeks with benelate. Local orchid growers dip their whole plants in benelate periodically. There are acres of *gypripedium candidum* in northern Ohio but only where the utility companies burn over each spring. The fire probably destroys the pathogenic fungi.

It seems likely that fungi and microrganisms play a role in controlling and destroying pathogenic fungi. It is far more complex than commonly thought.

Norman C. Deno, 139 Lenor Drive, State College PA 16801 USA

100 Feedback

and one email that arrived a while ago:

Hello Malcolm,

Read your editorial (January 2002) with much nodding of the head yesterday. My wife Susan is an enthusiastic flower sniffer (she says she wants to be reincarnated as a bumble bee as they spend their lives with their noses in flowers), and she would like to volunteer to act as a judge if your suggested show class ever materialises!

I think she has taught lots of our members to try using their noses at the display table - certainly lots more people sniff the flowers than ever did before. My own seed list selections have consciously included lots of scented plants and I think one of my favourite alpines is highly regarded here largely because of its scent, though it is also very beautiful in any of its forms - I refer to *Primula reidii*.

I agree with you especially about *Dionysia aretioides*. The clone 'Bevere' has a nice scent on warm days but my favourite (now lost) was 'Mary Randall'.

Cheers and best wishes, Darren Sleep, AGS North Lancs Group

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The Crosland Prize is awarded annually by the Aberdeenshire Group in memory of the late Jack Crosland. It is awarded for the best contribution to *The Rock Garden* in that year. Writers, photographers and illustrators are all eligible.

I am delighted that the award for 2002 has gone to Ian Young for the first SRGC photo-essay "Small Fritillaries - Yellow" which was published in the last issue.

Ian's stunning photographs were very well received and a sequel is planned. *Editor*

SMALL FRITILLARIES - YELLOW CORRECTIONS

The caption to figure 175 on p.345 of the last issue wrongly identifies the plant shown as *Fritillaria latifolia* when it is in fact *Fritillaria tubiformis*.

Similarly figure 176 is intermediate between *F. tubiformis* and *F. tubiformis* ssp. *moggridgei*

and figure 179 is *F. bithynica* a member of the same complex as *F. carica*.

SEED EXCHANGE AND DISTRIBUTION

Jean Wyllie is now in the process of retiring from the Seed Exchange and we wish her very well with the time she will have available once the last remaining 2002 seed-lists and queries are dealt with. It is hard to imagine that Jean will not immediately start filling this newly found free time. Seed donations and requests for the 2003/4 seed-list are now the responsibility of the new Seed Reception Manager, Prof G Stuart Pawley.

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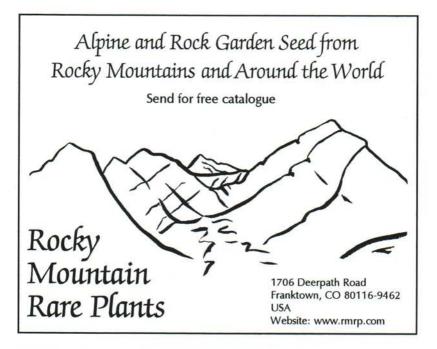
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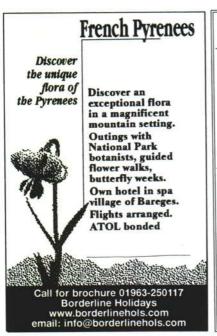
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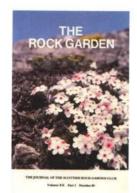
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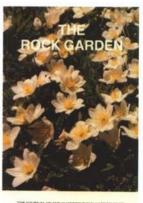
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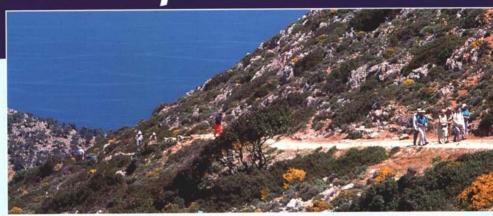
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