THE ROCK GARDEN 121

July 2008

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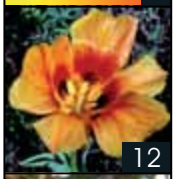
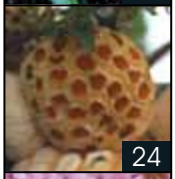
The Journal of the
Scottish Rock Garden Club

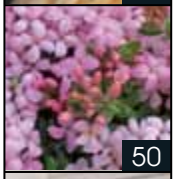
July 2008

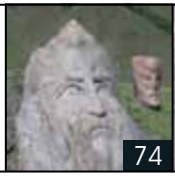
Number 121

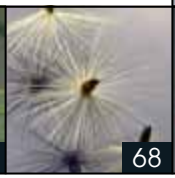
COVER: *Dryas octopetala*

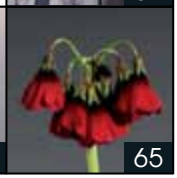












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The Editor welcomes articles, photographs and illustrations on any aspects of alpine and rock garden plants and their cultivation. Authors are encouraged to submit material electronically but articles may also be submitted in manuscript, preferably double spaced. Digital images are particularly welcome but 35 mm slides, high quality prints or drawings may also be submitted for professional scanning.

The deadlines for contributions are 1 November for the January issue and 1 April for the July issue. These dates also apply for material for the Yearbook & Show Schedules.

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The Cover

Dryas octopetala

The emblem of the Scottish Rock Garden Club is *Dryas octopetala,* commonly known as 'Mountain Avens'. It first appeared on the cover of Issue 7 of the SRGC journal in 1950, when it was drawn with two flowers, one facing and one turned away. This simple drawing illustrated the boss of stamens in the centre of the flower as well as the dark-green & brown sepals on the flower back. Later versions of the logo became increasingly complicated and it was again simplified in 1993. The current single flower was drawn by the late Duncan Lowe.

Dryas octopetala is a circumpolar plant, growing in many countries around the North Pole through Canada, Iceland, Scotland, Scandinavia and Russia. In the Alps it is a high alpine. It is surprisingly true to its name throughout its range in that it almost always has eight petals to its flowers, although plants with more petals may occasionally be found. Like many alpine plants, the flowers open over a period so that even if the first are damaged by bad weather, later ones may survive and produce seed.

The cover of this issue reflects the widespread distribution of this plant by showing two of the stages of *Dryas octopetala:* flower and seed. The flower was photographed by Sverre Lunde from Hallingsdal in Norway; the seed was photographed by Karlheinz Knoch from the University of Karlsruhe Botanical Garden in Germany.

The SRGC 75th Anniversary

Ian Christie

This year is the 75th anniversary of the Scottish Rock Garden Club. As I write, halfway through my three-year term of office, we can boast a worldwide membership of about 4500 and a proud record of encouraging keen amateur growers, gardeners, horticulturalists, scientists, conservationists and the plantspeople of the future.

Scotland itself has a proud history of discovery and intrepid exploration in plant hunting. Many of today's staple garden plants, even in the uncertain Scottish climate, are not native but were brought here by Scottish collectors whose names live on in the Latin of everything from primulas and giant lilies to the vividly-coloured meconopsis of the Himalayas. Appropriately, for this anniversary, the club is staging an

exhibition of photographs in the David Douglas Pavilion at 'Explorers, The Scottish Plant Hunters Garden' at Pitlochry. The SRGC and 'Explorers' have enjoyed a long and fruitful association since the garden's foundation and opening in 2003, with regular events, workshops and exhibitions. Of course, the garden itself is a natural home to many of the most beautiful and recognizable alpine plants as well as some striking rarities. The garden's manager, Julia Corden, is one of our members. Julia has built a close relationship with the club and many of our members are among the 36 volunteers who give their time and energy to work in the garden in a wide range of capacities from reception to leaf-raking!

A recent show in Edinburgh attracted visitors from Holland, Germany and a swathe of continental countries; Chinese appeared in our journal this January; there's no language barrier in the love of plants. It's a unique passion that brings people together to learn and to enjoy themselves. The SRGC is the friendliest bunch you can imagine: a like-minded family. We are fortunate to enjoy some very distinguished people in our ranks: award-winners and experts such as Fred Hunt & the Taylors from Invergowrie, the ever-encouraging "Fifette" Bette Ivey, the artist Anne Chambers and our past president Sandy Leven with his wife Anne. We face the future confidently with our popular web site www.srgc.org.uk, managed by Fred Carrie with huge input from Ian & Maggie Young. There are many others who contribute enormously to the club and to horticulture in general. In our mix of backgrounds and activities we share a real love of a subject that easily becomes a way of life.

"Rockers" contribute regularly, as a club and as individuals, to flower shows, displays and events all over the country, and we have forged links with groups all over the world. The late Queen Mother was known to be a keen reader of the club's publications. Our distinguished sister organizations include the Royal Caledonian Horticultural Society but at 75 we're comparatively young - they celebrate their 200th anniversary next year! Our shows attract visitors and praise in equal amounts: their quality is always a tribute to the huge efforts of growers and organizers alike.

Many of us enjoy the club immensely because members are so involved and enthusiastic and because it has always been so outward-looking, building relationships with other societies and organizations, local, national and international. There's a great pride in the membership. Within the club, we have incredibly dedicated gardeners, people whose knowledge is unbelievably detailed and wide-ranging but ... it's not all about becoming an expert in the field. Most people are drawn to this accessible area of horticulture because you can start small, know very little, and grow in expertise along with your plants!

We remain absolutely dedicated to the idea of getting the younger generation involved, especially in helping young students to travel and learn. Our main sources of funds for this work are the Explorer Fund and

1 - Fred Hunt's *Fritillaria reuteri*

the Diana Aitchison Fund. The scale of this support for trusts and funds is well over £10,000 per year.

We have supported people keen to work on site and in botanic gardens and horticultural projects from Scotland to Sweden, Tibet to Turkey. Students from China, Japan, the USA and other countries have applied to work in Scotland, many on volunteer placements at venues such as 'Explorers' and the Royal Botanic Gardens in Edinburgh (RBGE), acknowledged as a centre of excellence for alpine plants. The SRGC and the Edinburgh Botanics continue their close relationship: we are contributing to a new alpine house in Edinburgh; Robert Unwin of the RBGE is heading out on a two-year trip with funding from the club to study horticulture in Australia, New Zealand and further afield. Another young horticulturalist will be travelling to Ladakh as part of her PhD and will be sharing her knowledge and expertise with other students.

Julia Corden's trip this year to Bhutan, in the footsteps of George Sherriff, is partly sponsored by the SRGC and she hopes to bring back photographs for another exhibition at Pitlochry, as well as greater knowledge and experience

to boost the story of alpines in Scotland and the wider world.

To mark the SRGC's 75th anniversary, the club is offering 75 free student memberships to 75 young people, and this offer is already being taken up from all over Scotland and overseas.

Looking abroad again, the club has recently re-started group holidays, with an orchid-viewing visit to Cyprus. Individual members continue to scour the world for beautiful plants and bring back accounts to share with us all. I, for one, visited South America last year and was hugely impressed, although China perhaps remains my favourite destination. These visits to see plants in the wild in their natural habitat are amazing and in many respects awe-inspiring when thinking of locations like the mountain setting of the Tibetan plateau. It's astonishing to think that plants native to these wild and beautiful places may also make a home here in Scotland and the British Isles. It is that kind of background - the story behind the plants, the people and the places - that fascinates us. Every time we plant a particular type of primula, fritillary or poppy, there's a whole world behind it. And, above all, it looks beautiful wherever we see it!

I am particularly grateful to Anne Chambers and Bob Mitchell for their recollections in this issue of the journal of the great days of Ascreavie, a beautiful garden near Kirriemuir in Angus, owned by Major George Sherriff. George Sherriff is one of the great Scottish plant hunters celebrated in the Pitlochry garden, along with Scone-born David Douglas - after whom the famous Douglas Fir is named, Francis Masson, David Lyall, George Don of Forfar, George Forrest, Robert Fortune and Archibald Menzies - who introduced the Monkey Puzzle Tree to the British Isles and Europe. My own fascination with alpines began early in life when I had the great good fortune to meet Sherriff. It was at Ascreavie that I fell in

love with his amazing collection of blue meconopsis, the Himalayan poppies, and was lucky enough to bring home my first packets of meconopsis and primula seed. I was hooked from then on ... and have been ever since.

Editus errus

Perhaps spurred on by the offer of SRGC 75th Birthday Champagne but more clearly motivated by their passion for plants and accuracy, a few keen-eyed readers pounced on several real and imaginary errors in the last issue number 120 and offered several kindly suggestions for their future avoidance. Alas, dear members, we are all human and fallible, even your editor: Shiela Maule, Bob Meadon, Inchriach, Jimmy Person, The River South, *Iris histroides* ... does nothing escape members' eagle eyes? Well, yes it does – no-one picked up my one deliberate mistake. However, the birthday prize of a complementary *(sic)* bottle goes to Anne Chambers because of her forgiving nature and her helpful comments following my assaults both on her name (in an earlier issue) and on her and Viv's *Arisaema taiwanense* which was regrettably captioned as *A. taiwanensis.* How could I!

The same prize is offered again for the most amusing list of errors in this issue, to be submitted by the closing date 30th September 2008.

Anton Edwards

2 - The 75th Anniversary Party at RBGE

West of Scotland Discussion Weekend

3-5 October 2008

Following on last year's very successful Discussion Weekend, the event will again take place in the Beardmore Hotel, Clydebank, adjacent to the River Clyde and north-west of Glasgow. The Beardmore is a spacious modern hotel with beautifully-appointed rooms and public areas and a high standard of cuisine. The hotel was built as a conference venue and lectures are in a comfortably-seated tiered auditorium. The leisure facilities including a heated pool are available for the use of delegates. It is easily accessed by road and rail (Dalmuir Station) and there is ample parking in its grounds.

Glasgow, Scotland's largest city, has many attractions for the visitor. These include an impressive architectural heritage and a lively social and cultural life. The newly refurbished Kelvingrove Museum and Kibble Palace glasshouse at the Botanical Garden are great attractions. The city centre, with the best shopping outside London, is 20 minutes away by train from nearby Dalmuir Station.

Accommodation is in double, twin or single rooms. There is no ground floor accommodation but there are lifts to all floors. It is very important to note that no smoking is allowed anywhere in the hotel or its grounds. If you wish to share a room please arrange this before booking and indicate the name of the person you wish to share with on the booking form, otherwise we will use our judgement. Extra nights accommodation for Thursday 2nd and Sunday 5th are available at £40 per person sharing, £70 single. Please indicate on the booking form reverse if you need either. A booking form is included in the Secretary's Pages; please ensure that the form and remittance reach the Registration Secretary not later than 13th September 2008. The Registration Secretary: Anne M Chambers, Suilven, Drumore Road, Killearn, Glasgow G63 9NX.

If you require further information write to Anne at the above address, or e-mail annechambers730@btinternet.com, or telephone 01360 550537.

RESIDENT	
Friday dinner – Sunday afternoon tea, double occupancy	£187
Friday dinner – Sunday afternoon tea, single occupancy	£210
Saturday morning – Sunday afternoon	£135

NON-RESIDENT	
Saturday – morning coffee, lunch, afternoon tea	£45
Saturday – morning coffee, lunch, afternoon tea, dinner	£71
Saturday Dinner	£26
Sunday – morning coffee, lunch, afternoon tea	£45

Programme

Friday 3rd October

16.00	Registration
16.00-17.30	Plant staging
19.45	President's Welcome Address
20.00	The Bulb Group Lecture
	Brian Duncan – *'Narcissus – from species to modern hybrids'*
21.30	Small Bulb Exchange

Saturday 4th October

08.00-09.00	Plant staging
08.30	Registration
09.00	Optional activities
11.30	The William Buchanan Lecture
	David Rankin – *'The Fourth River – Forrest's Legacy'*
12.30	Plant Show opens
14.00	George Sevastopulo – *'Burren: a stony place'*
15.45	The Harold Esslemont Lecture
	Robert Rolfe – '*Notable Anniversaries: some significant plant introductions from the past 75 years'*
19.00	Dinner
21.00	Plant Auction

Sunday 5th October

08.30	Registration
09.30	Gerben Tjeerdsma – *'The Flora of the Kurds'*
11.30	Robert Rolfe – *'Encounters with the Mile High Club'*
14.00	The John Duff Lecture
	Andrew Fraser – *'On Scotland's Hills'*

Club Events at RBGE, Brechin and Glendoick

Members are invited to participate in three events associated with the club during the first half of 2009: a snowdrop walk; a snowdrop gala; and a visit to Glendoick gardens. The two outside events have been timed to be at the best times for flowering. Further details of all these events may be obtained from Ian Christie on 01575 572977.

Snowdrop Gala

The Snowdrop Gala will take place at the Royal Botanic Gardens Edinburgh on Friday 20 February 2009, with several prominent speakers. Details of the event, arranged by RBGE, will be available on the SRGC web site www.srgc.org.uk.

Snowdrop Walk

This year's successful Snowdrop Walk at Brechin Castle is to be repeated from 11.30 a.m. to 4.00 p.m. on Sunday 1st March 2009; tickets will be £25 per head, to include a superb lunch in the castle dining room - a wonderful opportunity to dine in a room full of interesting treasures - followed by a visit to some outstanding snowdrops at Auldbar and at Maulsden by the River South Esk. The castle will be open only for the SRGC.

Glendoick Visit

Finally, there will be a visit to Glendoick Gardens between Perth and Dundee on Monday 11th May 2009. The price will be £17-50, to include a garden brochure and choice of lunch.

Background to the Visits

Brechin Castle and the snowdrop collections were described on pages 32 & 33 in Issue 120 of 'The Rock Garden'. For readers unable to visit Glendoick, we share here some background information, by courtesy of Kenneth Cox, whose family has over the generations defined the gardens and their importance both in international horticulture and Scottish gardening. Further useful and colourful information on Glendoick is available at www.glendoick.com.

Glendoick Gardens

Four brothers Cox established a successful jute business in Dundee in 1841. The firm expanded into Camperdown Works by 1849 and in 1898 Alfred Cox bought Glendoick House and estate. The house itself had been built around 1747 in the William Adam style for Robert Craigie, Lord

3 - *Rhododendron* 'Halfdan Lem'

Advocate of Scotland. Alfred and Helen Cox's child Euan was born in 1893 and later lived in London but in 1918 his life was changed by a chance meeting with Reginald Farrer.

Euan accompanied Farrer on a successful plant collecting expedition in upper Burma. Several important new plants were introduced, including *Rhododendron mallotum*. However, Farrer fell ill during the winter and died at 40; it fell to Euan to deal with their seed collections. He later told the story in the first of his many horticultural books, *Farrer's Last Journey*. Euan started the garden at Glendoick in 1921, clearing a little glen for rhododendrons, primulas, berberis and viburnums. The developing garden benefited from a load of semi-mature plants from Leonardslee and from one of George Forrest's later expeditions; it also received plants from collectors such as George Sherriff.

Peter, Euan's son, joined in 1951 at the start of the rhododendron nursery. The nursery expanded and, in 1963, Peter married Patricia Sherrard, another rhododendron lover. Glendoick Gardens was a small retail mail-order business until 1973, when the Garden Centre opened under Patricia's direction. In addition to the huge range of rhododendrons and azaleas, Glendoick now specializes in hardy camellias, kalmias and ericaceous subjects, Asiatic primulas, meconopsis, lilies, *Nomocharis* and other plants, particularly those collected by the family's own expeditions. The centre stocks a fine range of trees, shrubs and perennials. The nursery has expanded to the point that it is the largest retail rhododendron and azalea specialist in Europe, with worldwide export to places as far as Japan, Australasia and North America.

Interestingly for the enviro-friendly horticulturalist, Glendoick has resisted the United Kingdom trend for rhododendron production in containers. Only the most tender rhododendrons and evergreen azaleas are grown in pots at Glendoick because it has been found that: open ground produces better and easily-established plants; container production forces root-balls into unnatural shapes; and pot-bound

4 - Azaleas at Glendoick House

rhododendrons are hard to establish. An accompanying benefit has been that peat use is very low.

The gardens sit on a south-facing slope near the Tay Estuary and enjoy a Scottish east-coast climate, somewhat harsher than in the West where gardens such as Inverewe, Crarae and Arduaine flourish. Winters may reach extremes down to -18°C and summer temperatures rarely exceed 27°C. Annual rainfall is around 800 mm. The gardens therefore suit most alpines although a few plants have a little difficulty in ripening their growth and frosts may sometimes split bark. One particular feature of the gardens of interest to SRGC members is the effort put into the so-called 'Bird' rhododendron hybrids.

Early hybridizers concentrated on the larger rhododendrons but after the second world war attention turned to smaller species that had particular potential for small suburban gardens. At Glendoick, Peter Cox started breeding a hitherto largely neglected group, the small-leaved alpine and dwarf species. His first cross (*R. ludlowii* x *R. rupicola* var. *chryseum*) produced 'Chikor', a now well-loved and well-known rhododendron. It was followed by *R. ludlowii* crossed with the pale-yellow *R. fletcherianum* : the marvellous 'Curlew'.

Stimulated by such early success, Peter and Euan crossed systematically as many of the dwarf lepidote species as possible,

5 - *Rhododendron* 'Glacier'

concentrating on previously neglected yellows, pinks and whites. A stream of successful hybrids ensued: their names reflected Peter's parallel interest in birds. For example, the 'Bird' hybrids 'Teal', 'Chiff Chaff', 'Goosander', 'Wagtail' and 'Merganser' are all yellow; 'Ptarmigan' is white while 'Phalarope' and 'Snipe' are pale lavender-pink *R. pemakoense* x *R. davidsonianum* selections with great popular appeal. 'Snipe' was crossed with *R. racemosum* to produce the bright pink 'Pintail' that is now grown at Glendoick in place of its parent.

For the rock gardener, many of these hybrids have been a boon. 'Wigeon' is one of the hardiest 'Birds' and thrives in parts of North America and other severe climates. Because it is very small and slow-growing with fine flowers and handsome bronze winter foliage, many of us are familiar with 'Wren' as the cross of *R. keiskei* 'Yaku Fairy' and *R. ludlowii*. 'Yaku Fairy' also produced 'Quail' when crossed with a dark dwarf form of *R. glaucophyllum*. These are only a few examples taken from the long and inspiring full 'Bird' list. All are a tribute to sustained and careful hybridizing over many years that continues to this day with the search for hardy compact scented dwarf hybrids which can grow outdoors at Glendoick as well as in the milder climate of west Scotland. We hope to see some of this work during our visit.

6 - *Rhododendron* 'Bird' Hybrids

Growing Tulips in Pots

Mike Hopkins

I have been struggling for some years to grow species tulips in pots and to bring them to a standard where they may be shown. Despite setbacks I have made steady progress: I can now keep bulbs going more than two years, increase quantities in most cases, and induce them to flower. Transporting them to a show in good condition with their flowers open for the judges is another matter – and probably the thorniest of all. Condition is simply a question of what I term hardness, and very careful handling. An open tulip may look perfect in the frame in bright sun but, as soon as it is moved, it droops, wilts & sulks, the petals close up and it can look very tatty, especially at 6 o'clock on a cold Saturday show morning. Tulips seem to resent movement of any kind and anybody who has put one on the bench will know what I mean. Perhaps they are not destined to be show plants and we should be content to enjoy them in the frame and in the garden. But I can't really believe that; some people have done it.

I start with this question of *hardness*: I do not mean *hardiness*, although this is also relevant. When I first started, I protected my plants totally during the winter and spring which - in retrospect - could have contributed to the very soft growth I had at that time. It took several trips abroad to see tulips in the wild before it dawned on me that most are very hardy and do not need much, if any, protection - even in Aberdeenshire. However, some protection is still necessary to control water levels and to keep flowers & foliage from weather, pests and bird damage: we are host to the largest parliament of magpies in the North-East. They like nothing better than a juicy, young and tender tulip shoot, fritillary, narcissus or crocus – they're not fussy; and don't let anyone tell

7 - *Tulipa turkestanica,* Kazakhstan

you that birds won't go into a frame or under a net – they do! So now I grow tulips - and in fact all bulbs - in a cold frame with wire mesh sides and glass top. The glass is kept on all winter but is increasingly open as spring progresses. In line with this policy, I have more and more put species tulips in the garden. Mostly they do well although, apart from *Tulipa tarda* and *T. sprengeri*, they do not increase very quickly, if at all; many sulk and do not flower again for a couple of years. To round off the habitat aspect: the frames used to sit on a ground-level sand bed about 30 cm deep where pots were plunged as deeply as possible. The frames were raised in 2007 to about 120 cm and it remains to be seen if they will do better with this additional drainage. They will probably need more attention to watering but, at a more convenient height, this should not be too much additional work.

Another thing that may contribute to soft growth is nutrient supply: too much Nitrogen and leaf growth is soft and long, compelling stems to grow longer to bring the flowers above the foliage. This all contributes to the plant's physical vulnerability. Despite drastic reductions in Nitrogen in my compost over the years, I am still guilty and more reductions are imminent. So what I mean by *hardness* is the plant's ability to stand up, even when moved, with upright leaves and flower stems; it is a combination of growing hard, minimizing Nitrogen and maximizing light. Inducing the flowers to open is largely a matter of luck, depending entirely on a combination of warmth, light and sun - three things largely absent from Scottish show halls in spring.

8 - *Tulipa humilis,* Lake Van

I have left the largest contributory factor in producing long lanky growth till last and it is - of course - lack of light. Tulips start their growth very early: in some cases shoots appear above the top dressing as early as November. Growth continues throughout the winter when day lengths are shortest and cloud cover is maximal. Nothing much can be done other than keeping protective glass as clean as possible and perhaps using artificial light. A case may be made for not potting the bulbs on or for withholding the first watering as late as possible in the year. Unfortunately, these merely provoke slightly later blooming as the plants try to catch up. My own take on this is to start growth as early as possible so as to harden early growth during the autumn and early winter - which tends to be mild here in eastern Scotland - before the worst of the cold months of January and February. As I write, it is mid January and most potted tulips are well advanced in leaf growth.

9 - *Tulipa heterophylla,* Kazakhstan

The watering regime is a crucial and possibly the single most important aspect. Bulbs in their natural habitats are - by and large - very dry during dormancy. They are woken by autumn rains, followed by ample moisture during their growing season up to the point where foliage starts to die. Under glass, this pattern may be replicated & controlled and indeed is the only possible way to grow many bulbs under Scottish conditions. Ian Young's advice on watering bulbs is to simulate autumn rains by flooding each pot twice and then to keep the plunge or compost just damp for the remaining period until strong leaf growth starts, when additional watering and feeding will be necessary. This feeding regime is not exactly matched in Nature but is needed for our intensive growing methods. In the garden it is much more difficult - even impossible - to control conditions to any great degree. However, if recent summer weather patterns in the North-East of Scotland indicate anything, we will soon be in a position to grow all bulbs outside!

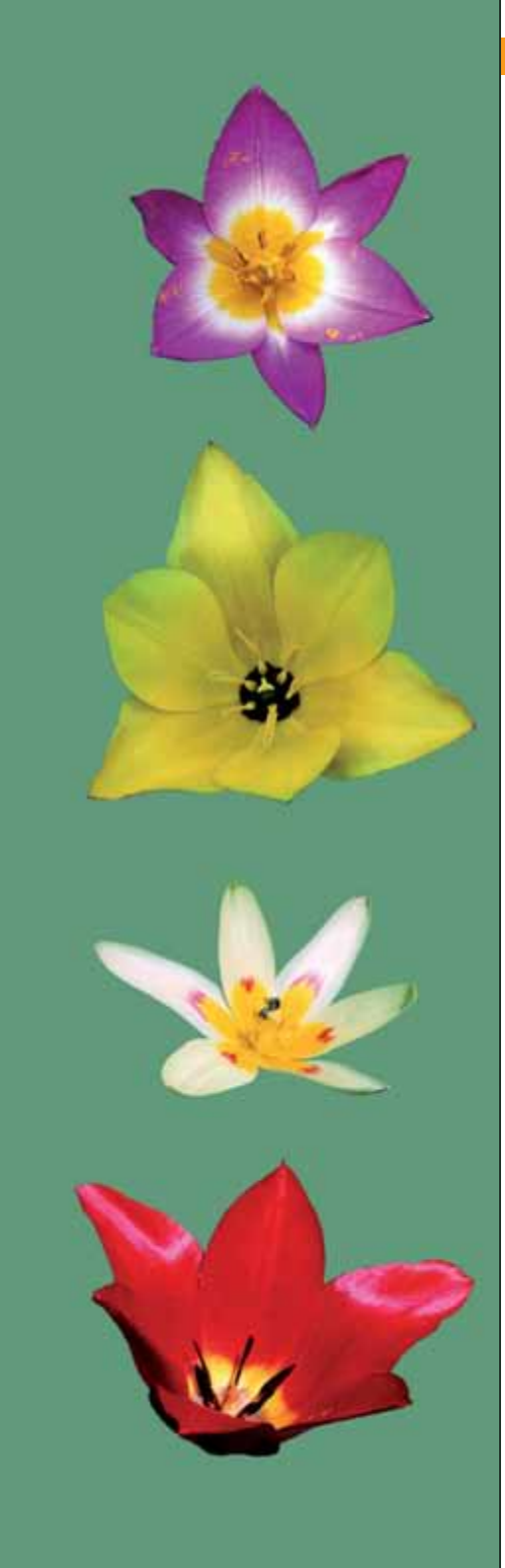
Purely in the interests of science, I tried to dig up a plant of *Tulipa heterophylla* in Kazakhstan. I was almost down to 30 cm and still saw no sign of the bulb. This emphasizes my next point – tulips must be planted deeply. At 30 cm the soil was very cool despite high ambient temperature and was quite dry despite recent snow melt. To me, this makes nonsense of the claim that bulbs must be "baked" in summer. The average clay pot

10 - *Tulipa orthopoda*

is not deep enough; long toms are enormously expensive and seem especially vulnerable to frost. Deep plastic pots are available but don't look particularly good. The choice of plastic or clay does not seem to matter although it may become an issue once among the finer points of obtaining that last ounce of condition that makes the crucial difference on the show bench. I still grow most of my tulips in normal depth clay pots but plant the bulbs in the bottom third of the compost; this currently produces reasonable results. The bulbs are covered with compost to about 25 mm below the rim and then topped with a thin layer of grit, leaving about 18mm at the top. Once growth is well advanced, this space allows for top-up of grit, improving stem support, providing clean topping for the show bench and hiding a multitude of other sins. Some commentators advocate more grit but I feel that, as it is, there is already too little compost. Again, it may be something to try when dealing with the finer points. For the future, long toms will be tried now that I have much deeper sand beds.

Like all bulbs, tulips appreciate company and, as more bulbs become available, the more you pack in a pot the more they like it. When starting out with perhaps three or five bulbs of a new variety or species, pack them close together and do not spread them out; this makes all the difference. On the same theme, I have found that growing only one bulb often ends in failure. On the other hand, you rarely see a large group of closely packed bulbs in the wild; rather - they are quite widely spaced. There is a contradiction here in the ways that bulbs multiply and like company that is contrary to some experts' advice. Nevertheless, a pot on the show bench with seven to thirteen flowers looks just right and I have found too many bulbs to pose their own problems, not least of which are size and weight!

I have briefly touched on compost but not on its composition. I have varied this over the years; at first it was two thirds John Innes (JI) No. 3 & one third grit; this produced the lush and soft growth mentioned earlier - few flowers, lots of leaf and dwindling bulbs. Currently, I use half JI No. 2 & half grit. In the coming year, it will be half JI No. 1 & half grit with additional Potassium Sulphate and bone meal. In 2007 I added about a third by volume of leaf mould. Related to compost is the feeding during the growing period. Earlier, I used occasional tomato feed but now I use it



at every watering, with occasional extra Potassium Sulphate. I am a bit wary of adding Potassium Sulphate to the compost as originally planned because it is used very quickly and may therefore not benefit growth - this remains to be seen. All bulbs seem to need huge amounts of feed. This does not square with conditions in the wild but may relate to so many bulbs in a pot competing for relatively small amounts of feed. Bulbs in the wild can send out long and searching roots for nutrients and water, whereas plants in pots are correspondingly restricted.

There are many different things to try and it's important when conducting trials like this only to change one thing at a time. This is a scientific approach - not that my methods are by any means completely scientific - if more than one condition is changed at a time you can never be sure of the causes of new results. The drawback is that such trials take so long, as you have to wait a year to get the results! I tend to favour the engineering approach. Faced with an irate client whose equipment isn't working and who is losing money by the hour, there is no time for many tests: change several things at once and make one or fewer tests. When the problem is fixed you may not know why - but the client is happy. So it is with these plant trials, at least at the

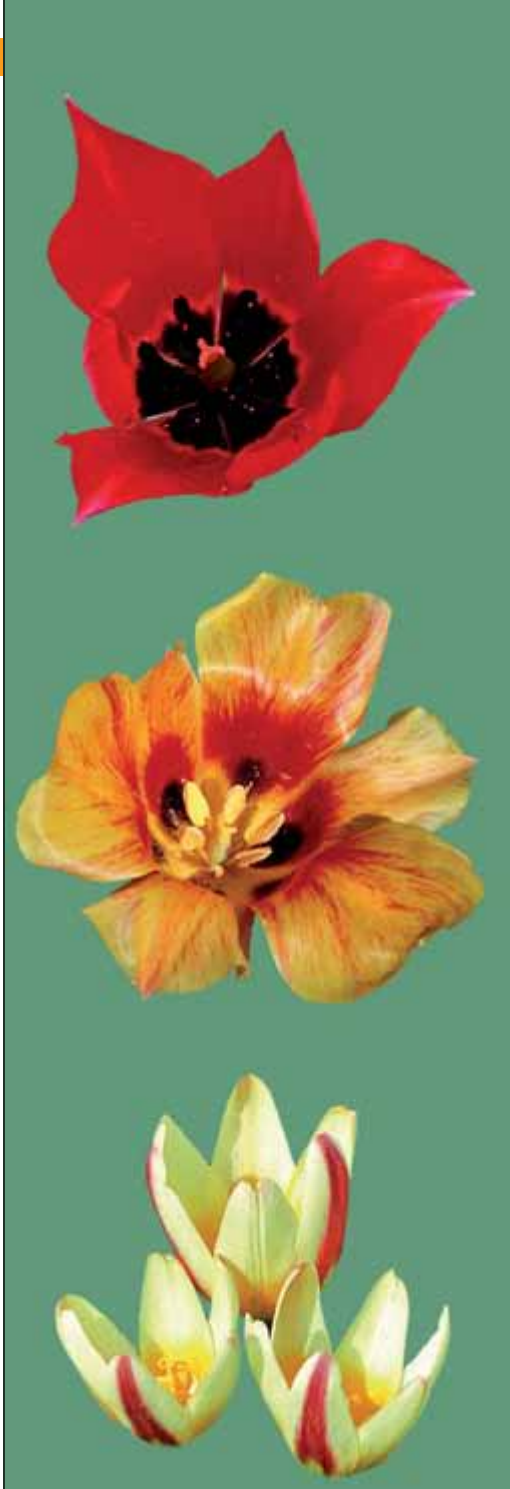
11 - *Tulipa bakeri*
T. zenaidae
T. kaufmanniana
T. humilis

practical gardening level, and especially when pension age is behind you! So I change several things at a time and remember to make all the same changes after a success.

A Bit of Botany

Tulips come mainly from Eastern Europe & Central Asia. They grow on poor scrub land or meadows, with hot dry summers and cold dry winters. Species fall into one of two broad categories à la Brian Mathew (Timber Press 1997), corresponding to the subgenus *Eriostemones* and *Tulipa*. From a casual point of view, these are either multi-flowered, starry and opening flat in the sun, or single-flowered wine goblet types; even the wine goblet types try to open flat in very hot and sunny conditions. As might be expected, there are differences in the stigmas, anthers, leaves and stems. The main differences - particularly the degree of hairiness - are normally hidden from view in the bulb tunics.

My personal view may differ from others, even to the extent of occasional disagreements with experts. Nonetheless, Table 1 lists my general assessment of species and named varieties. All are readily obtainable from a number of nurseries; I have avoided the rarer and more difficult ones. Rarity and difficulty are relative terms, so what



12 - *Tulipa julia*
T. greigii
T. kaufmanniana

I really mean is “those I have not yet tried to grow or are difficult to obtain in cultivation”. There is little point in assessing easiness: with a few noted exceptions, I now find all those listed to be similar. I have referred to Richard Wilford (Timber Press 1964) for naming and grouping. I am concerned at the great variance in naming, particularly in nursery catalogues; there is little problem with named varieties and hybrids but species seem very confused. Despite the confusion, it is usually reasonably clear what species or form is being described – a testament to the knowledge that is around. I confess that the origins of many of my bulbs are lost and indeed one or two names are uncertain through loss (birds again!) of labels. I have been more careful in the past two years to use two labels, one of which I bury completely. There is also a large unlisted number - half as many again - of recent species obtained and seeds germinated for which I yet have little data or experience.

Table 2 lists species seen in the wild but not yet grown. More than anything else, what strikes me about plants in the wild is the variation even within a small colony - and not just in tulips. Is this not what natural selection is all about? It surprises me that experts may go to great lengths to name a particular plant while seemingly ignoring the natural variation. This, I suppose, goes some way to explaining the difficulties in trying to name a particular plant.

Let’s look at naming: *Tulipa humilis ‘Albocaerulea Oculata’* for example. In just a few pages from the internet I obtained: *Tulipa humilis albo-caerulea, Tulipa pulchella coerlea-oculata, Tulipa Pulchellus caerulea, Tulipa humilis* var. *pulchella Albo Caerulea, Tulipa humilis* var. *pulchella Albo Caerulea Oculata* Group, *Tulipa puchella ‘Albo*

13 - *Tulipa batalinii*

Caerulea' ... I could go on. Some are simply spelling mistakes or irregularities in form but there is discrepancy in whether this is a variation of *humilis*. The general consensus is that it is. There is similar confusion for several other species and those doubtfully named by vendors. Who, on superficial examination, really knows the difference between *T. turkestanica*, *biflora* and *bifloriformis*? I have seen *T. turkestanica* in the wild in Kazakhstan before I made serious attempts to grow tulips, so my memory is suspect. Looking at my photographs now, there is little to gauge size - the deciding factor - and of course I have no bulb details. I have *T. biflora* and *T. bifloriformis* in captivity but I feel they are, together with *T. turkestanica*, readily interchangeable. I suspect naming has been confused within the distribution network. Lumped into this group are *T. polychroma* and *T. orthopoda*, both of which I find very distinct. *T. polychroma* is instantly recognizable, as is *T. orthopoda*, which is very small. This emphasizes something else: naming and grouping are not necessarily to do with objective similarities but more to do with technical differences that are neither obvious nor possible to determine without specialist procedures or digging up the bulb. DNA testing and chromosome counts are helping to clarify taxonomy but it remains difficult for the amateur.

I hope that these reflections of an amateur tulipophile provoke thoughts and comments and increase your interest in growing species tulips. It would be wonderful to see more - particularly the less well-known ones - on the show bench. I feel that many people have been deterred by the seemingly difficult task of producing an acceptable pot of tulips but - as I have said before - it can be done!

14 - *Tulipa humilis 'Albocaerulea-Oculata'*

Table 1 - Species Tulips in Pots and Garden

Colour Key: *Section;* *Species;* Form/Variation/Synonym/Common Name; General description

Australes; urumiensis; Very similar to *tarda,* more yellow and not much white. Early to mid April. Good in pots, not so easy to flower.

Australes; sprengeri; Tall, 45 cm, stunning wine-glass type, slim red flowers with bronze to yellow centre in June. Almost a weed once established. Sets prolific amounts of seed which propagates readily. Flowers in four years. Stands up to weather despite its height. Not tried in pots - there is no need. Poor foliage.

Australes; (orphanidea Whittallii Group); whittallii; Tall, 45 cm, stunning wine-glass type. Slim orange to green streaked yellow flowers. Very attractive, unusual colours. Seems to grow in pots.

Biflores; tarda; Short. Yellow petals with white tips. Two or three flowers per stem. April. Starry type. Very hardy. Grows anywhere, naturalises quickly. Could become a weed (but a nice weed!). Grows very soft and lanky under glass & in pots.

Biflores; turkestanica; Medium stems. Many small white starry flowers with yellow centre petals, up to five blooms per stem. Yellow or black stamens. Late March to early April. Excellent in pots. There is said to be a commercial variety which is taller with black stamens. I seem to have both forms.

Biflores; biflora; Difficult to separate from *turkestanica*. It may be that one of the two forms of *turkestanica* above is in fact *biflora*.

Biflores; (biflora); polychroma; Distinctively globe-shaped white flowers. Many flowers per stem. Opens well with a bit of warmth & sun. Good in pots.

Biflores; neustreuvae; Short stemmed, with two or three starry yellow flowers per stem sometimes with white tipped petals, bronze outer shading. Not tried in pots.

Biflores; orthopoda; Biflora type flowers, white with yellow centre. Very short stems. Very early, the first to flower for me in late February or early March.

Clusianae; (linifolia Batalinii Group); Several named hybrids, all worth growing. The name *batalinii* has been used for the yellow form of *linifolia*: *batalinii* - small, wine-glass yellow flowers & upright pale-green leaves; 'Apricot Jewel'; 'Red Hunter'; 'Bright Gem' - yellow flowers; 'Bronze Charm'; 'Red Gem'. Do well in pots. Less prone to droop than most.

Eichleres; greigii; Large wine-glass type flowers in many shades of red, occasionally yellow, with black centre, Prostrate, broad, curly edged leaves, sometimes spotted. Good in the garden - too big for pots. Parent of many modern hybrids. Variation in the wild is considerable including all shades from yellow to red with and without veining, streaking and white marbling. The latter may be due to virus. Leaves mostly spotted but not all. Seen all over Eastern Kazakhstan.

Kolpakowskianae; kolpakowskiana; Medium to large sized, starry type flowers of several colours, mainly yellow, sometimes red. Erect narrow grey-green leaves. Red ones called by some commentators *ostrowskiana*. One of the first to show in November.

Saxatiles; humilis; caerulea-oculata; Short-stemmed white flowers with steel-blue centre. wine-glass type. Early April. Was expensive - not so anymore. Difficult in pots but stunning. Very confused naming.

Saxatiles; (humilis); pulchella; Short stemmed purple flowers with black centre sometimes with white edge. wine-glass type. Early April. Often available in garden centres. Very easy. Many commercial hybrids available but not tried. Generally regarded as one of the *humilis* variations.

Saxatiles; humilis; Short. Lilac with yellow centre. May. Good in pots. Reliable. Seen all over eastern Turkey in stony pastures and rocky hillsides.

Saxatiles; humilis; 'Eastern Star'; Short, upright, narrow leaves. Purple flowers with yellow centre. Seems to be easy.

Saxatiles; humilis; 'Lilliput'; Very short-stemmed dark red flowers, wine-glass type. Had no luck growing this despite three attempts.

Saxatiles; aucheriana; Short. Lilac with yellow centre. Very similar to *humilis* but tends to be taller and later flowering. May. Very good in pots. Reliable. My most successful show tulip but does need lots of warmth and light to open fully.

Saxatiles; cretica; Short, very small wine-glass type, flowers white tinged pink. Leaves narrow, sharply "V" shaped, curled, prostrate, purple-edged. April. Was difficult to obtain, but now easier. Really stunning, seems to like pots. Does well from seed. One of the four (or five) Cretan tulips*. One of the first to show shoots in November in Eastern Scotland.

Saxatiles; saxatilis; Superficially, a much larger version of *bakeri* with paler colours. Too big for pots, grows well in the garden but may sulk for a year or two until established. Some commentators say that *bakeri* and *saxatalis* are one and the same – but have they seen them in the wild? *Saxatalis* is stoloniferous; *bakeri* bulbous. One of the four (or five) Cretan tulips*.

Saxatiles bakeri; Short, almost prostrate. Small, wine-glass type, dark lilac to purple flowers with dark-yellow centre. A commercial variety is 'Lilac Wonder', which tends to have paler colours, more like *saxatalis*. Maybe that's why some people have grouped them. One of the four (or five) Cretan tulips*.

Orithyia; heterophylla; Dark-green leaves. Small flowers; yellow with grey to black stripes outside. Reluctant to open fully, even in good sunlight.

Table 2 - Species Tulips only seen in the Wild

Kolpakowskianae; zenaidae; Short-stemmed red or yellow flowers. Broad green leaves. Merke Gorge, Eastern Kazakhstan in pasture. Never found a commercial source but obtained some seed this year.

Eichleres; kaufmanniana; Predominantly whitish with pink vertical stripes but many variations in the wild. Dzabagley River valley and Siram Su in Eastern Kazakhstan in pasture and scrub. One parent of many hybrids. Never found a commercial source of the true species.

Eichleres; julia; Short-stemmed red flowers, occasionally yellow. Prostrate grey-green leaves. Eastern Turkey near Lake Van in dry gravel slopes. Found commercial source this year.

Eichleres; albertii; Large red flowers with broad grey-green leaves. Tamgaly-Tas, Eastern Kazakhstan in gravel, near-desert conditions. Never found a commercial source.

Australes; doerfleri; Medium size dull red flowers with black centre. The fourth Cretan tulip*. Dry gravelly phrygana (scrub, French - *garrigue*) above Spili.

Biflores; dasystemon; Found together with heterophylla at the Big Almaty Lake in Eastern Kazakhstan in high stony pasture at 8000 ft above Almaty, snow still lying in the area. Short stem, yellow flowers sometimes with grey to black stripes on the outside. Differences are in the bulbs. Never found a commercial source of the true form.

Kolpakowskianae; ostrowskiana; Small starry type in many pale colours. In gravel slopes, Eastern Kazakhstan. Name given to a red form of *kolpakowskiana*. However, plants seen in Kazakhstan were of a whole range of colours, mostly dingy mauves, browns, oranges.

Australes; sylvestris; Medium size, 8-20 cm. Yellow flowers. Roadside meadow, Pindos mountains, Greece, most flowers over, so not a good show. Naturalised throughout northern Europe including the UK.

* The 'fifth' Cretan tulip, *goulimyi,* seems to be part of the myth as I can find no credible evidence of its existence in Crete, although it does grow in the Peloponnese.

Lines to the Clay Pot

Among the 75th Anniversary displays at 'Explorers' in Pitlochry, visitors will find many mementos from the SRGC's history. For those who are unable to visit the garden, we repeat here a poem on display there to our indispensable ally, the great Clay Pot.

Some of us prefer terra-cotta (unglazed clay) pots for their aesthetic qualities but there are other more practical advantages. They provide a healthy environment by allowing air and moisture to the roots at the edge of the soil ball. The porous pots wick excess moisture away from the soil so that gardeners who overdo their watering may benefit - although others who wait for their wilting plants to shout for water might be better off with plastic. The clay pots have thick walls to protect roots from damaging temperature changes and their weight anchors them in the wind.

15 - A family of pots in waiting

On the other hand, moisture loving plants such as ferns may dislike the drying effect of clay pots. The pots may form a white crust of evaporated minerals which, despite its soothingly nostalgic appearance, some folk find irritating to see. Frost and gales can wreak havoc with fragile clay pots.

Plastic pots are light, strong, flexible, chemically inert and safe for growing plants. They are available in kaleidoscopic colours, lending themselves to eye-catching garden design. The impermeable plastic conserves water, making them an excellent choice for moisture-loving plants, but do make sure that they have drainage holes! Unless carefully positioned, thin plastic walls expose the roots to greater extremes of temperature – black pots may prove lethal in strong sun.

Age is not as kind to plastic pots as it may be to clay: the sun bleaches them, gardening roughens and cracks them; ultraviolet makes them brittle. They do not recycle as well as clay (Earth to Earth ...). Irrespective of these arguments, it is abundantly clear where the poet's preferences lay in a previous issue of this journal ...

Oh! Bonnie, sonsy, couthie pot
Of thy same kind a graidly lot
In ilka size I have a store
Will last me mony a season o'er.

I canna thole these plastic yins!
I'm share it's no a gairner's sins,
But raither only siller's lack
That gars him buy them, red or black.

A pot o' plastic cracks in twa;
It is nae ony use at a'.
There's naithing ye can dae wi' it –
Ye dang it in the rubbish pit!

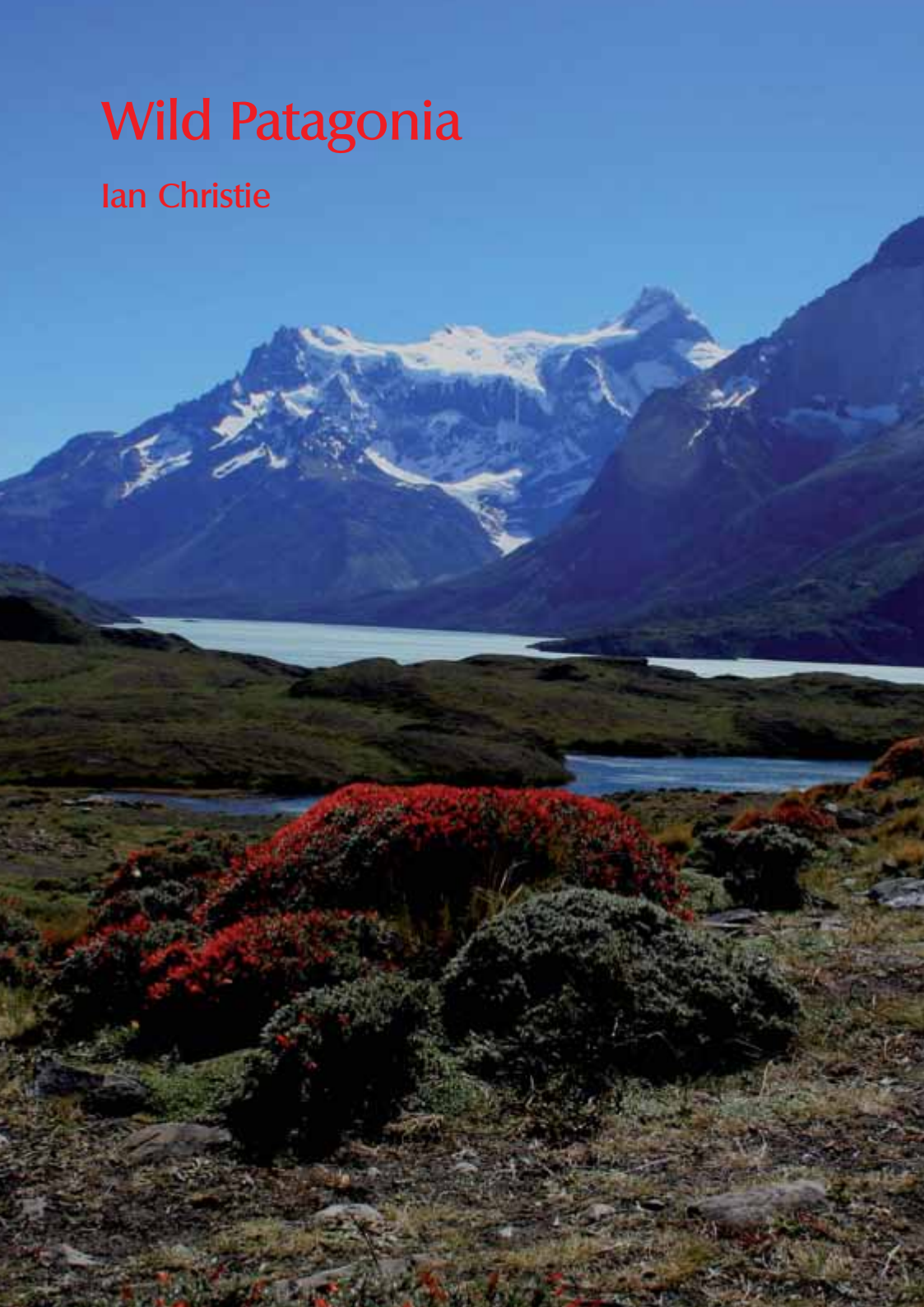
But gin a puir old clay pot brak,
Then every single bit I tak
An' wi' it crock anither yin.
Bless me! Its use is ne'er din!

Oh! Had I but a mound o' clay,
I'd mak' my ain pots ony day,
An' ne'er gie a tinker's dash
For a' that lifeless plastic trash!

Jean Arré

Wild Patagonia

Ian Christie



In November and December 2007 a group of keen European rock gardeners made a botanical trip to Chile and Patagonia. We flew from Buenos Aires to Rio Gallegos, drove to Stag River and on to Puerto Natales, Sierra del Toro and the dramatic Torres del Paine National Park. We visited the glacial centre of El Calafate (named after the common local shrub 'calafate', *Berberis darwinii),* Estancia La Angostura, El Chaltén, the Perito Moreno Glacier and Estancia La Maipú, a huge sheep ranch. Despite such exotic surroundings, things went like clockwork and it is a tribute to our very switched-on team of Danielle our driver and Guido our guide that we travelled so far, saw so much, marvelled at such an astonishing variety of alpines and enjoyed ourselves so immensely.

Stag River, a very famous name within the SRGC, is where the late Ruth Tweedy lived. SRGC journals from around 1956 reveal that she introduced many fine plants: *Oxalis, Calceolaria* and, from the USA, *Lewisia tweedyi* was named in her honour. Stag River is a huge and sprawling estancia of 25,000 acres (half the size of the Scottish county of Angus) where our group enjoyed generous hospitality from Ruth's daughter Julie and Robin Johnston. The estancia has wonderful horses, sheep and cattle which graze the endless undulating acres as far as the eye can see. We saw areas of *Nothofagus antarctica* forest, some just surviving by a thread, others a wonderful vivid green; amidst the branches grew Indian Bread,

16 - *Anarthrophyllum.* Torres del Paine

17 - Indian Bread: *Cyttaria darwinii*

Cyttaria darwinii, a strange parasitic plant that distorted them into unusual sculptures. The lower grassland or steppe lay at an altitude of between 250 and 400 metres. We climbed to 1000 or more metres on mountain screes where we found some very amazing plants. It is little wonder that we never hear about *Hamadryas, Benthamiella, Nassauvia,* and *Xerodraba,* for these are probably impossible to grow except by a few dedicated Alpine experts.

Our accommodation was very comfortable and we were always sure to get up early in the mornings thanks to the cockerels that started to crow around 0530. We had a great time with Julia and Robin, ably assisted by their family. Julie had rescued a wildcat from the forest - a

18 - *Hamadryas sempervivoides*

19 - *Hornus mcbeathii*

magnificent creature with claws like daggers. At low levels the wind was always blowing but on the high screes it felt like a hundred miles an hour, with hailstones that could take your nose off. This was indeed a rare opportunity to witness this very harsh terrain - and worse was to come. The plants shown here are just a few of those we saw on a very memorable few days.

Puerto Natales is a small town founded in 1911 as a port for the sheep industry. During the last half of the 20th century it declined and many inhabitants started to work in the coal mines of Río Turbio in Argentina. It has since become the base for excursions to the Torres del Paine National Park. We stopped here for lunch and visited the few shops where we were able to buy some books and have a good cup of coffee. We drove down to the port overlooking Última Esperanza (Last Hope)

20 - In the mountains

21 - *Hamadryas delfini*

Sound, an inlet that stretches from the mouth of Eberhard Fjord to the outskirts of the heavily glaciated Monte Balmaceda. The sound receives the waters of almost all the rivers and lakes in the area of Torres del Paine National Park via the Serrano River. It is a huge expanse of water with Black Swans near the shore. Under a perfect clear sky we were awe-struck by the views of our next destination, the Paine Grande, some 120 km away. Our trusty bus drove us across endless grassland but, thankfully, the journey was broken by roadside stops to botanize. These roads were merely gravel and sand that raised clouds of dust as we motored along at an altitude from 250 to 350 metres. As we neared Torres del Paine we all

22 - *Hamadryas* hybrid

23 - *Hamadryas delfini*

24 - *Hamadryas kingii*

had to get out of the bus while it crossed a rickety wooden bridge over a very fast flowing river, which was negotiated with great care!

Our first day was sunny and bright, making life very pleasant, and we set off early following a slightly uphill route. The path was flanked by many interesting plants: *Olsynium biflorum, O. junceum, Oxalis enneaphylla, Calceolaria, Gaultheria,* and several large bushes of *Embothrium coccineum* which were in full bright scarlet-red flower. Our next finds were two superb orchids. First, *Codonorchis lessonii* is known locally as the Dove Orchid although some books term it incorrectly the Dog Orchid; seeing it, you would agree this very attractive orchid looks very like

25 - *Hamadryas kingii* hybrid

26 - *Hamadryas kingii*

27 - Above & 28 - Left:
Benthamiella patagonica

a little dove. Secondly, *Chloraea magellanica* offered an incredible combination of subtle green colours; I would really like to grow this one but fear it is probably impossible. The steady climb was such a very pleasant walk then, as we started to descend, the views across large deep-blue lakes to the distant mountains became breathtaking. At the edge of the steep downward path we came upon very unusual almost coal-black stone scree where the very best *Oxalis enneaphylla* grew. At first I thought these to be a different species because they were so compact, with superb leaves and flowers, but our expert alleged that this owed to the growing conditions.

29 - Below & 30 - Right:
Benthamiella azorella

31 - *Nassauvia juniperina*

The next day we again set out early along this pathway but after a mile or so headed steadily upwards towards a mountain top, crossing over *Gaultheria, Oxalis* and *Calceolaria* that now didn't merit a second glance, until at last around 1200 metres we came upon an unbelievable

32 - *Nassauvia pygmaea*

33 - *Codonorchis lessonii*

34 - *Chloraea magellanica*

35 - *Chloraea alpina*

36 - *Oreopolus glacialis*

Above: 37 - *Xerodraba pectinata*
Left: 38 - *Nassauvia* species

scree ablaze with the colour of several hundred *Oreopolus glacialis* in full flower. We were all so excited with this find that we spent an age here. It was well worthwhile, with numerous other stunning plants found in the scree: four *Nassauvia* species; *Moschopsis, Benthamiella, Xerodraba* and - the real star of the day - *Leucheria leontopodioides.* Our day here was barely credible, there were so many wonderful plants. We eventually had to depart for El Calafate, a fairly big town that seems to support a

39 - *Adesmia salicornioides*

Right: 40 - *Xerodraba pectinata*

thriving industry by using the fruits of *Berberis darwinii;* it must be torture to pick these; as is well known, the spikes of this plant are almost lethal but we found Calafate jam to be a very tasty liqueur-flavoured ice cream nevertheless.

We had another wonderful day, climbing a steep path to the nearby mountain top. The usual fierce winds drove sand into our faces, it was biting cold, and the top was a lunar landscape. Huge house-size boulders sat on ground that was mostly a mixture of

41 - *Leucheria leontopodioides*

42 - Leucheria hahnii rosea

43 - *Calceolaria polyrrhiza*

sand and gravel. I never expected to find any plants ... but surprises lurked round every corner: superb cushions of *Xerodraba, Azorella, Junellia, Adesmia* and *Bolax* - every plant we had already seen, but here growing in very different conditions. I think that the pink form of *Primula magellanica* reached perfection in this area. Moving on, we headed to the Perito Moreno Glacier. This awe-inspiring glacier is a huge expanse of ice-

44 - *Oxalis enneaphylla*

45 - *Embothrium coccineum*

46 - *Chloraea alpina*

47 - At Perito Moreno Glacier

48 - *Olsynium hybrids*

49 - In the mountains, Perito Moreno

50 - Icebergs at Perito Moreno

mountain with a cutting Siberian wind but, believe it or not, huge bushes of *Embothrium coccineum* grew and flowered nearby within a few metres. We had a good walk around and returned down the road through the forest where we saw large colonies of *Codonorchis lessonii* and then a magnificent new orchid, *Gavilea lutea,* with bright golden-yellow spikes.

We stayed a day or two at Estancia Belgrano which sits amidst the

51 - *Embothrium coccineum* at Perito Moreno

52 - *Calceolaria uniflora* var. *darwinii*

53 - *Oxalis loricata*

54 - *Viola auricolor*

55 - Anne Christie with *Junellia,* cushion & varieties

Perito Moreno National park. A winding dirt track through the park was surrounded by huge mountains, some dark-red and others very jagged like newly-set metal. On a walk along the undulating steppe we found hundreds of *Calceolaria uniflora* var. *darwinii* in very variable colours and each one was outstandingly beautiful. To our delight we then found our first rosulate viola, *Viola auricolor.* We continued onwards to find many more violas, all at their very best and each better than the previous, until at last we found the Forrest medal winner on a steep rocky outcrop. We also found *Primula magellanica* with brilliant white flowers in a strong colony on a grassy slope. Among the other interesting species we saw

56 - Monte Fitzroy (Cerro Chaltén)

were *Nassauvia lagascae, Adesmia, Astragalus, Junellia* and *Leucheria.* During our return to the Estancia, we stopped to investigate the rolling steppe because we had information that *Oxalis loricata* grew here on the very slithery scree of the steep-sided steppe. Sure enough, we found many variations of *Oxalis loricata;* it is a rare plant in cultivation although there are many impostors. Now that I have seen the genuine plant with its superb furled leaves and very fine flowers, everything else seems secondary.

We travelled onwards to El Chaltén, a very basic town where the sand-laden wind was very harsh and every building rattled every hour. The wonderful collections of plants were similar to those we had already seen but it was a most interesting experience. I was certainly impressed by the huge mountain of Monte Fitzroy (Cerro Chaltén), with its tall and jagged granite and sandstone peaks. Our drive in the bus

57 - *Gavilea lutea*

58 - El Calafate

59 - *Neobaclea crispifolia*

60 - *Petunia patagonica*

61 - *Ourisia poeppigii* and waterfall habitat

62 - *Primula magellanica alba*

63 - *Viola auricolor*

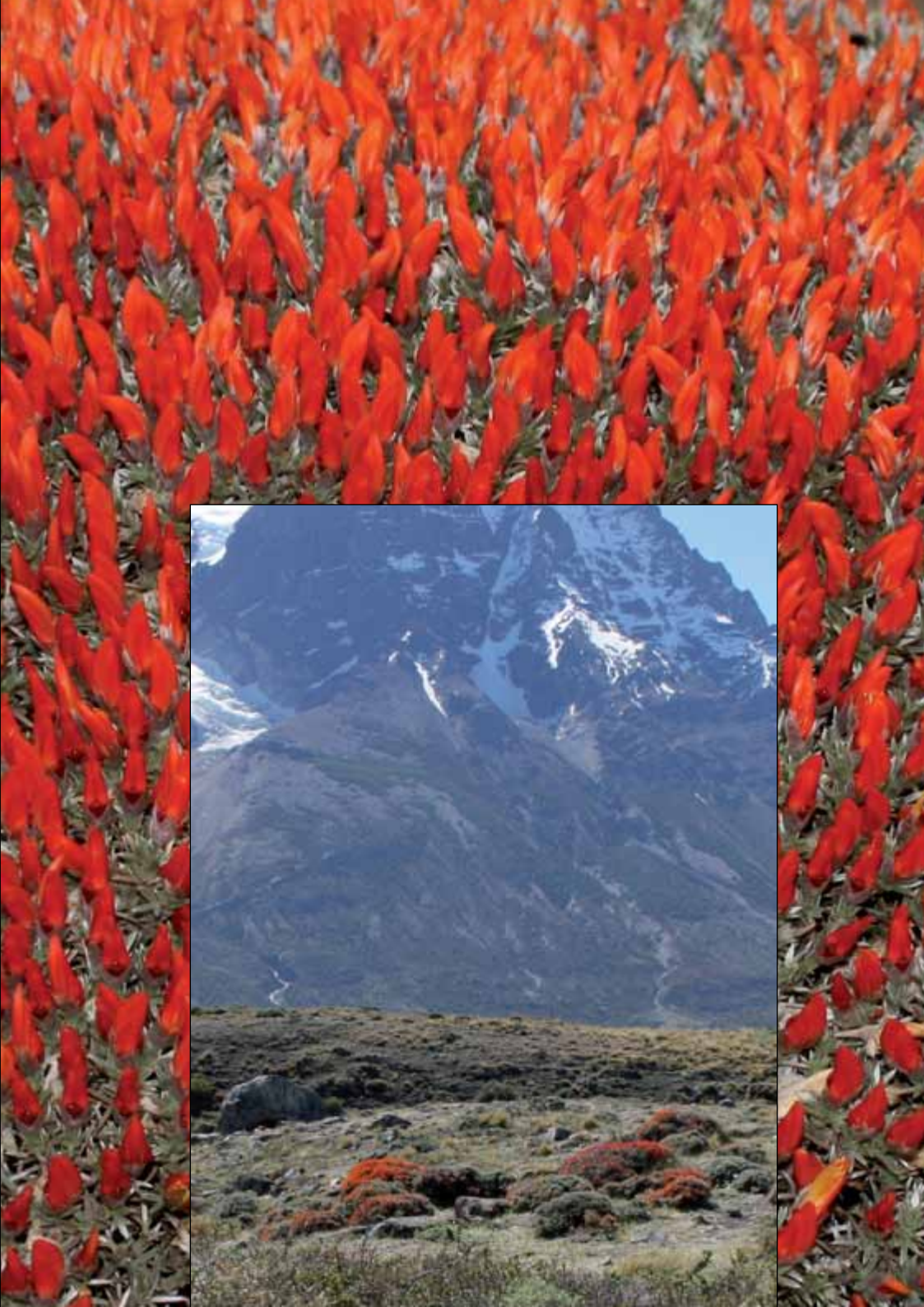
continued across more undulating terrain while great sheets of *Junellia* in full flower brightened our journey and we once again saw *Anarthrophyllum desideratum,* the Scarlet Gorse. New and rare plants seen along the way were *Petunia patagonica* and two cacti that I had never expected to find – the yellow *Austrocactus patagonicus* and a remarkable deep-pink form of *Pterocactus australis* growing at the roadside in almost pure sand. I climbed a rocky outcrop, only to find hundreds of *Calceolaria uniflora* var. *darwinii* and *Calceolaria polyrrhiza* growing together with very many wonderful hybrids of *C. uniflora* and *C. biflora.* These were amazing combinations and Nature had certainly produced some winners here.

We felt compelled to stop at one very spectacular roadside where several hundred breathtaking plants were in full flower. Our team split up to have an in-depth look around and within minutes a huge shout of *"Hurry Hurry!"* rang out. We all ran down a nearby bank to find the most stunning yellow form of *Anarthrophyllum patagonicum* with reds and oranges growing side by side. I do not think I will ever see such an extraordinary group again.

I find it an almost impossible task to write about such a superbly rich botanical trip and I have mentioned only some of the flora that we saw. It was an unforgettable treasure trove, with wonderful friends, good food (and some wine). I intend to write again in a future journal about Paso Roballo, another great adventure in the mountainous divide between Chile and Argentina, with more exciting flowers, scenery and mountains.

Opposite: 65 - *Anarthrophyllum* and habitat

64 - *Calceolaria uniflora* var. *darwinii*



Daphne cneorum var. *pygmaea* 'Czech Song'

Zdeněk Zvolánek

To avoid the situation that some Czech cultivar might be named in England under a crippled name (for example, *Daphne arbuscula* 'Sladhova' rather than 'Marie Sládková'), I decided to publish my new cultivar in the Scottish journal and to send cuttings to my beloved foreign correspondent Davie Sharp, a friend of Dr Cyril Lafong, who propagates daphnes with the higher blessing, or divine inspiration.

The story of this lovely dwarf shrub began in the Austrian enterprise of the well-known plantsman Fritz Kummert where, after my questioning about the localities of *Daphne cneorum* var. *pygmaea*, he made a dot with a pencil on a map showing a tiny fork in the roads on the northern edge of the French Maritime Alps. Five years ago, a miracle happened when, after my great navigation, Joyce Carruthers found this small locality close to Mont Cheiron. The site lies in open pine forest with sandy soil at an elevation of about 1300m. Dwarf daphnes pervade an irregular community of small leaved sun-roses and thymes; when they are not in flower, only a sharp Welsh eye can recognise their presence. We took one sample, which has now flowered for two years during the April-May period in our garden. It is a stunning miniature, ripe to be described as a cultivar of the future. We really wanted to see the plants in flower so the next year we were attracted back to see them and their variability. Some plants were darker in their saturated pink colour and some were of course paler. *Daphne cneorum* var. *pygmaea* has here in light sandy soil a habit similar to that of *D. striata* in the turf of the Alps: there are longer underground shoots with no roots. We allowed ourselves three small samples and established them directly in crevices enjoying a westerly exposure in our rock garden at Karlik near Prague.

A week earlier than its sisters, one of the new plants opened its flowers and I was deeply charmed by the angelic beauty of its appearance. This plant has such an intensive sweet pale-pink colour and is so rich in its performance that I may only compare it to the qualities of the sweetest Czech folk songs.

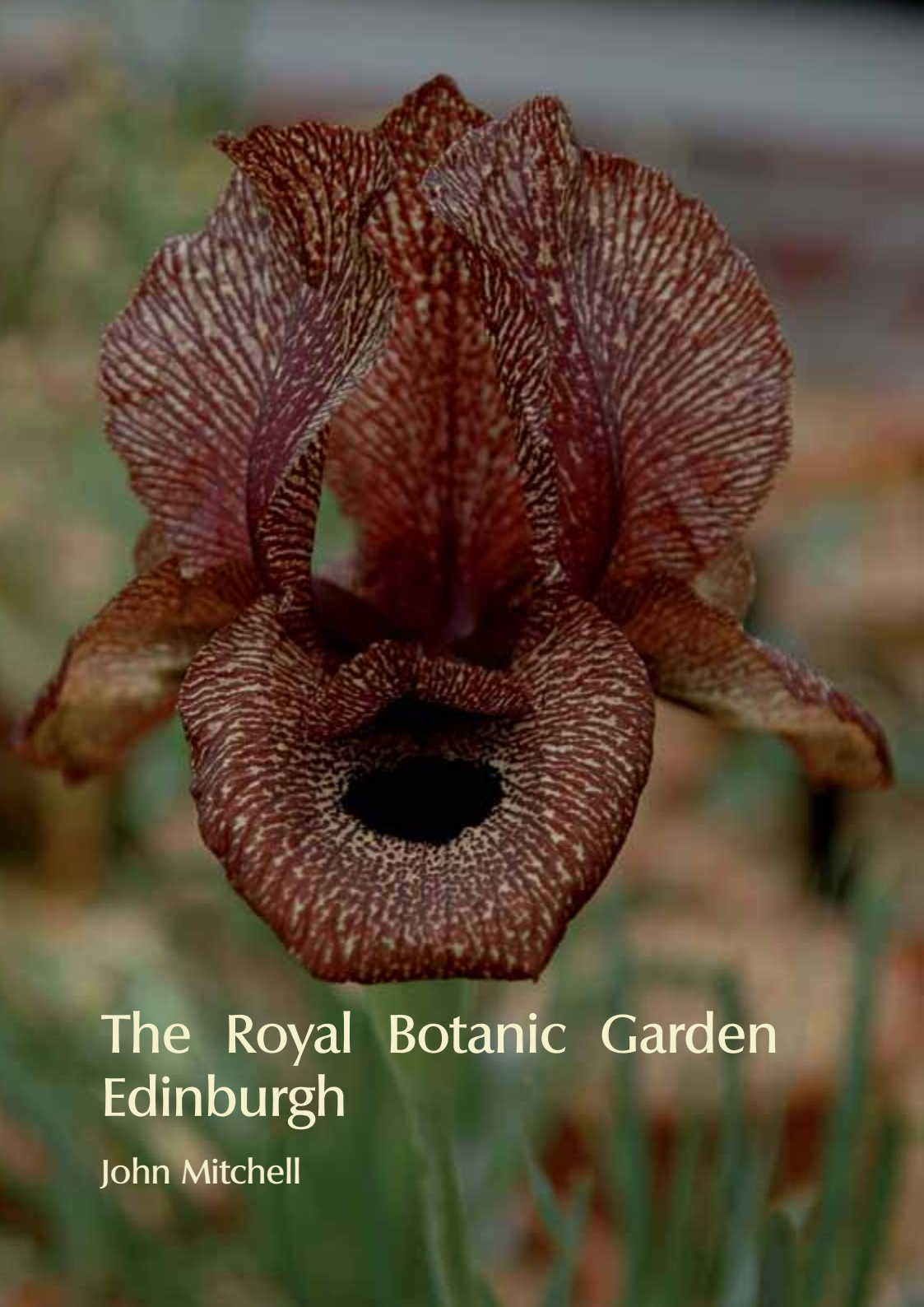
Daphne cneorum var. *pygmaea* ´Czech Song´ is a fully prostrate form 3 to 5 centimetres high (presently spreading about 15 by 25 cm). Mature plants could reach 45 cm in diameter in lean soil without artificial watering. The stems hug the ground and the oblanceolate leaves are small, averaging 9 by 2 mm. The large flowers, 11 mm in diameter and 10

mm long, are bright sugar-rose in colour aging to pale pink; they form dense terminal inflorescences with ten or eleven flowers. The perianth lobes are 3 mm broad with a rounded apex and buds have a pale vermilion colour. The cultivar has a rich, prolific and earlier blooming with good fragrance and is suitable for drier and hotter gardens. In cooler weather it may flower for three weeks.

To describe properly a new cultivar you must compare it with existing cultivars and define the differences clearly. Robin White in his reference book '*Daphnes*' described three cultivars of this dwarf class: 'Blackthorn Triumph' which is slightly taller in habit and has a darker colour to its flowers and leaves than 'Czech Song'; 'Ewesley' has a similar habit but reddish pink flowers; 'Peggy Fell' differs with deeper pink flowers.

Writing in May 2008, when the blooms are nearly over, there are about 100 healthy new growths so I can easily foresee that this tiny shrub is destined to fill plenty of deep fish boxes and kindly overpower their natural smell - somewhere in Northern Europe - someday in the near future.

66 - *Daphne cneorum* var. *Pygmaea* 'Czech Song'



The Royal Botanic Garden Edinburgh

John Mitchell

The Royal Botanic Garden Edinburgh (RBGE) is the second oldest botanic garden in Britain, Oxford being the oldest, and is considered to be one of the best botanic gardens in the world. The origins of the garden date back to 1670 when Andrew Balfour and Robert Sibbald, both distinguished Edinburgh doctors, obtained a lease of a 12 x 12m plot of land near Holyrood Abbey to grow plants for medicinal purposes. In 1675 the original site proved too small and the garden moved to Trinity College near the Nor Loch below what is now Princes Street Gardens. The size of the garden had now grown to a 90 x 90m plot and became known as the 'Physic Garden'. John Hope became Regius Keeper and the garden later moved to Leith walk. As the garden changed format, it grew to 2.02 ha (5 acres), a medicinal area was retained but glasshouses, an arboretum and ponds were introduced. And finally ... in 1819 the garden moved to the site at Inverleith where Robert Graham was Regius Keeper.

67 - Clockwise from top: Around 1890; the scree in 1904; an early view; 1851 OS Map.

The Rock Garden

The first Rock Garden in Edinburgh was built at the RBGE by James MacNab in 1871 and was roughly 30m x 10m. Stone was used from the removal of a wall that had separated the old experimental grounds. It was used to make thousands of individual compartments of various sizes in which different soil types were placed, allowing MacNab and his staff to grow a wide range of plants in one area. Almost half of the compartments were planted with various species and varieties of alpines and dwarf herbaceous plants. The remaining compartments were planted with free-flowering plants at a uniform spacing so as to please non-botanical visitors. The larger compartments were used for spring bulb collections; once the bulbs finished flowering they were cut down, soil was placed over the area and it was replanted with annuals and shallow-rooted herbaceous perennials. As the rock garden grew, it had nearly four thousand compartments with

68 - Opposite; *Iris iberica* ssp. *lycotis*

parts of it divided into related areas. MacNab speaks of collections of *Colchicum*, with the red, pink, white and variegated varieties contrasting well against the varieties of autumn-flowering *Crocus*; other areas were planted with monocotyledon species of *Cordyline*, *Ophiopogon* and *Iris*. He makes a nice comment about *Iris reticulata* thriving in these compartments and never needing to be lifted, and about single and double forms of *Primula vulgaris* - which were quite hard to cultivate in those days - flowering freely in the rock garden as a remarkable spring sight. However, the construction and planting of the rock garden were MacNab's last major contributions.

69 - The Alpine House

Isaac Bayley Balfour, the new Regius Keeper, was not totally happy with the way the rock garden looked and over a few years he tried to change its look because he did not like the small pockets of planting areas. He was more in favour of rocky outcrops and larger planting areas. In early 1907, Reginald Farrer condemned the garden severely in his book 'My Rock Garden', calling it a '*chaotic hideousness*' and a '*Devil's Lapful*'. This infuriated Balfour and in 1908 MacNab's garden was demolished. The vision of the new rock garden was for it to be the jewel in the crown at RBGE. The new-look garden was to set standards and be the blueprint for other institutes world-wide to lay out and create a 'natural' man-made landscape. Conglomerate stone was brought in from Perthshire and sandstone came from Dumfries. This was a massive job as the stone was brought by train to Edinburgh and then transported to the site. The new rock garden was built in the same area as MacNab's garden and took six years to complete. At its peak it covered 1.2 ha (3 acres). In 1914 the garden was finished and fitted perfectly into the RBGE landscape: it looked like a European mountain hillside.

70 - *Fritillaria eduardii*

71 - Inside the Alpine House

With collectors like Forrest, Farrer, Rock and Kingdon-Ward travelling the world, and with Forrest working for the RBGE, new and exotic species of plants came back to Edinburgh. The newly-built rock garden was the ideal place for many of these to grow.

The rock garden has never stood still over the years; major changes have been continuous and many staff have played their part in developing and maintaining this landscape including, since the 1950s, Alf Evans and Ron McBeath. In the 1930s, a woodland garden was created to the West. This meant that a different range of plants could now be grown and, with Forrest introducing new species of *Rhododendron*, *Meconopsis*, *Lilium* and *Primula* to RBGE, this was the ideal place for all these newcomers to be grown in a natural habitat. With the new addition came an opportunity to show the different vegetation zones. The woodland garden grew the large-leaved rhododendrons and conifers, with under-plantings of herbaceous material. Wandering onwards into the rock garden, visitors walked through dwarf rhododendrons, then on to the alpine slopes. This gave them the feeling of walking up a Chinese mountain side.

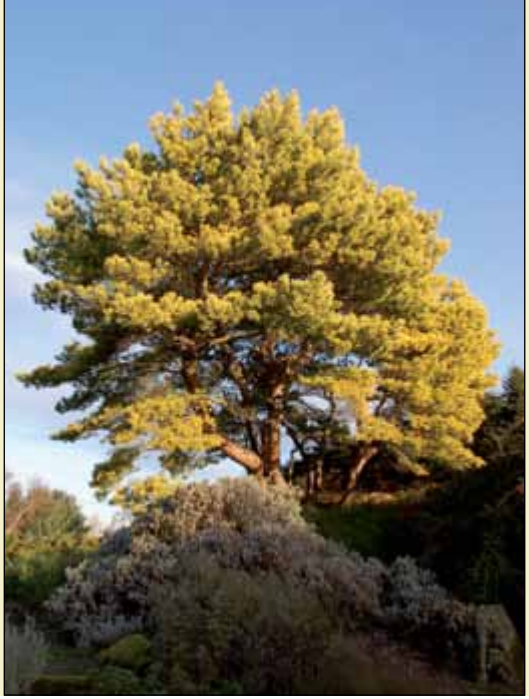
In the 1930s the heather garden was developed to the East. Thousand of cultivars of *Calluna vulgaris* and *Erica* species were planted and mixed with the tree heathers, *Erica arborea*. The rock garden also gained a new addition – a south-facing scree. It was planted to the rear while a gravel bed simulating a dry river bed was added to the west side and planted with *Meconopsis horridula*, *Primula* and *Androsace*.

One of the major changes the rock garden saw in the 1960s was a reduction in size. At its peak, when labour was cheap and plentiful, it covered 1.2 ha (3 acres) but with rising labour costs it became unmanageable. It was decided to reduce the size to 0.8 hectare. This meant that the south-facing scree was scrapped together with the surrounding beds. Much of the old stone is still buried between the mounds in the centre of the present garden. With the reduction of part of the garden, a water feature was created to simulate a mountain stream meandering through the rock, and two small ponds were built.

As more expeditions were being made from the RBGE, it was decided to make geographical beds. This initiative started in the 1970s and more were added in the 1980s. The Japanese and Himalayan beds are in the east valley. *Roscoea humeana* is planted at the entrance: it forms a large clump with purple flowers appearing first and large leaves afterwards. *Iris clarkei*, collected by Ludlow and Sherriff, covers a larger area and when in flower it forms a fine carpet of blue flowers. Next to the *Iris* stands a Wilson collection of *Lonicera cyanocarpa* with its yellow nodding flowers.

72 - *Arisaema sikokianum*

73 - *Libertia peregrinans*



74 - *Pinus sylvestris aurea*

75 - *Poncirus tritoliata*

On the Japanese side, *Sciadopitys verticillata* forms the backdrop for *Enkianthus campanulatus*. *Arisaema sikokianum* grows up through the rhododendrons. *Acer palmatum* is dotted through the beds and the small *Saxifraga fortunei* with their leather leaves and spikes of white flowers all contribute to the appearance of Japanese woodland.

The New Zealand bed mixes *Podocarpus*, *Celmisia* and *Libertia peregrinans*, whose striking orange leaves contrast nicely with *Parahebe catarractae* '*Whittallii*'. There is yet more contrast where the yellow flower spikes of *Bulbinella angustifolia* are set against the dwarf purple foliage of *Gunnera hamiltonii*. The North- and South-American beds lie to the back of the rock garden and, in the height of summer, *Phlox subulata* cultivars make a lovely carpet of colour ranging from whites to pink. The grass-like leaves of *Xerophyllum tenax* push up white spikes of flowers in summer time and there is an eye-catching stance of *Trillium pusillum* var. *pusillum*. Visitors who look hard enough when wandering round these geographical beds will also find stone carvings depicting certain aspects of the cultures of these areas.

In the 1990s the heather garden was replaced by a naturalistic Scottish native planting and an old ruined croft. The reconstruction of the water feature was the biggest change the garden had seen since its size reduction. Cranes were brought in to move huge boulders so as to create a four-metre drop for the large waterfall and stream; ponds were replaced

76 - *Pulsatilla* 'Budapest'

77 - *Synthyris platycarpa*

78 - *Pulsatilla nivalis*

79 - *Iris hippolyti*

and a large amphitheatre was formed where a white-water run enters the smaller pond. This work was all completed for 'Alpines 2001'.

Wander round the rest of the rock garden, but do not miss the superb specimen of *Juniperus rigida* - one of the original plants that is visible from most areas. Other conifers and shrubs worth mentioning are *Pinus strobus* - a very dwarf plant - and the lovely *Pinus sylvestris aurea* that changes to a lovely golden colour when the frosts of winter arrive. *Poncirus trifoliata* is an unusual shrub dating back to 1902; it is covered in very sweetly scented white flowers in spring and has inedible orange fruits in the autumn.

Today the rock garden grows 145 families, 605 genera, 2215 species and 3429 accessions. Bald statement of these numbers masks the great beauty that lies within. The spring is always a good time to visit. *Narcissus cyclamineus* forms a sea of yellow over the beds and the *Pulsatilla* flowers, ranging from dark-pink to light-mauve, brighten every prospect. The heavy scent of *Daphne bholua* fills the surrounding area and then - the dwarf rhododendrons burst into bloom. The north-facing scree presents a

80 - *Daphne bholua*

81 - *Narcissus bulbocodium* ssp. *tananicus*

montage of colour all through spring and summer with gems such as *Saxifraga oppositifolia*, *Meconopsis horridula* and *Stachys lavandulifolia* with its pink fluffy ball flowers. The rock garden is indeed at its best in spring or summer but nevertheless there is always something to cheer the visitor even in the cold dark days of autumn and winter.

The Jewel in the Crown

The alpine house, frames and wall were built in the 1970s to house an expanding collection. Today the alpine house has a vast range of *Dionysia*, *Draba* and *Raoulia*. Growing on the limestone wall are *Stellera chamaejasme* and *Paraquilegia anemonoides*; these plants are now well established and, to give us winter

82 - *Primula sherriffae*

83 - Opposite
Fritillaria sewerzowii

84 - Outside Rovero

interest, there is a large tight mound of *Bolax gummifera*. *Pulsatilla* 'Budapest' is a welcome sight in early spring with its violet nodding heads and hairy leaves while nearby *Synthyris platycarpa* offers stunning blue flower spikes and is always one of the first on the wall to flower.

In the last ten years the alpine area has almost trebled in size. The public walk round this area reveals only the tip of the iceberg, for behind the wall lie all the gems. A new glasshouse was built for propagation and growing-on of the plants. Old frames were moved into the back area to house our growing collection of bulbs and plants from New Zealand. A new potting shed and offices were built; the latest construction is a Rovero polytunnel - the first in Scotland – that houses some of our bulb collection, *Oncocyclus* & Juno irises, tulips and *Fritillaria*.

In the shade tunnel we grow *Arisaema* from the northern hemisphere along with a collection of petiolaris primulas, ferns and the small

85 - Inside the first Rovero polytunnel in Scotland

Lilium souliei whose black flowers and orange anthers hang on stems up to 30 cm long. There is a small glasshouse that we use for newly-struck cuttings and smaller plants like *Dionysia* and *Raoulia*. Once the plants get too big for the smaller house we move them to our main alpine house. This was built as our propagation house but the collection has grown so much that it now occupies almost all the space. Over the last two years we have enjoyed great success in growing *Oncocyclus* irises from our trip to Iran. In 2005, *Iris acutiloba* ssp. *lineolata* and *Iris iberica* ssp. *lycotis* flowered for the first time at RBGE.

86 - Carvings at RBGE

Other notable plants which have posed challenges include *Primula sherriffae*: this wonderful primula from Bhutan is not hardy but RBGE has kept it going for the last 30 years and I believe that it is extinct in the wild. Beyond the main glasshouse is our framed area which houses the New Zealand collection, *Androsace*, saxifrages, *Daphne*, *Narcissus* and a miscellaneous collection. In total we have 121 families, 618 genera, 2353 species and 3897 accessions of plants in this small area. We are just about at full capacity and cannot expand any more in the back area.

New Alpine House

Because of the limited space in the back-up areas we would like to build a new alpine house to show the visitors how to display alpine plants in a more naturalistic setting. We aim to show and contrast for garden visitors the old and new ways of growing & showing alpine plants. Our proposal is to build a new alpine house. The structure will be made of aluminium or stainless steel, allowing good light into the house and needing little maintenance. There will be a brick wall on the north side;

the south side will have a long sloping roof; and the house will be slightly sunk into the ground. On the back wall a small extension will house the irrigation system. The planned automatic venting system is extremely important because of the essential need for free air movement. We would also like to incorporate an automatic watering system, allowing us to turn on certain zones that might dry out before others. This would be used in conjunction with the automatic shading for precise climate control.

Our plan is to use tufa throughout the whole house so as to grow a wider range of species than before. A vertical tufa wall on the north side will allow us to grow plants like *Primula allionii* and species such as *Androsace* and *Dionysia*. On the south side will be a tufa landscape starting in the house and continuing down towards the road. A water feature will be incorporated so that we can grow alkaline loving aquatics. With this new house our plants will grow in a natural habitat, in tufa rather than pots. Edinburgh will be proud to have an exciting new environment to grow and display alpines and to improve immensely the quality and survivability of the plant material.

We are now busy raising funds to build this new alpine house and we would like to thank the SRGC for being the first to give us a generous donation towards the project!

87 - The Waterfall

88 - Winter in the garden

Primula kingii – A Retrospective

Anne M Chambers and Bob Mitchell

As we look forward optimistically in this 75th anniversary year, inevitably we remember past highlights. Sandy Leven's splendid article in the January issue recalls some of these - in particular, a visit to Ascreavie. He also recalls being much younger than most members which means that those of us fortunate to have seen this garden in its heyday are now an ageing and ever-diminishing band. It seems appropriate then to look back to those days.

Ascreavie was a garden in the Angus hills created by George and Betty Sherriff when they retired to Scotland in 1950 after many years in the Himalaya. Together with their gardener they grew, very successfully, a wonderful range of Himalayan plants including the now almost legendary *Primula kingii*. This is a primula of boggy, yak-grazed meadows growing at about 3650m, snow-covered in winter and blooming in monsoon conditions in summer. A first thought is that Ascreavie was an unlikely place to succeed with this plant but the garden lies at 255m and the Sherriffs did not rely on the chancy rainfall of an Angus summer. Bob remembers that they led water from a stream to a holding tank whence it was piped to the bed where *P. kingii* and other primulas grew, to flood it every summer. His photograph of that bed, taken in 1966, shows part of the piping.

The history of *P. kingii* starts in 1878 when it was first collected in eastern Sikkim by Dungboo, always referred to as 'King's collector'. Dr George King was appointed Superintendent of the Calcutta Botanic Gardens in 1871, then as Director of the Botanical Survey of India, and employed native collectors to good effect in the Himalaya. From 1878 onwards *P. kingii* was found by several plant hunters at sites in Sikkim, Bhutan, upper Assam (now Arunachal Pradesh) and south-east Tibet: pressed specimens of these collections are lodged in the Herbarium of the Royal Botanic Garden, Edinburgh. As one can see from the photographs, it is a handsome plant with an umbel of pendent flowers whose colour seemed to strain the descriptive powers of some of the collectors. Watt's original Latin description was translated as vinous red but some plant hunters were more specific, calling it claret or port wine. Another opted for purple which it certainly is not, nor is it Kingdon-Ward's dark maroon though he is right in describing it as almost black at the base. I prefer blood-red – arterial rather than venous – but any description fails

89 - Opposite: *Primula kingii*
90 - Right: *P. kingii* at Ascreavie (Bob Mitchell)

91 - *Primula kingii* in a meadow in Arunachal Pradesh

to indicate the depth of their velvety richness. In Watt's description the calyx is noted as equalling the corolla tube as it does in Bob's photograph and in my experience of plants in Arunachal Pradesh, but the specimens in the Herbarium show some variation. In the black and white photograph facing page 11 of Fletcher's *A Quest of Flowers,* the plants - location unspecified - have corolla tubes twice the length of the calyces. The line drawing in Halda's *The Genus Primula* is consistent with its having been made from this photograph and the leaves are poorly characterized. Incidentally, included in the early Herbarium material is a contemporaneous line drawing – unfortunately the artist failed to heed Watt's words "flowers ... all nodding" and some are shown tilted upwards as they appear on the herbarium sheet. Ah, the hazards of botanical illustration! The bright green leaves are described as subcoriaceous - rather leathery with distinctive tiny cartilaginous projections at intervals along the margins. In cultivation the plant is slightly less compact than it is in the wild where the flower scape is about 10 cm, depending on altitude.

The distribution of *P. kingii* in the wild is disjunct but it grows locally in vast numbers, often over a large area. In Arunachal Pradesh it grew in a wet meadow in the company of *P. dickieana* & *P. glabra* and yet, just a few kilometres distant, there were apparently similar meadows full of the latter two species without a single *P. kingii* in sight. In common with other members of the Section *Amethystina* it has not proved easy in cultivation. Apart from the Sherriffs' success at Ascreavie where it persisted for about thirty years, introductions have been short-lived and recent expeditions have not had more positive results with this delectable primula.

Become a Seedy Rocker – Join the Seed Exchange!

Ian Bainbridge

While I'm out and about on Rock Garden Club business, new(ish) members often say to me *"What is the seed exchange and how does it work?"* and *"How do I participate?"*, so this is to explain what the Seed Exchange can do for you, and what you can do for it and your fellow members.

The first surprise for many is that the exchange is run purely by volunteers, as is the club itself: we have no staff. The second is that the exchange sends over fifty thousand packets of seed of 4500 species and varieties to over 1400 worldwide members each year; it's not a small operation and many members help make it work for all of us.

How does it work? It starts with you - all of you - collecting seed from your gardens and trips out and abroad. We love seed donations and over 400 of you contribute every year. The basic rules are: collect seed when it's ripe; clean it of husks, leaves, fruit pulp or debris; packet it in the smallest sensible envelope; label it clearly with its full and correct name - putting your own name at the bottom; and send it to Stuart Pawley, our Seed Reception Manager. If it's wild collected seed, please obey the laws of the source country and remember that we adhere to

92 - *Seed Distribution:* Stuart Pawley's post; Numbered packets; Distribution from green boxes; Surplus seed at Scotland's Garden Show; An end result - *Primula forrestii* from SRGC seed

the laws of the UK: we cannot and will not offer wild-collected seed of any specially protected species from the UK or the rest of the EU. I need not repeat here details of how to donate; they come with the annual instructions for the Seed Exchange. Seed names are important though - please supply the genus, species name and the subspecies and form or variety name if applicable; this all helps members to get the seed they expect when they order.

What does Stuart do? He gets sacks of mail from about September onwards until the donation deadline of 31st October. He records donors' names (they are entitled to extra seed from the Exchange); he checks names against the RHS Plant Finder and the International Plant Names Index (IPNI); and he enters them into the annual seed list. The total number of species and varieties (let's call them *'taxa'* hereafter) on Stuart's running list is around fifteen thousand, with about four thousand or more in any one year. His lists take account of taxa not accepted into the USA by the authorities; the system marks them and also marks live material such as *Pleione* bulbils and *Fritillaria* rice, which may only be sent within the EU. From all this information, Stuart compiles the Seed List, has it printed and sends copies to all overseas members, seed donors, and those UK members who ask for it and send the necessary SAE.

And the seed? In Phase 1, Stuart puts the donation envelopes of each taxon in a bulk envelope in alphabetical order in endless rows of green plastic racks - about 15 metres! When the seed list is compiled, all are labelled with their name and are allocated a number for this year's seed list; they're then ready for Phase 2 - seed packeting. In early November, Stuart passes a car-full of seed racks to Ian Pryde, the Seed Packeting Manager, and breathes a sigh of relief that he now only has two thousand seed lists to be distributed!

Seed packeting has been done in a number of ways over the years but is now a working-from-home cottage industry. Ian Pryde has around seventy volunteers scattered across the UK who receive a box, usually

93 - Sorting: Mike Hicks, Ken East, Graham Wenham, June Hicks and Stan da Prato

through the post, in early to mid November. The box contains a number of the bulk envelopes of donations, a pile of glassine seed packets, a set of instructions and a list of the numbers of packets to be made up for each of the taxa. Packeters make up the required number of packets of each taxon - providing enough seed is available, number them, slot them back in the box in order and return them to Ian within three or four weeks. Some groups make packeting a social occasion, with parties in the village hall or around the kitchen table. We're greatly indebted to all of them: they make a huge task possible in a short period. Ian then checks and collates the returning seed, ready for Phase 3 - Seed Distribution.

How do we know how much seed to packet? The answer is experience - and a rough form of stock control. We maintain a list of how many packets of each taxon were made the last time that the item was in the Exchange. We record the extra packets made up during distribution to satisfy demand, and whether there were large numbers left over at the end. We use these figures to adjust numbers year on year and it's an interesting game to guess the most popular seeds in the exchange, but more on that later.

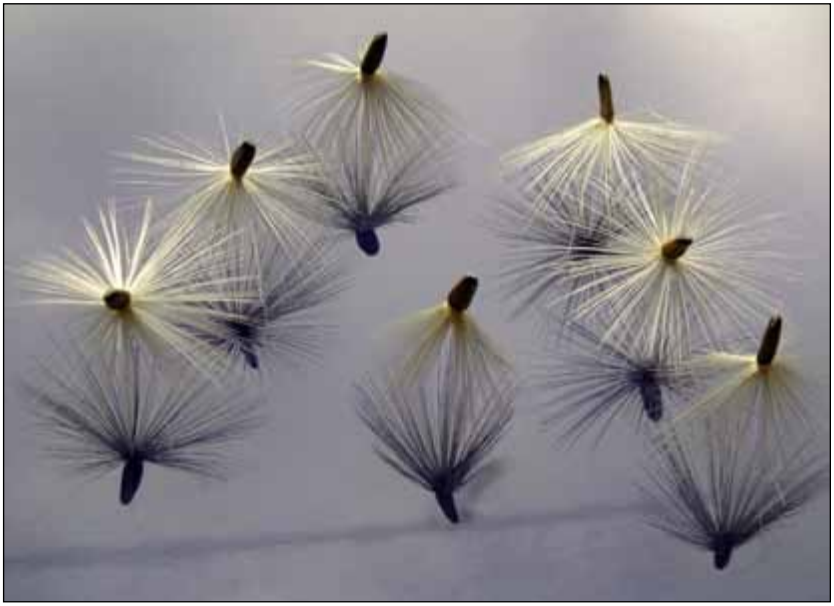
Seed has been distributed this last four years by a team of Edinburgh Group volunteers. Alan Hayes manages seed orders, Jean Aas looks after finances, and Ian & Carole Bainbridge organize the distribution itself, helped by around twenty-five Edinburgh members. We use a classroom in

94 - The Seed Packeting Manager working flat out in Argentina

the local Suntrap Horticultural Advice Centre, allowing us to 'set up shop' for five or six weeks with little disruption. In mid-December, Ian Pryde brings us the packeted seed & seed racks, and we put the individual packets into fourteen trays, 60cm square, each with nine rows for packets. The trays are arranged in two rows of seven, opposite each other, and the seed packets go in them in number order, each with a numbered tag behind so it's relatively easy to find the numbers when picking seed. At this point we have about 75 metres of packets awaiting distribution! A colour code on the number tag tells us whether we have spare seed for additional packeting should it be required, and spare seed sits in the green racks underneath the trays.

The picking of seed usually starts in the first weekend in January and takes place over four weekends. Volunteers come and go as they please but there are usually 10 to 15 people picking packets: this task alone represents around 600 hours of effort. The volunteers simply take your order forms and select the right number of packets from your choices. To help us, please make sure your writing is really clear: it is too easy to mistake 1 and 7, for example. Seed donors' orders are picked first and are ranked on the basis of the amount of seed and the number of years they have donated to the Exchange. We then move on to non-donors, ranked by the date of receipt of orders. Only after 15th January, when the 'order book' is closed, do we move on to the surplus orders, so your surplus

95 - Stuart Pawley's 'Dance of the Seeds' *(of Onopordum nervosum)*



96 - *Arisaema sikokianum* from Long Island seed

seed may well arrive several weeks after your main order. We usually send out around 1100 main orders and 300 surplus orders, finishing by the end of January. As well as picking, volunteers sort out postage, check the named lists for USA, Australia and New Zealand customs, deal with customs bureaucracy, and packet extra seed as needed: another cottage industry!

There are often questions about alternatives and substitutes. Obviously, the very first orders should receive all their first choices but much seed is in short supply, especially the rare and more desirable items, so we recommend that everyone should specify at least fourteen extra numbers and that non-donors should fill in 21 extras. It's always a disappointment not to be able to fulfil an order but if alternatives are not given we can offer no substitute. The same applies for surplus seed: please always provide twice as many numbers and blocks of numbers as you actually want, because many items are exhausted in the main distribution and we don't provide random replacements. Please remember the surplus seed limit is 200 packets. Larger orders are unwieldy to collect and deprive members of a fair chance of interesting seed in the surplus.

What's popular? Well, *Campanula zoysii* often heads the list; we sent out over 100 packets this year, with *C. rainerii* close behind. *Lewisia tweedyi* warranted 85 packets and *Aquilegia jonesii, Callianthemum anemonoides, Paraquilegia anemonoide*s and *Clematis marmoraria* remain in demand. Shortias, *Glaucidium palmatum, Jeffersonia dubia* and *J. diphylla* are very popular. The three 'big' genera are *Cyclamen* (25 items in the most popular 150), *Primula* (22 items) and *Meconopsis* (20 items), while no other genus makes double figures. *Arisaema, Trillium, Nomocharis, Fritillaria* and *Lilium* make up the second rank. *Arisaema sikokianum* warrants 70 packets if enough seed is available. This means that donations of these genera, and especially unusual taxa, are extremely welcome.

Packeting gives us an impression of taxa in short supply. A number of genera clearly fit this category. Many are bulbs which produce relatively few seeds, such as *Crocus, Colchicum, Narcissus* and *Tecophilaea.* It's fair to say that all donations of these, however small, are welcome; a

donation of twenty five seeds of *Narcissus calcicola* gives three members the chance of something not easily obtainable elsewhere. *Daphne, Paeonia,* and gesneriads also come into this category. If ordering these genera, you should not expect to receive everything.

Wild-collected seeds are always interesting and, in contrast to many garden-collected seeds, donors usually send reasonable volumes: perhaps they think it's only worth collecting material if there's a decent amount (thank you all!). I'm always surprised at the volume still available into the surplus period, so why not look in the wild-collected list for species you want from the main list? There's always the chance that they will be slightly different forms from those routinely propagated.

How much seed do you get? You normally get a pinch of small seed, perhaps up to fifty seeds if plentiful. We try generally to give at least ten seeds even of rare material, though very precious seeds may go as low as six. Peonies, having such large seed, offer their own problems and you may only receive three or four of the largest tree peony seeds. These rules of thumb maximize members' chances of germinating and propagating the plants that they want from the seed we offer.

Finally, this autumn, why not contribute to the Seed Exchange? If your garden has a daunting choice, just choose a few of your favourite or unusual plants and keep an eye on them so as to collect their seed and send it in. If you send us a little seed from that rarer item, you've helped to keep our alpine and rock garden plants in cultivation by giving a few more lucky folk a chance to grow it. Order seed and experience the pleasure of seeing germination throughout the spring; I've just come in from the seed house with a smile because *Calandrinia umbellata* and *Narcissus papyraceus* have germinated today, and I pricked out *Primula takedana* yesterday - when did you last see that for sale?

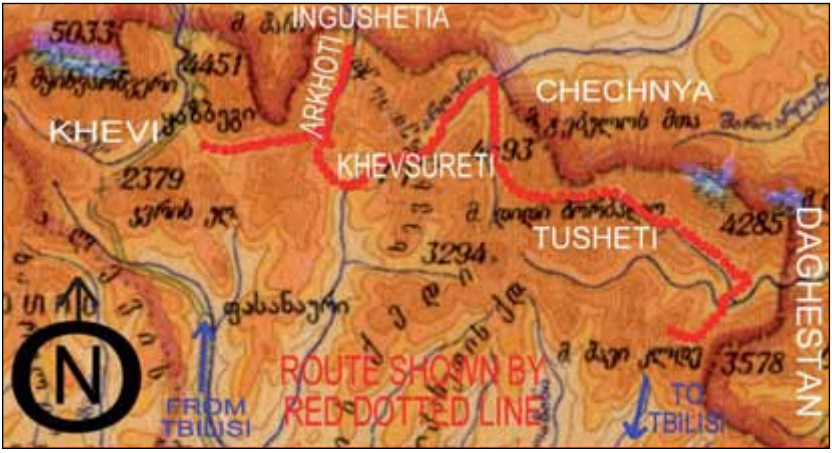
Join in and go to seed!

97 - A popular item: *Clematis marmoraria*

A WALK ON THE WILD SIDE

Diary of a Trek in the Caucasus, 2006

Michael J B Almond



98 - A walk on the wild side of the border, (but the other side is wilder!)

Sunday 16th July: My flight into Tbilisi is late and I do not get to bed until 2 a.m. I am collected from the hotel at 6 a.m. by Irakli, my guide for the next two weeks, and Mindia - our local guide for the first section of the route. We drive along the Georgian Military Highway and over Jvari Pass (2380m) in Gocha's little Lada Niva and do not breakfast until the top. I see nothing of interest in flower near the road – much as I expected; experience has told me the flowers here will have been at their best two or three weeks earlier. We press on down into Khevi, leave the Highway, drive up past the wonderfully weird collection of carved boulders at the village of Sno, and on to the end of the track at Juta (2150m), where we leave the Lada.

99 - Below Arkhotis Tavis Gheli

Soon after leaving Juta we pass the military post manned by local volunteers (a sort of Territorial Army) and intended to control movement between Georgia and the Russian territory of Ingushetia, over the ridge to the North; it is important that the Russians are given no excuse to make any military incursions into Georgia. Our

100 - *Campanula petrophila* and its surroundings

passports are examined and the commander regales me with tales of his hunting exploits in Arkhoti, where we are heading. Although to the West of the pass and geographically part of Khevi, Juta has been considered historically to be part of Khevsureti, so we are already well on our way.

The meadows above Juta are steep and grassy with various *Campanula* species, including *C. petrophila* and *C. trautvetteri* – the latter also known as *C. glomerata* var. *caucasica.* There are also several *Pedicularis* species, geraniums, *Polygonum bistorta,* white & pink *Centaurea* (the former probably *C. cheiranthifolia* and the latter *C. fischeri)*, a large and handsome *Taraxacum* species and *Betonica grandiflora.* Higher on the approach to the pass is *Rhododendron caucasicum* still in flower on the valley sides. I also see *Primula algida, P. auriculata, Gentiana verna* and *G. pyrenaica.* At about 3000m, I am delighted to find a few clumps of *Primula crassifolia* behind some boulders on the scree. This is a beautiful member of the nivalid section, with ivory-coloured flowers, which I have seen only once before in Georgia. Other flowers on the scree include a little yellow *Draba* (possibly *D. scabra*), the prostrate *Veronica telephiifolia* with its

101 - Carved boulders at Sno

102 - *Primula auriculata,* upper Assa valley

white or pale blue flowers, a small white crucifer (possibly *Arabis flaviflora*) and the pretty pink *Scrophularia minima.* The pass itself, the Arkhotis Tavis Gheli at 3230m, is windswept and bare on the south side and has snow banked on the north.

As time is pressing and it is bitterly cold we do not stand long admiring the jagged peaks of the Chavki Range to the South or down the Assa valley into Arkhoti and over Ingushetia to the North. The imminent sunset lends urgency to our slalom down the snowfields and scree until we find a suitable campsite. Luckily, we are successful and pitch camp as the sun goes down.

Monday 17th July: The day dawns crisp and bright. The camp is superbly situated on flat alluvium below the snowfields of the pass at about 2990m and above the cliffs leading down into the Assa valley. The scree between our tents and the main stream is blue with *Campanula* – at least two different species of varying shades, low-growing but with large flowers. Some are like *C. bellidifolia,* with a distinct white spot in the centre of a dark conical flower; some are like *C. biebersteiniana,* with large, pale-blue flowers more of a beaker shape with no white spot – but all flowering right on the ground. In the alluvial grit are also large pale-yellow flowered *Pedicularis comosa* (or perhaps *P. caucasica*), *Corydalis conorhiza, Primula algida, Potentilla caucasica* with big, deep-yellow flowers, the golden-yellow *Anthemis marschalliana* and *Veronica gentianoides.* In the pockets of soil on the low cliffs there are *Lloydia serotina,* what I

103 - *Rhododendron caucasicum,* upper Assa valley

take to be *Arabis flaviflora* and *Doronicum oblongifolium.* On the rocks themselves are large cushions of *Draba bryoides.*

104 - *Betonica grandiflora,* upper Assa valley

The steep sides of the upper valley below the camp site are dotted with meadow flowers, including *Dactylorhiza euxina, Gymnadenia conopsea* and *Anemone fasciculata.* Lower down we come upon a wet flush, pink with *Primula auriculata,* and a spectacular gorge overhung with *Rhododendron caucasicum* and *Trollius patulus.* We also see the occasional *Swertia iberica* and *Asyneuma campanuloides.* Although I have seen *Gentiana angulosa* as we descend, there is no sign of any other gentians.

As we walk down into the valley, with the great stone watch tower at Akhieli below us in the distance, we pass alluvial screes covered with a mass of dark-purple geranium (possibly *G. ruprechtii)* together with *Veronica gentianoides,* and hillsides bright with various combinations of *Aconitum orientale, Betonica grandiflora, Doronicum oblongifolium,* a lighter-coloured *Geranium* (possibly *G. sylvaticum), Inula orientalis, Lythrum salicaria, Polygonum bistorta, Scabiosa caucasica, Tanacetum roseum* and more *Veronica gentianoides* together with a lower and much darker species which may be *V. petraea.* There are occasional signs of grazing – patches of rank vegetation, thistles and *Veratrum album.* Just above the old ruined village of Qveritsminda are campanulas of various kinds, including several *C. trautvetteri* with its usual groups of dark purple flowers on long stems, and another plant with a similar form of flower and flower head but much lighter-coloured flowers on much shorter stems; whether this is a separate species I do not know. On a rock, I see a beautiful clump of what may be *Campanula argunensis.* Between Akhieli and Amgha the valley floor consists of level alluvial debris. There are docks, thistles of various kinds including a striking, bright-red *Onopordum,* tall blue *Echium* and several species of *Heracleum.* In the shingle by the river are a small white *Anthemis,* campanulas, *Centaurea cheiranthifolia, Epilobium, Geum rivale* and bright-red *Silene compacta.* On the rocks above the river is a stand of the tall, pale-flowered *Campanula kolenatiana.*

The upper reaches of the Assa valley, within the borders of Georgia, are known as Arkhoti. A couple of miles or so below Amgha lies the border with Ingushetia, which at present is closed. The only access to Arkhoti is on foot over 3000m passes or by helicopter. Rather than camp,

as we expected to do, we are to stay with Mindia's family in Amgha; it is one of only two families who still live there permanently – and the other has decided to leave. We discover that Mindia is only distantly related to the family whose guests we are; relationships both of kin and obligation are taken very seriously in the Caucasus. Irakli and I walk a little way down the valley and explore above the village as far as the shrine of St Peter. The hillsides are dotted with flowers, *Heracleum* species and a host of summer meadow flowers, as Amgha is at about only 1700m and we are too late for most spring flowers. We are warned not to approach too close to the shrine, as only its Guardian is allowed to do so; there are more complicated rules about how close a woman may go – sometimes no nearer than about half a mile – depending on her "condition". Although the Khevsurs protest that they are Orthodox Christians as opposed to the Moslems of neighbouring Ingushetia and Chechnya, their religion is extremely heterodox in many aspects and contains a great deal of animism.

Tuesday 18th July: To walk out of Arkhoti we retrace our steps from Amgha, up the Assa valley, and branch off onto a different path at yesterday's overhung *Rhododendron caucasicum* gorge. We continue towards the Bagavacho Pass at 2850m to return to the northern side of the main Caucasus watershed. The path climbs steeply up the valley side and I see more *Betonica grandiflora,* campanulas - including those like *C. biebersteiniana* & *C. bellidifolia,* and some bright-orange flowers like *Crepis aurea* (perhaps *C. conyzifolia).* About 200m below the top, the path crosses several west-facing wet flushes. Here the hillside is covered with masses of *Primula crassifolia* – a truly magnificent sight. The primulas continue to the top of the pass – a distance of well over a kilometre – but higher up have finished flowering as the ground is drier and more south-facing. I pass pink and yellow *Corydalis (C. conorhiza* and *C. emanueli)* and some small *Anemone speciosa* with flowers varying from cream to deep lemon-yellow.

At the top of the pass is a superb view across the drier southern flanks of the mountains. We thread our way gingerly across an almost vertical slope for about half an hour before reaching another grassy col, with many yellow *Pedicularis comosa* and a few *Gentiana pyrenaica* in the turf, together with very attractive *Muscari.* These south-facing slopes are actually very poor in flowers compared with the other side of the ridge – at least by July. We eventually

105 - *Saxifraga flagellaris*, Atsunta Pass

106 - Border - *Saxifraga exarata* in show condition

descend into rank valley vegetation and plough our way through the undergrowth. We ford the main stream and camp beside it at about 2250m, the tents surrounded with pink spikes of *Betonica grandiflora* and *Gymnadenia conopsea.*

Wednesday 19th July: This morning we walk on down the valley to the village of Roshka (2000m), which appears to be sinking under a sea of *Heracleum.* After an exhilarating drive down the track from Roshka we reach the "main" road, still only a dirt track, follow it over the Datvis Jvari Pass (2676m) back to the north side of the watershed, and down into the headwaters of the Argun river - which flows north through Grozny, the capital of Chechnya. As we drive down the valley, the main floral interest is provided by the masses of *Campanula* cascading down the cliffs – whether several or one variable species (or what it might be), I cannot say. We stop below the ruined village of Kistani and its twin towers; Irakli and I climb up to them. There are lots of similar campanulas on the rocks and also, in the grass, a taller and more robust species which I think is *C. sarmatica.* Around the towers are orchids such as *Gymnadenia conopsea* and *Traunsteinera sphaerica,* together with a small, bright-blue veronica (perhaps *V. petraea*). Against the base of one tower are large clumps of a very pretty white-flowered dianthus, possibly *D. cretaceus.* The ruined village itself is choked with giant hogweed and comfrey, leaving little opportunity for less vigorous species – although I do see a clump of *Asyneuma campanuloides* beside one of the ruined houses.

Further down the Argun valley we explore the old houses in the citadel-like village of Shatili, many of them renovated since my last visit, and then press on to the confluence of the Argun and the Andaki rivers. Here we are within 500m of the Chechen border. However, there is no road across the frontier, only a footpath - with a Georgian military post. Our road turns southward away from Chechnya and continues up the Andaki gorge to Mutso. From here we drive a few kilometres up a side track to Khonis Kala (1700m), the jumping-off point for the Atsunta Pass and Tusheti. Gocha and Mindia take their leave and we are joined by Tamaz, who has ridden here from the far end of Tusheti on his seemingly anonymous horse, with its three-month-old foal in tow.

Thursday 20th July: We now have the Horse With No Name to carry our packs - welcome news, as the mountains are not getting less steep and I am not getting any younger! The first part of the ascent is a very steep path through dense woodland. Among the undergrowth I notice

107 - *Saxifraga exarata moschata,* Atsunta screes

108 - *Pedicularis comosa,* Atsunta Screees

Lilium monadelphum (but unfortunately finished flowering), *Aconitum vulparia* and *Aquilegia olympica.*

On the hillsides above the trees, at about 2400m and higher, there is a mass of *Fritillaria* (possibly *F. collina)* and *Primula* (probably *P. elatior* ssp. *pseudoelatior* or ssp. *meyeri)* in seed, *Polygonum bistorta, Scabiosa caucasica, Gentiana pyrenaica* and whole hillsides covered with orchids – *Gymnadenia conopsea, Traunsteinera sphaerica* and *Coeloglossum viride.* As we get higher and move on to a steeper hillside we pass bright pink *Centaurea fischeri,* a patch of *Aster caucasicus* and walk through a lot of *Rhododendron caucasicum* scrub.

We reach our campsite in the corrie below the Atsunta pass, at about 2900m, by early afternoon, with plenty of time to explore the surrounding grassy area and the screes above. In the turf there are small pink *Pedicularis pontica, Gentiana pyrenaica, G. angulosa, Primula algida* and *Corydalis conorhiza.*

The screes above, rising up around the wide corrie to the top of the ridge at between 3500m and 4000m, are fascinating – covered in flowers, but not necessarily what one would expect to find on high mountain screes. The large yellow-flowered *Pedicularis comosa* covers acres of scree, along with patches of *Doronicum oblongifolium* and *Senecio karjaginii* in places. *Myosotis alpestris* and

109 - *Pedicularis comosa*

110 - A non-Georgian example of *Primula elatior*

Anthemis iberica together cover more acres and in some areas a bright yellow mountain pansy, the aptly-named *Viola minuta,* is dotted over the otherwise bare scree as far as the eye can see. There are patches of white *Cerastium purpurascens* and the purple oxlip, *Primula elatior* ssp. *meyeri,* in places. On the barer ridges between these seas of flowers are bright yellow clumps of *Anthemis marschalliana* and *Senecio sosnowskyi, Saxifraga flagellaris* & *S. exarata*. This latter is a plant that Malcolm McGregor later described from my photograph as "*S. exarata moschata* in a good form which may represent what has been called *S. verticillata* Los-Losinskaya". On larger rocks and cliffs are clumps of *Androsace raddeana,* cushions of a *Draba* species (probably *D. brunifolia)* and an attractive sedum.

Friday 21st July: The scree beside the path to the Atsunta Pass at 3400m is festooned in places with large clumps of *Campanula bellidifolia.* There are numerous impressive clumps of *Saxifraga flagellaris,* with its whip-like runners, together with a *Cerastium* species and the very attractive blush-pink, hairy flowers of a *Lamium;* I suppose it may be a very dwarf *Lamium tomentosum,* although it is only 3-4 cm tall. The top of the pass is in cloud and it is disappointing not to have any wide views – but at least it is neither raining nor snowing. On the high screes as we descend to Tusheti there are more *Lamium* and *Viola minuta,* together with the small white crucifer *Pseudovesicaria digitata* and the little pink *Scrophularia minima.* I also see a number of *Erigeron* species.

As we follow Tamaz and the horse over the lower screes, we pass large wet areas of valley floor and hillside awash with the large yellow *Primula luteola* – unfortunately past flowering but it must have

111 - *Campanula bellidifolia*

112 - *Swertia iberica,* west of Kvakhidi

looked incredible in flower. The lower screes are dotted with campanulas, *Scabiosa caucasica, Betonica grandiflora* and patches of *Aconitum orientale* with *Aster caucasicus.* Where there are patches of scree bare of grass and other herbage, I see *Silene lacera,* with its white frilly-edged flowers, and the bright yellow *Achillea biebersteinii.* Once we ford the main valley stream, armed frontier guards inspect our documents briefly before we press on. Pushing their flowers up through long grass on the steep sides of the Pirikita-Alazani valley are more *Scabiosa caucasica* & *Aster caucasicus* together with *Polygonum bistorta* & *Delphinium speciosum.* We pass steep scree festooned with campanulas. I see a large patch of *Gentianella caucasea* and, in another place, one of *Swertia iberica.*

Eventually we arrive at our campsite. The nameless horse and Tamaz ford the river to the far side but, luckily for Irakli and me, an iron girder rather precariously spans the torrent as it thunders into a narrow gorge at the end of the flat camping ground. Arriving here sodden and exhausted in the rain in 1998, nobody had been willing to risk the crossing and we had camped very unsatisfactorily on the north side of the torrent. Although the name of the place is Kvakhidi, meaning "stone bridge", there is no sign of such a thing; the only possibility is that the gorge may have once had a natural stone arch where the girder crosses.

113 - *Scrophularia minima,* Atsunta Pass

I explore the surrounding area

114 - *Silene Iacera, Kvakhidi*

115 - *Cerastium* and *Lamium*

but am loth to recross the girder because of sheep dogs which have arrived with their flock on the other side, and my unwillingness to ford another torrent which bars my way upstream. The cliffs of the gorge by the girder are hanging with an exquisite blue *Campanula* (much like *C. sarmatica)* and I also find some impressive stands of *Aster alpinus, Inula orientalis* and *Campanula trautvetteri.*

Saturday 22nd July: Crossing the girder is less of an ordeal this morning. Walking down the valley it is clear how well-grazed Tusheti is and how less interesting the flora is than that of Khevsureti. Perhaps if one came before the sheep arrived it might be better but access, either walking over the Atsunta Pass or driving over a road which usually opens around mid-June, would be difficult if one could not afford to come by helicopter. There are still large tracts of *Primula luteola* (gone over) but, apart from these, I only notice occasional *Scabiosa caucasica* & *Campanula* species and, in one spot, a mass of *Gentianella caucasea.* At one point Irakli and I traverse a cliff face while Tamaz and the horses twice ford the main torrent; the force of the water is clearly a struggle even for such

116 - Irakli, Tamaz, the author and the Horse With No Name

experienced local travellers. In the riverside shingle here is a lot of dwarf pink Willow-Herb, *Chamerion caucasicum.*

The lack of flowers is partly compensated by the interesting villages with their dry stone houses and massive, brooding towers. The first, Djontio, is uninhabited. The second, Hegho, clambers majestically up the rocky ridge but is across the torrent and we see it only from a distance. However, Girevi, with very impressive ruined towers, is definitely inhabited and Tamaz stops to catch up on local gossip. At the far end of the village is the military post, where our passports are again carefully examined. We are still close to the Chechen border, which runs along the top of the ridge north of the valley. The commander has told Irakli that nobody is allowed into this zone without a guide or a good knowledge of the area and language.

We pass the twin villages of Baso & Parsma and continue round the big bend in the valley below old castles on the ridge above, to the village of Chesho. We are staying with Kato Murtashvili for two nights and she has the cooking pot ready on the fire, full of water for our first hot shower since Tbilisi. My room under the eaves is decorated with beautiful felt hangings. Tusheti is famous for its felt and Kato has made these and many other hangings in the house. She has occasional selling exhibitions in Tbilisi; and thus start the negotiations to buy one of the pieces hanging in my room – a process fraught with difficulties, as we are in a host - guest relationship.

Sunday 23rd July: Sunday is a day of rest, for the horse at least. Irakli, Tamaz and I go for a "stroll" up the south-facing hillside above Chesho. We get as far as 500m up a very steep slope and are rewarded with a fine

117 - Kato and my new Georgian felt

view of the village and the valley of the Pirikita-Alazani River. We pass *Gentianella caucasea,* violet *Scabiosa caucasica,* cream *Cephalaria gigantea* and *Primula elatior* - which has finished flowering.

Later, at Kato's house, as I watch her and Tamaz preparing the *khinkali* (dumplings stuffed with meat or cheese) for the evening meal, I notice a youth and two young women with rucksacks walking up the valley towards us. On arriving, they arrange to camp by the house and eat with us; they seem under the impression that villages like this actually have food shops! They have walked from Omalo, whither they travelled by minibus from Alvani and Tbilisi. They intend to follow our route in reverse, walking all the way and finishing on the Georgian Military Highway below Kazbek. They have no large-scale map (as far as I am aware, there isn't one) nor do they speak Georgian. They are Israelis, but seem oblivious to the perils of wandering accidentally over the Chechen border. They are clearly mad. We learn a few days later that they were turned back at the military post at Girevi.

Monday 24th July: Having wished our Israeli friends *bonne chance,* we descend to the village of Dartlo, where I camped for two nights in 1998, leave the motor track to Omalo, and continue down the left (north) side of the valley. We gradually rise above the torrent and pass the village of Chigho. After Chigho we dive down over grassy meadows with

118 - Pirikita Alazani valley

occasional gentians (similar to *G. cruciata* but with much smaller flowers) into the deep tributary valley of the Chighos Khha. A never-ending climb up through the wooded slopes on the other side brings us eventually to the flat top of this ridge known as Sanare (2400m). Some of the meadows in the clearings are purple with tall campanulas, probably *C. latifolia*. The view from the top is superb – up the Pirikita-Alazani and Tushetis Alazani valleys, up the Chighos Khha, down the valley of the Andikoysu (as the combined Alazanis become), over Diklo, into Daghestan and across the ridge to Omalo & the valley leading up to the Abano Pass beyond. It is a wonderful place to camp, even with a half-mile walk for water.

Tuesday 25th July: Today we just walk down through the woods above Diklo and on to Shenako at 1900m, for two nights. I notice some *Monotropa hypopithys* in the woods, but nothing else of interest. We are fairly low and the area is heavily grazed. In the afternoon, Irakli and I are shown round the village brew-house and then wander over to the old village of Ageota, where the first instalment of the Khevsur *Atangenoba* festival is taking place.

Wednesday 26th July: This morning Irakli and I climb to the top of Sonekhi Hill which rises steeply above Shenako to a height of 2400m. It forms the southern end of the ridge on which we camped at Sanare and commands similar all-encompassing views of Tusheti. The valley floor between the village and the bottom of the hill is blue with borage, sage and some tall campanulas. In the woods on the lower slopes there is more *Monotropa hypopithys* and, on the open grassy hillside above, the odd flower of *Gentiana cruciata.*

In the afternoon we join the village *Atangenoba* festival, which involves a lot of eating, drinking and elaborate toasts in the Georgian fashion. There is a horse race starting way down in the valley and finishing by the village church; the winner is rewarded with three sheepskins that until this morning were wrapped around what everybody is now eating. Folk songs, including - of course - *Ra Lamazia Tusheti* ("How Beautiful is Tusheti") are sung to the accordion and balalaika and there is a certain amount of dancing of varying expertise and flair.

119 - *Atangenoba* at Shenako

Thursday 27th July: There is light rain this morning, the first since I started my trek. We make our farewells and take the track south out of the village. We go down the steep path through the woods to cross the Pirikita-Alazani on the old wooden bridge and then rise steeply again to Omalo. Instead of going into the village, we cut left across the fields to the lip of the wooded gorge of the Tushetis Alazani. After a while we plunge into it and cross the river on an even more ancient footbridge: we are now at about 1600m. Climbing up through the wet woodland seems an eternity. The exertions of the last two weeks are taking their toll and I find the going tough. I notice an interesting tall campanula (possibly *C. ossetica)* and a small orchid (probably *Neotinea maculata)*. Eventually we emerge at the top of the woods, only to descend into another valley where *Campanula latifolia* is beside the stream. We climb up this well-grazed valley, full of *Veratrum album,* for a couple of miles and then re-ascend the ridge. We traverse the far side, which is very steep and covered, to a large extent, in *Rhododendron caucasicum* which has finished flowering. On the very top of the ridge the rhododendron is replaced by the largest expanse of *Daphne glomerata* I have ever seen (unfortunately, finished flowering). During the next hair-raising hour or so my patience with Tamaz, who is leading the way in the distance, begins

120 - The towers of Dartlo, with Kvavlo beyond

to wear thin; I realise yet again that, although the laden horse finds the going easy, that is no reason to think I will. After somehow managing to traverse the precipitous, *R. caucasicum*-covered mountainside without coming to grief on the rocks below, we at last come down onto a grassy hillside and reach our objective, Oreti Lake, at 2600m.

Friday 28th July: We awake to find our tents engulfed in cloud and assaulted by heavy rain. Having packed away and loaded the horse, we slither down the path to the valley bottom and clamber up the other side of the valley as far as the village of Shtrolta, at about 2000m. We pass another village on the way, doing its best to get into the swing of its own festival in the pouring rain, but we make our excuses and press on.

Saturday 29th July: Although the road over the Abano Pass (2926m) is execrable – and certainly has not improved since I bounced over it in the other direction in 1998 – and the weather is foul, at least I am in a car and not an open lorry, as I was then. The drive should be spectacular, with the possibility of interesting flowers along the way. Unfortunately it is raining hard and the cloud base is below 2500m; so I just sit tight and trust to the knowledge and expertise of my local Tushetian driver, Jimsher, to get us safely to Alvani. At Alvani the rain has stopped and we meet Moris for the drive back to Tbilisi in his comfortable car. It is even fitted with seatbelts – we have returned to the 21st century!

Further Reading

If you would like to read more about this area, try *Bread and Ashes: A Walk Through the Mountains of Georgia* by Tony Anderson (ISBN 0 099 43787 2).

121 - Horses at Shenako (good for the gentians?)

Show Reports 2008

Edinburgh & the Lothians

The unpredictable nature of British weather was yet again the cause of concern for show secretaries in the run up to the show. But on the day this proved groundless: entries were high and few classes remained empty. For once, no one group of plants dominated and, arguably, there was the widest range of plants on the benches seen at many an Edinburgh Show. The numerous superbly grown plants set the scene for a magnificent display in this 75th Jubilee year.

Top honours went to Cyril Lafong (Glenrothes), proving yet again that he is the prime exhibitor in Scotland today. His massive white dome in Class 21 of that perfect alpine species, *Androsace vandellii,* was awarded the Forrest Medal for best plant in show. Several other perfect but smaller specimens of this species featured in others of his entries. A Certificate of Merit was given to Cyril for another superbly grown *Androsace, A. muscoidea* var. *breviscapa* and also for *Iris graeberiana* 'Yellow Fall' which, along with *Anemonella thalictroides* 'Schoaf' formed the Henry Archibald Rose Bowl winning entry (class 2).

Primula henricii, a species relatively new to cultivation, is broadly similar to *P. bracteata.* Cyril Lafong showed two subtly distinct forms of this. The plant in his class 3 entry with off-white flowers fading to a very pale lilac was judged the best Asiatic Primula (R E Cooper Bhutan Drinking Cup), while that in class 5 had flowers with a yellow eye that later changed to orange. The former was part of his class 3 Elsie Harvey Memorial Trophy winning entry, and the latter was exhibited with stunning white *Jeffersonia dubia* and *Androsace vandellii* for the A O Curle Memorial Trophy.

The bulb classes are always fiercely competitive at Edinburgh with large entries, particularly in *Narcissus* and *Fritillaria.* The Henry Tod Carnethy Quaich for best bulb, corm or tuber in section I was awarded to Fred Hunt (Invergowrie) for *Fritillaria graeca* ssp. *graeca,* part of his 3-pan entry (class 34) which also included *F.* 'Craigton Cascade' and *F. kotschyana.* It was interesting to see several quite distinct exhibits of 'Craigton Cascade', the differences arising through different cultivation methods.

The Alfred Evans Quaich for the best plant of Ericaceae excluding *Rhododendron* was won by John Lee (Glasgow) for a wonderfully floriferous *Cassiope lycopodioides* 'Jim Lever'. However, the winner of the Reid Rose Bowl for most points in section I needs consistent quality

122 - Border: Cyril Lafong's *Androsace vandellii* (More to come in Issue 122)


Iris suaveolens
'Yellow Form'

123 - *Crocus goteborgensis*

124 - Opposite: *Iris suaveolens* 'Yellow Form'

125 - *Jeffersonia dubia alba*

126 - *Ranunculus crithmifolius*

127 - The RBGE Display at Edinburgh


PLANTS EXHIBITED
BY COURTESY OF THE

128 - *Pleione forrestii*

across a large number of classes. This accolade was achieved by Alan Newton (Ponteland). His winning 6-pan entry typified the quality and breadth of his plants: *Primula* 'Broadwell Milkmaid', *P. bracteata, Dionysia* hybrid, *D. termeana, D. crista-galli* JLHS02-109 and *Androsace vandellii.*

Section II is typically considered the preserve of local group members but - sadly - this year contained fewer entries than last. However, there were many excellent entries, with the best plant and Midlothian Bowl awarded to Geoff Hill (Roslin) for *Primula maximowiczii.* The best forms of this strikingly coloured primula are proving to be winners at shows. Obliged to move this year into Section I, Stan da Prato (Tranent) has continued to produce plants of a high standard. His *Rhododendron* 'Moerheim' won him the Midlothian Vase for best rhododendron. He also won the Boonslie Cup for the best miniature garden, featuring a fresh and mossy display of primulas, anemones and *Ranunculus.*

129 - Alan Newton's 6-pan

Other stalwarts of the local group also took honours. David and Stella Rankin's *Primula allionii* 'Lilac Fairy' was judged to be the best European or American Primula (K C Corsar Challenge Trophy) and *Saxifraga ferdinandi-coburgii* ssp. *grisebachii* 'Wisley' the best saxifrage (Bill Mackie Quaich). Sue Riddell (Tarbrax) again won the Kilbryde Cup for Class 120, an arrangement of cut flowers. The 75th Jubilee Award of a print of *Cyclamen repandum peloponnesiacum* by Anne Chambers was awarded to the winner of class A - for a cushion plant in a pan not exceeding 19 cm diameter. It seemed fitting that the show secretaries, Carole and Ian

Bainbridge (Easter Howgate), won this with *Kelseya uniflora,* a difficult plant indeed.

A regular feature of the Edinburgh Show is the informative, educational and non-competitive display of alpines and bulbs staged by the Royal Botanic Garden, Edinburgh. This year was no exception and the garden was awarded a Gold Medal for a splendid display that included many narcissi, fritillaries, erythroniums and dionysias.

Although the plants rightly take centre stage in a show, we must also thank the team of local members who, under the guidance and leadership of the show secretaries, helped to make this a very enjoyable and successful Edinburgh show.

David Millward

Perth

In contrast to preceding years of the Perth show, the tables were not heaving with *Fritillaria lanceolata* var. *tristulis,* for which a virtually separate class was created a few years ago, but primulas, auriculas and various members of the *Ranunculus* family were much more in evidence.

The Forrest Medal plant was, however, a *Lewisia, Lewisia tweedyi* 'Lemon', exhibited by Cyril Lafong (Glenrothes). This magnificently-sized plant is thought to be about 9 years old. Originally grown from North American Rock Garden Society (NARGS) seed, only one plant survived from the original sowing which has been re-potted over the years and has set seed. Seedlings that were crossed with Mike Hopkins's yellow form really do come true yellow. The plant was grown in a free draining mix of JI 1: peat 1 : perlite 1/2.

Nevertheless, this was not Cyril's only winning plant. Both his *Daphne* x *hendersonii* 'Kath Dryden' and his *Pleione* x 'Shantung' were

130 - Sunshine in the hall: two pounds well-spent at Perth

131 - *Pleione* x 'Shantung'

awarded Certificates of Merit. Cyril was also awarded the Dundas Quaich, the L C Middleton Challenge Trophy, the Alpines 2001 trophy and the Class A 75th Jubilee prize. The best Asiatic Primula was judged to be Nick Boss's *Primula dryadifolia*. Nick's unique natural style of growing high alpines planted amongst rocks certainly succeeds in producing results – and particularly amongst plants renowned for their difficulty in cultivation.

A class that always creates interest is that for 'new, rare or difficult' plants. This year Cyril had an interesting entry in the form of *Amblynotus rupestris* - a member of the Boraginaceae. A monospecific genus, this grows in gravelly places at 2500m in the Changai Mountains in Mongolia and China. It used to be included in the genus *Eritrichium*. It is a dwarf and compact cushion with short hairy leaves and blue flowers. Our advice from Cyril is to keep it dryish when dormant in winter. Grow it in sharply drained John Innes based compost with plenty of light, and water when in growth. It was raised from recently collected seed.

A fine plant of *Aubretia glabrescens* MESE 536 was brought by David Millward. This plant was very showy with purple flowers. It grows on serpentine on Mount Smolikas in northern Greece – inhabiting crevices near the summit at 2600 m. Again, a gritty compost was used – JI with 50% grit. It doesn't require special conditions but is difficult to keep in character and Dave seems to have succeeded well.

Mike Hopkins had a number of excellent entries – he managed to get his *Aquilegia jonesii* to flower, albeit only one! He also won the Alexander Caird Trophy for six pans of rock plants.

132 - Lesley Drummond's *Auricula* 'Mojave'

133 - *Meconopsis punicea*

The bulb trophy was won by Anne and Viv Chambers with *Trillium pusillum* while the E H M Cox Trophy for the best dwarf *Rhododendron* was awarded to Bob Meaden (Penpont) for *Rhododendron* 'Snow Lady'. Bob also had a lovely iris on display with unusual blue- to green-coloured flowers.

Tayside members Fred Hunt and Barry & Cathy Caudwell received the Major-General Murray-Lyon Trophy and the Perth Trophy respectively. Talking of Tayside members, in the class for three pans of rock plants native to one country, only the Taylors could have exhibited such interesting primulas, all from Italy – *Primula albenensis, P. grignensis* and *P.* x *crucis* - all looking particularly fine amongst their limestone rocks. Jim and Janet Paterson from Invergowrie also had three magnificent pans of American trilliums in this class.

In Section 2, Geoff Hill (Roslin), battled it out with the Drummonds (Forfar). Although Geoff was the eventual winner of the Perth Salver & Bronze Medal, without either of these contestants section 2 would have been empty. All the plants exhibited in Section 2 were of a very high standard. Sadly, we once again had no entries in the junior section.

Cathy Caudwell

134 - *Townsendia rothrockii*

Hexham

Hexham show is always interesting, with plants coming from far and near, and this year was no exception; with 75 exhibitors and 637 plants it had something for everyone. How some of the exhibitors manage to carry their plants always amazes me - there are so many pots overflowing with plants, all crammed into the trolleys 'borrowed' from the local supermarket.

In any show some plants wow with their brilliant flower colour, such as a plant of *Corydalis* 'Latvia Zwanenburg' (Alan Newton, Ponteland) with rich pink flowers; others just look plain odd - like *Benthamiella nordenskioldii* (Alan Furness, Hexham) which must surely win a prize for its seemingly unpronounceable name and mass of tiny white flowers; and some seem to fall into the 'cute' category such as *Viola spathulata* (Brian Burrow, Lancaster). My eye was caught by *Synthyris pinnatifida lanuginosa* (Barry McWilliam, Hebron) which had wonderful blue flowers over woolly foliage, while *Pulsatilla vernalis* (Carole & Ian Bainbridge) looked just like a small furry animal. Amongst the bright colours there were some quiet gems; one foliage class was won by a stunningly marked *Cyclamen hederifolium* 'Bowles Apollo Group' grown by David Boyd (Powburn), and Darren Sleep (Carnforth) brought several massonias with their intricately shaped seed pods.

The Forrest medal went to Don Peace with an *Androsace muscoidea,* completing a double bill: it had won the Farrer Medal at the Cleveland Show the week before – all allowable as Hexham was under SRGC rules and Cleveland the AGS ones. Don also brought a wonderful mauve *Corydalis solida* whose flower colour was a perfect match for the *Iris suaveolens* var. *violacea* from Darren Sleep.

Certificates of Merit went to David Boyd, Carole & Ian Bainbridge, Bill Robinson and Barry Richardson for their respective *Hepatica nobilis, Saxifraga georgei, Viola columnaris* and *Primula* 'Netta Dennis'.

135 - Above - Jean Band's posies at Perth
136 - Opposite, Hexham Show, top to bottom, left to right:
Alan Newton's AGS exhibit; *Berneuxia thibetica; Primula* 'Netta Dennis'; *Nardophyllum bryoides; Fritillaria michailovskyi; Ornithogalum nanum; Bergenia* 'Pat Furness'; *Fritillaria pudica* and narcissi; *Primula clarkei; Sideritis phlomoides; Hacquetia epipactis* 'Thor'; *Pleione* Eiger; *Pleione forrestii; Tecophilaea cyanocrocus; Pulsatilla vernalis;* primulas; *Primula* 'Clarence Elliot'; *Primula* 'Jo Jo'; *Primula marginata* 'Casterino'; *Saxifraga* 'Lismore Carmine'



















Ian Kidman (Ebchester) won two AGS medals for the 6-pan classes and the R B Cooke Plate for the most first class points in the open section. Trevor Harding (Skelton) took the Gordon Harrison Cup for the most first prize points in section B and the SRGC Bronze Medal – section 2, Barry Richardson (Skelton) was awarded the Cyril Barnes Trophy for the most first prize points in Section C. Completing a family trend, Frances Hughes took the Northumberland Cup - the third member of the family to have their name on the trophy.

The SRGC Jubilee awards have highlighted some great plants: at Hexham the prize went to Wilma and Jim Wright (Southport) for *Cymbidium goeringii.* The E G Watson Trophy was won by Trevor Jones (Hoddesdon) and the final award was the Sandhoe Trophy which went to Ju Bramley for *Dionysia mozaffarianii.*

I'm not sure what the groups of children taking their ballet exams made of all these plantspeople, but then - what would we make of a ballet exam?

Sue Gill

Stirling

Primulas, saxifrages and bulbs painted a bright palette in Dunblane's Victoria Hall in late March, complementing the terra cotta ceiling with its floral relief. Our judges were Ian and & Margaret Young, Barry and & Cathy Caudwell, Sam Sutherland and John Lee. As usual, Glassford Sprunt was ready to substitute when needed.

Our shows are places to see plants and where discerning gardeners find new treasures, either on the stands of professional nurserymen or on the club plant stall. Ron McBeath's stand was a mass of colour provided mainly by saxifrages. Ron, Ian Christie, Jim Sutherland, Neil Huntly and Stella Rankin all work hard to propagate and source new things to tempt us. On behalf of all members I record our thanks.

The show seemed *déjà vu*: Cyril Lafong's *Trillium rivale* 'Purple Heart' won the Forrest medal for a second year. We are used to the fabulous quality of Cyril's plants but he excelled himself this year. His entry in Class 1 for three pans of rock plants in flower won its class. The *Trillium rivale*

137 - Opposite, Stirling Show, top to bottom, left to right:
The hall; *Erythronium americanum*; Saxifrage and teapot; Cyril's Triumphs; *Erythronium dens-canis; Fritillaria crassifolia*; Posies; *Trillium rivale* 'Purple Heart'; Size matters!; Judges; More Judges; *Saxifraga georgei;* Lyn and Ron Bezzant; *Muscari macrocarpum;* saxifrages; *Primula clusiana* 'Murray-Lyon'; Decisions, decisions... ; *Mandragora officinalis; Fritillaria eduardii;* Eleanor and David Milne





















won the Forrest medal and the Institute of Quarrying Quaich for the Best Non-European Plant; *Primula* 'Broadwell Milkmaid' won the Ben Ledi Plants Trophy for the Best European Plant and the Spiller Quaich for Best Primula. I almost feel sorry for the third plant in the class - *Tecophilaea cyanocrocus* - excellent but unrecognised in the trophy list!

Cyril's *Fritillaria crassifolia poluninii,* a 10cm tall plant with pale grey almost translucent flowers, was Best Plant in a six inch Pot and won the special Jubilee Prize of one Anne Chambers prints of *Cyclamen peloponnesiacum.* Ian Young's selection of *Fritillaria kotschyana* 'Craigton Max', a strong plant with large lime-green bells, is shown by a few exhibitors. *Fritillaria eduardii* was the tallest plant in the show and *F. minuta* correspondingly one of the smallest, although the height of the flower stem depends on its feeding. Ian Steele showed the best plant in a pot but did not get a trophy as the pot in question was a tea pot! Sam Sutherland took first in Jubilee Class A for six small pans of rock plants, with six different *Primula allionii.* Geoff Hills (Roslyn) won the SRGC Bronze Medal and the Fife County Trophy for most points in Section 2 with an excellent entry of high quality plants.

Susan Alexander was top 'New Exhibitor' with a clump of *Erythronium dens-canis* lifted from her garden. Sandy Leven retained the Carnegie Dunfermline Trophy for most points in Section 1, mainly by winning two 6-pan bulb entries.

Saxifraga 'Bohemia' from Ian and Carole Bainbridge was awarded a Certificate of Merit. Ian demurs over his share in 'Bohemia' but is justifiably proud of *Saxifraga georgei,* a species which excited interest in the 1970s when it was introduced by George Smith.

Andrew Radley (Auchterarder) took no chances with his *Mandragora officinalis,* from the potato family. Growing it in a pot avoids being killed by its screams when digging it up. Miranda Radley had won seed of *Townsendia rothrockii* in 2006 at the Perth show, sowed it, and won first prize at Stirling.

Variation within a species is fascinating. Two forms of *Primula marginata* sit at extremes of the height range of this species. A tiny form was raised by Margaret and & Henry Taylor whereas David Millward's *Primula marginata* 'Gold Plate' was larger. Margaret & Henry also showed the fabled and long-maintained form of *Primula clusiana* 'Murray Lyon'. Cyril's American *Primula henryi* with white primrose flowers over a prostrate mat of shiny deep green leaves was new to me.

Thanks to everyone, especially to the exhibitors. If you grow plants but don't show them, why not begin showing next year? Our love of plants ranges from interest through enthusiasm to near fanaticism and, when I read the prices of some bulbs, I am almost certain that some of us are touched with madness, so perhaps we all should beware the mandrake's hallucinogenic properties.

Sandy Leven

Woody Plants of Northern Sakhalin

Alexandra Berkutenko
2007, 68 pages, 339 colour illustrations
Russian Academy of Sciences, Far-Eastern Division, Oblmashinform, Irkutsk
ISBN 5-93250-080-8

Sakhalin is an island off the Russian coast with an area well over half that of Great Britain. At first glance readers may question the relevance to alpine garden enthusiasts of a book dedicated to woody plants of this large and remote area. However, I am one of many western people who have acquired seeds from Alexandra Berkutenko for internationally known botanic gardens including our own Royal Botanic Garden in Edinburgh. In this book, Berkutenko illustrates each species from forest, arctic–montane or marshland zones with several photographs – in spring and autumn for example - along with small but clear maps of locations and frequency. Despite Russian text, the value of shared botanical Latin could not be better demonstrated. There are usually two species per landscape-orientated page. Several, such as *Empetrum nigrum*, are circumpolar and therefore familiar to many alpine gardeners but many are not - such as the delicate little *Chimaphila umbellata* and *Sieversia pentapetala*.

Seeds collected from Nature and distributed by Alexandra over the years to so many gardeners reflect her incomparable professional knowledge as a botanist in Russia's most remote region, with access to a vast area from the Arctic Tundra, through the Taiga forests, down rivers such as the Amur, over mountain chains such as Sikhote-Alin with its Siberian tigers, over to the island of Sakhalin in the western Sea of Okhotsk, and across that sea to the fiery volcanic peninsula of Kamtchatka. Alexandra once told me there are no railway links to her city of Magadan, on the north coast of the Sea of Okhotsk at almost the same latitude (59°N) as Scotland; the Trans-Siberian railway ends a thousand miles away in Khabarovsk; access is mainly by air and her working trips often involve government helicopter flights.

The book is a tribute to a colleague, Dr. Anna Chernjaeva, founding director of the Yuzhno-Sakhalinsk (South Sakhalin) Botanic Garden whose pioneering work has been somewhat overlooked by successors. This lovely book contains delightful photographs to accompany the text.

Alexandra shows a range from alpines to shrubs and trees in remarkable detail. My own working life has been around Scotland's native Caledonian pinewoods dominated by our own national tree, *Pinus sylvestris* ssp *scotica;* I was therefore particularly fascinated by populations of *Linnaea borealis;* photographs in Sakhalin show a form with exquisite

pink flowers as against our own mainly white population. I was delighted to see *Gaultheria miqueliana* with its startling white berries - a species that now grows very happily in Scotland, flowering and fruiting from seed that came from Alexandra several years ago. Indeed, a virtual Amur and Sakhalin mini-region is taking shape here at Auchgourish Botanic Garden thanks to Berkutenko's seeds. They have been planted on one of our several rockeries or in open shrub & woodland areas and include two particular species: *Clematis ochotensis* is a plant whose striking blue flowers are caught perfectly by six photographs in this book; this highly recommended species is a valued addition to the botanical clematis collection at Auchgourish; *Sorbaria sorbifolia* is a similarly valuable, outstandingly graceful, fluffy and white-flowered shrub. Another attractive plant meriting mention as doing very well at Auchgourish is *Weigela middendorffii,* a low shrub suited to the back of a rockery with very pretty orange-throated yellow flowers, not previously found to be reliably hardy in colder parts of northern Europe; the plants at Auchgourish derive from Alexandra's seed and have so far proved indestructible to 25°C (for American readers, roughly equivalent to USDA Hardiness Zone 6). Alexandra's winter temperatures go much lower than ours are ever likely to!

Other dwarf and low-growing species suitable for larger rock gardens include *Betula middendorffii, Rubus sachalinensis* and several very attractive dwarf willows not yet at Auchgourish. There are several really robust dwarf and shrub rhododendrons including *Rhododendron parvifolium, R. adamsii* & *R. aureum.* This latter is ideal rock garden material, as is *Ledum decumbens.* I admit I am a prejudiced fan of boreal forest; nevertheless, many plants that rock gardeners so rightly covet grow there or on the margins. I therefore recommend this book for its excellent photographs and because it shows so many plants *in situ* with - importantly - their natural associates. I therefore close with more name dropping: *Chamaepericlymenum canadense* & *C. suecicum, Orthilia secunda, Dryas ajanensis, Cassiope ericoides, Rubus arcticus* - possibly extinct in Scotland but growing beautifully and romping away here - and two artemisias, *A. stelleriana* and *A. glomerata.*

For appreciative ecologists, botanists and enthusiastic gardeners, this book opens a new and rewarding window on some far-eastern Russian botanical treasures. As with her seeds, Alexandra supplies this atlas of woody plants directly because there is no distribution agreement in the West. To find Alexandra's regular annual seed lists or to purchase a copy of this beautiful book, contact her by email either at berkuten@online.magadan.su or at Berkutenko@yandex.ru.

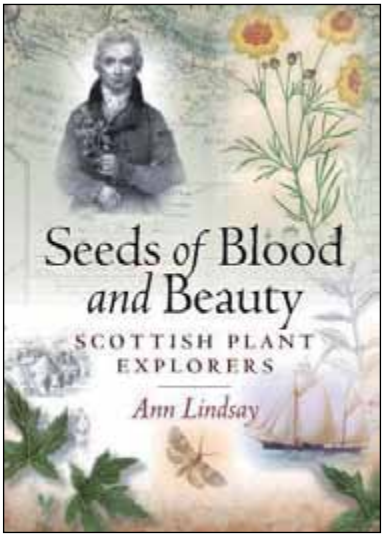
Mountain Flower Walks: The Greek Mainland
John Richards
216 pages, 26x14 cm, numerous colour illustrations and maps
ISBN-13 978 0 90 004879 1
Alpine Garden Society, £17.10
2008

The AGS and John Richards are to be congratulated on this splendid new volume, the first of several intended to replace Bacon's venerable *Mountain Flower Holidays.* The series title is somewhat misleading, as this is not a book of walks, like the little *Sunflower* books, but is a guide book to where best to look for wild flowers. The book is clearly set out, well illustrated and its coverage is extensive – although not comprehensive; I was surprised at the omission of Mt Ossa which is both very floriferous and easy of access. Each of the 28 sections has a description of the area in question, a detailed guide to how to get there, suggestions of where to stay, a note about the best times of year to visit, and a survey of the best places - "hot spots" - to head for. Most of the described places are easily accessible from roads passable by a small hire-car and, where they are not, this is made clear. Several of the sections fall into groups which could be tackled as walking tours by those not wanting to drive. All is very straightforward and eminently practical. I do hope, however, that the AGS will have other titles in this series proof-read by someone proficient in the local languages. Greek place names are a notorious minefield: there is no consistent Greek system of transliteration and there is sufficient confusion on this score to perplex the first-time visitor, if not the old hand. For example, the spelling of names on the (admirably clear) maps does not always agree with that in the accompanying text. Although some of the suggested pronunciations are helpful (see Taygetos on page 51), others (see the strange suggestion that Vardhousia be pronounced "Vardwhotheeya") are simply misleading and it is a pity that we are not told that Gytheion is pronounced "Yithion". I was also nonplussed, on first opening the book, to be confronted in the contents with a list of provinces, half of which were in the nominative case (as expected) and half in the genitive. Page numbers are clearly marked and the sections are colour-coded but it would also have been helpful to mark section

numbers clearly on each page - although the section number may be deduced from the illustration numbers. There is a full index of plant names but an index of place names (even with the eccentric spellings) would have been useful. However, having said all this, this book is an absolute *must-have* for anyone who wants to look for wild flowers in Greece – and who could possibly not want to? Send for your copy today!

Michael J B Almond

Seeds of Blood and Beauty
Scottish Plant Explorers
Ann Lindsay
304pp, 16pp colour and b/w plates
ISBN-13: 9781841585796 Softback
Birlinn £9.99
2008



Seeds of Blood and Beauty follows the adventures of the great Scottish plant collectors of the 18th and 19th centuries; these men exposed themselves to great perils in their search for exotic specimens in remote and dangerous places of the world. The book depicts their influence over two centuries both as explorers and horticulturists.

I found the introduction of particular interest, being both informative and humorous. Scots from as far north as Orkney, stretching down to the borders, left their homes to embark on the journey south - which in itself was no mean feat. Most of them initially found employment as gardeners at some of the great gardens in England and later aspired to become great horticulturists, explorers or a combination of both.

The author then devotes chapters to individual pioneering Scots who risked life and limb so as to introduce seeds and plants to Britain from most corners of the globe. One example of such a hardy and enterprising man was Francis Masson who was raised in Aberdeen and came from a humble background. He later became the King's undergardener at Kew Gardens and not long afterwards departed on his first expedition to South Africa, sailing from Deptford on the 9th April 1772 - a journey that took over six months to complete. Masson returned to England after an eventful and successful three-year trip, bringing back several new botanical species. His continued passion took him on

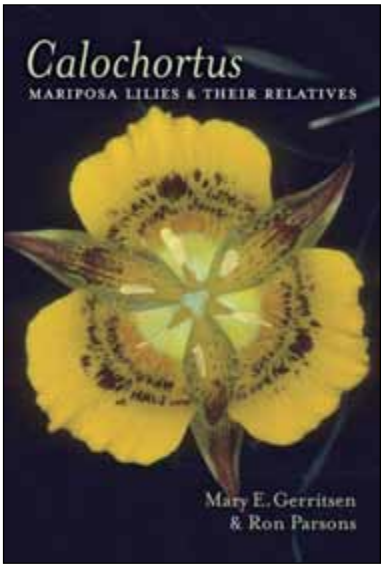
several more expeditions. While still botanizing in Canada he took to his bed and ended his days alone in Montreal in 1805.

I have given here only a brief summary of just one of the Scots who have influenced the horticultural world but I thoroughly recommend that you read the book to find out more about these early and intrepid explorers. My compliments go to the author on this expertly researched, well written and easily-read book which transports us on some fascinating and challenging botanical adventures.

Anne Christie

Calochortus

Mariposa Lilies & Their Relatives
Mary E Gerritsen and Ron Parsons
232 pp, 175 colour photos, 2 line drawings & 1 colour illustration
ISBN-13: 9780881928440
Timber Press, £20 (or from the SRGC Book List), 2008



I am always tentative when asked to review a book because although I love books, especially on bulbs, I am often a bit worried that I will not like the book and will feel obliged to find some way to be constructive in my criticism.

This is not the case with *Calochortus:* it is a super book. A quick look at the contents shows that the authors have covered almost every detail in their 232 pages. The history of those who discovered the plants is 20 pages long and includes some familiar names but the author has filled in some valuable background that I did not know and has introduced me to more plantspeople of the past.

The family tree of the genus is well covered in an excellent phylogenetic chapter that puts over a complicated subject in simple terms that should not scare even a simple gardener. Interestingly, it shows that the original classification of *Calochortus* into sections and sub-sections based on the morphology differs in only a few places from results displayed by the DNA studies.

Mary Gerritsen is the writer, while Ron Parsons's excellent photographs are used extensively to illustrate this beautiful genus of bulbs. Many of the pictures throughout this book show close-up details looking

directly into the flowers – these are great aids when trying to identify the different species as they show much of the necessary taxonomic information. As well as the flower portraits there is a good number of pictures showing the plants growing in their natural habitat. The profusion of some of these wild populations is fantastic and we are told how these mass flowerings often follow a period of fire.

The largest section of the book is given over to a detailed account of all known taxa, described methodically under *Description, Distribution & Habitat, Cultivation* and *References.* This is a very logical and clear way to describe the different species: with this layout and the photographs, even without a key, it is very easy to compare the characteristics of the different species so as to work out the identities of your plants.

If you do not know this genus, prepare to be amazed by their beauty and diversity, perhaps best illustrated by over four pages of colour variations of just one - admittedly the most variable species - *Calochortus venustus.*

A short chapter on cultivation gives valuable tips and suggestions for suitable soil mixes but best of all is the list of *'Growing Conditions for Calochortus Species'.* This takes up four pages and does just what it suggests: it describes the conditions you should try to provide for each species to grow successfully – such as *'C. albus - late autumn, winter and early spring moisture, summer drought'.* A further list of the species that require cold seed stratification to get germination will prove useful to growers in warmer climates so as to provide that cold period.

An extensive glossary running to nearly six pages provides a very useful reference for the true meaning of many of the botanical terms used not only in this book but elsewhere. For those who want to delve further into this genus there is also an extensive list of references.

Altogether I think this is a first-rate book: it is an excellent monograph for the expert that will also prove an invaluable guide for any grower who tries to raise some of these beauties. In the distant past I tried to grow many of the species; I now just grow *C. uniflorus* but I am inspired by this book to get seeds and have another go with a wider range. I am sure all bulb lovers will enjoy this book even if they do not intend to grow them but be warned - once you see their beauty and read about them ...

Ian Young

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138 - The SRGC exhibit at Scotland's Garden Show June 2008

Volume 30
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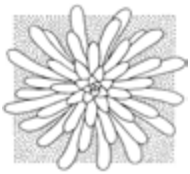

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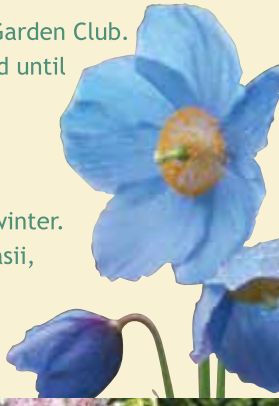

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