

# THE ROCK GARDEN



THE JOURNAL OF THE SCOTTISH ROCK GARDEN CLUB

Volume XXI Part 2 Number 83

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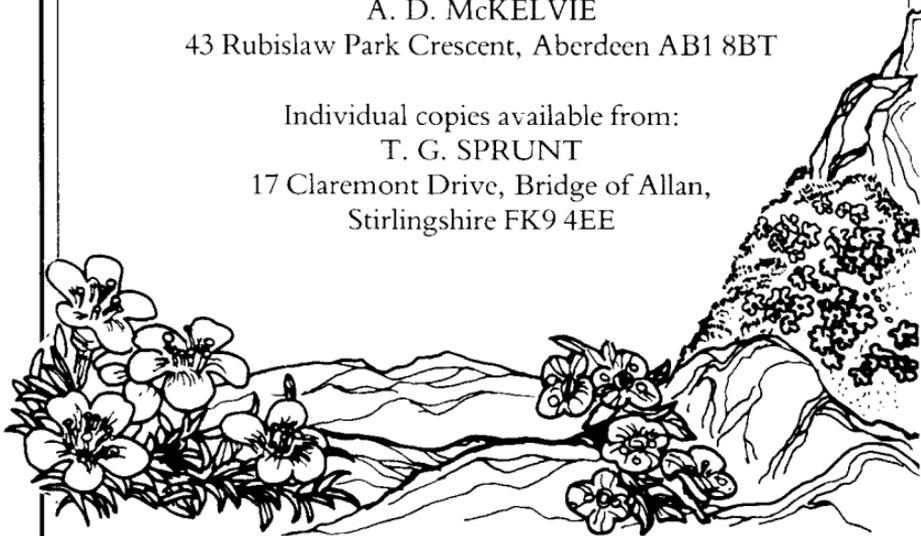
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Front cover:

*Primula macrophyllia moorcroftiana* (see p.144)

Photograph by Henry Taylor

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# Editorial

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It often seems to me that rock gardeners become obsessed with individual plants, for the Show Bench, for their rarity or for their difficulty. They often tend to forget about plant associations in the garden in their pursuit of individual perfection of cultivars differing only in minutiae from one another.

I was thinking about this the other night when I was giving, once again, my standard Women's Institute lecture on alpine plants. I showed the ladies all sorts of rarities which did not seem to impress them unduly. What really drew a gasp was two slides showing a plant association in my garden of *Calluna* 'Robert Chapman', *Pieris forrestii*, *Rhododendron* 'Blue Diamond' and *Erica x darleyensis*. In the first slide taken in early spring, the *Calluna* was a brilliant red, the *Pieris* was a striking pale white-green and the *Erica* was dark green. In the next slide, taken six weeks later, the *Calluna* was green, the *Erica* a mass of white, the *Rhododendron* purple and the *Pieris* bright pink. Both slides were beautiful but it was the juxtaposition of the colours which brought the gasp.

This is one of my happier plantings. More often than not, I end up with a mass of alliums, thalictrums and irises, all flowering together and in more or less similar shades of purple. This then leads me to shifting the plants, often at quite unsuitable times, and to my wife enquiring plaintively about the apparent disappearance of a plant from a well-known spot.

Planning the Journal is a bit like planning a garden. You can only include what you have got or been given. I do buy plants but I have never thought of buying articles from folk. I suppose all that would happen would be that my regular contributors would simply write even more if they thought they would be paid and the rest still wouldn't write.

Again like gardening, whether or not the Journal forms a readable blend is in the lap of the gods or like making a soufflé; you never know what it will be like until it appears. You have no idea how anxiously editors scan each new issue as it comes out!

ALASTAIR McKELVIE

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## President's Review

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The announcement of an increase in subscription rates has resulted in a gratifyingly small number of resignations and it is pleasing to report that there has been a satisfactory increase in the number of new members during the year. The total membership now stands at just over 4,500, and is made up of about 1,800 living in Scotland, about 1,600 in the rest of the UK and about 1,100 overseas. The apparent reduction as compared with last year is due to the deletion from the membership roll by the Subscription Secretary of a large number of overseas members because of long-term non-payment of their subscriptions. It is interesting to note that since 1984 the membership has steadily increased - by 1,000 from 3,500 to 4,500. This rate of increase has not been diminished by the increase in subscription rates.

It was expected that we would again experience an operating loss as the new subscription rates would not become fully effective until 1989. Due to prudent management and a number of generous donations, which have been very gratefully received, the deficit is very modest and just slightly less than last year.

Jean Wyllie is to be congratulated on having successfully completed her first year as Seed Exchange Manager. The Seed list and the issue of seed were once again distributed early, this being a feature of the scheme which members greatly appreciate.

Since retiring from the Royal Botanic Garden, and having moved to the west coast, Douglas Henderson has found that distance has made it not conducive to continue as chairman of the Exploration Fund Committee. John Main has kindly agreed to act as Chairman.

Bill and Bette Ivey moved house and it was therefore not possible for Bill to continue as Convener of the Ayrshire Group, a position he had held for 20 years. This must surely have been a record, and Bill was to be congratulated on having held this office for so long. Sadly, shortly after moving to their new house in Kirkmichael, Perthshire, Bill died after a short illness and Bill and Bette were not destined to create their new garden together.

Richard Barr has found it necessary to retire from the office of Convener for the Lanarkshire Group and Angus Small has taken over these responsibilities for the time being until a successor can be found.

The Newcastle Show now has a new Secretary as Mike Dale has retired and Alan Furness has taken over.

The Ayrshire Group are to be congratulated on receiving the Steradent award for a display which the Group constructed at the three day Ayr Flower Show. This display consisted of a raised bed and troughs and created a great deal of interest and good publicity for the Club.

The Discussion Weekend at Stirling University was very well attended and most enjoyable. This was our first weekend at this very attractive venue. The chief organiser, Sandy Leven, had arranged a very full programme of interesting and well illustrated lectures. New ventures included a reception/buffet meal at Stirling Castle on the Saturday evening with a pipe band in attendance, and a holiday photographic competition. There was also a popular session, while the show was being judged, of questions from the audience with answers from a panel of experts. Sandy and his helpers had spent nearly two years in making the arrangements and this was clearly obvious by the smooth way in which the weekend all too quickly passed. The venue for the 1989 weekend will again be Stirling University.

It is with much pleasure that I am able to report the award of the Golden Jubilee Salver this year to Isobel Simpson in recognition of her outstanding services to the Club. Over the years, Isobel has served on Council, was Club Secretary from 1975 to 1981, and has held the office of Librarian since 1982. Along with her husband David, she initiated the collection of subscriptions by Giro and the recording of membership by computer. She also started, and still organises the twice yearly competition for art and photography. The award of the Salver is a very fitting and well deserved tribute for the time and effort which Isobel has unselfishly devoted to Club affairs.

Perth and Edinburgh changed their show venues to more spacious and better lit halls.

Our participation in the Glasgow Garden Festival by holding the Club's Glasgow Show there proved very successful thanks both to the organising committee under the chairmanship of Viv Chambers and the strong support which the Glasgow Group received from their own members and from many members who came from far afield. Along with Viv Chambers, Rodger Smyth and Jackie Thomlinson must be specially commended for their efforts as they bore the brunt of much of the organisational work. Needless to say the committee faced and surmounted a lot of problems and complications over the two year period of preparations, but the effort had been well worth making.

Congratulations are due to Fred Hunt on receiving the AGS Salver for gaining the highest aggregate of first prize points in Section One of our Shows during the year.

Six applications were received for awards from the Exploration Fund and three grants were made for journeys to Austria, Nepal and North Labrador. Excellent donations of seeds collected in North Labrador and in Nepal have been gratefully received by the Seed Exchange Manager from Dianne McLeod and John Grimshaw, respectively.

Books and sundries, sold by the Publications Manager, have continued at a steady level. There have been a smaller number of new books on the current lists and regrettably book prices have increased. These two factors have resulted in a reduction of business as compared with last year, but even so the Publications Manager has been able, once again, to make a worthwhile contribution to Club funds from the surplus earned.

Our twice yearly journal, "The Rock Garden" continues to maintain a high standard. For the first time all the photographic illustrations have been in colour.

The committee for the joint AGS/SRGC Sixth International Rock Garden Plant Conference in 1991 are steadily proceeding with arrangements. Two other future events may be of interest to members. In 1990 there will be a Garden Festival at Gateshead and the Newcastle Group have been invited to participate by holding a joint two day SRGC/AGS Show at the Festival. There is also to be a Fifth Primula Conference in 1992 organised by the American Primrose Society. The Club is willing to sponsor this conference in name, along with other horticultural societies, and probably offer other support in ways yet to be finalised.

My three year term of office as President is now ended. I am proud and very glad to have had the opportunity of holding this very privileged position and I would like to thank Council, local Group officers and all members for their support and encouragement, and for the many acts of kindness that have been shown to me.

# THE STONE COLUMN



## Statistical Fluctuations

Many years ago, not long after we started to garden seriously, our younger daughter Bridget bought us a small present from one of the local tourist-traps. It was a rectangular wooden plaque upon which was written:

As a rule, a man's a fool,  
When it's hot he wants it cool,  
When it's cool he wants it hot,  
Always wanting what is not.

Children are often very perceptive when it comes to their parents' obsessions, and Bridget's choice of verse showed she was well aware of our growing preoccupation with the weather.

Poll put up the plaque in her potting shed, where, although prominently sited, it gradually merged into the background. The words, however, were never more appropriate than during the summer of 1988, when our dissatisfaction reached new heights. Early April was rather mild, encouraging growth, then suddenly, while we were away at Edinburgh Show, the temperature plunged to  $-8^{\circ}\text{C}$  overnight. Fortunately we had left our frame-lights on. Over the years we have had to become philosophical about such occurrences, but it does not make the damage to plants any less. This was just for starters; the weather had further extremes up its sleeve. There was no appreciable rainfall during the months of May and June, then suddenly on 2 July, someone turned on a tap and forgot to turn it off again, for the rest of the summer. Many meteorologists claim there is no changing pattern in our climate, it's all just statistical variations about the norm, even the American drought. Others, at present a minority, claim we are seeing the first manifestations of the "Greenhouse Effect". Whatever its cause, the unusual summer was very much a mixed blessing for us. Poll, who normally spends much of

May and June potting up, found the lack of rain diverting. Much valuable time had to be spent in shading and watering her frames. Most of the time I found the dry weather of benefit, hindering germination and growth of annual weeds, and enabling me to work outside every day. After the first three weeks or so, our thin light soil, over gravel, made watering essential. In the open garden, this is simply done since we invested in a wheeled hoze-reel and constructed a stand for the oscillating lawn sprinkler to increase its throw over beds (see p.141). Once the stand is in position, the hoze run out and connected, the angle of the table is adjusted to fine-tune the coverage of the sprinkler. A few years after we made our stand, we visited Roy Elliott's garden, and noticed that he had attached a similar oscillating sprinkler to the top of a large photographic tripod. Useful ideas often recur quite independently.

In this garden priority is given to watering the meconopsis and Asiatic primula beds, followed by the quick-drying screes, then the Ericaceae, starting with the smallest and choicest areas. Although our conifer bed is only one year old, this is long enough for considerable root growth and so it was well down the priority list. It had been top-dressed with peat to ease maintenance and by the time its turn for watering finally came around, the mulch was very dry. Usually we leave the sprinkler in each position for an hour or two, generally sufficient for the water to soak right in. Amongst the conifers this much only dampened the top 2-3mm of the peat. The watering had to be continued overnight, twice. We have abandoned any ideas of mulching ericaceous beds with peat, continuing to use our leaf-mould and accepting the generous lacing of pearl-wort seed it contains as a necessary, but Paraquatable, evil. As we said, peat top-dressings have their place as weed suppressors, but one must be circumspect in their use. Incidentally, we did not lose a single conifer following the big move described a year ago, although a few looked jaded for a while. Now they are showing their true colours, literally, the bed is making considerable year-round impact.

Taking care when moving established plants always pays off, and so it did with our shrub roses also. They put out their leaves at more or less the usual time, then stood still for several weeks. Were they just living on their sap? We joined all our hoses end to end to reach the bottom of the garden, watered, and kept our fingers crossed. Then shortly before we left for the USA early in July, they suddenly started to throw up new shoots from the base. All was well.

While we were away for our month's holiday, it rained virtually every day, and Bridget who was looking after house and frames, had little to do. There was no change after our return, it was over ten days before I had an opportunity to cut the grass. Some of the more overgrown sections of

herbaceous beds have yet to be weeded, the continuously wet foliage too dense to push amongst without getting soaked.

After the Discussion Weekend in Stirling, a small party of Irish members visited Askival. They commented on how natural the garden looked, with plants mingling and growing through one another and moss much in evidence. Those less charitable might suggest that “natural” is a euphemism for untidy, but as minimum interference is our basic philosophy, we took it as the compliment intended. Certainly we can get away with far more on our 1½ acre scale, than can the owner of a ⅛ or ¼ acre suburban garden.

### **Changing Priorities**

There is no doubt that garden visiting can be of mutual benefit to both guest and host. No matter how objective one tries to be it is quite impossible to step outside one’s own garden situation. We have found conversation with visitors to be of great help when attempting re-assessment of our priorities. As Poll can confirm, I was quite paranoid about weeds in the early days, becoming very bad tempered if continuous wet weather prevented action. Now I like to think I have learned the difference between “control” and “eradication”. Do tiny poppers seeding themselves amongst the tufts of a siberica iris really matter?

When we started to garden at Askival back in 1971 we had rather naive plans, derived mainly from books, to try almost every kind of gardening. We even proposed a heated greenhouse to grow exotics like brunfelsia and cymbidium orchids. As subsequent experience changed our priorities the annual bedding plants were the first to go. In our short cool growing season annuals are unrewarding without heated propagation facilities. Next was the vegetable patch, neither of us caring for the continuous repetitive discipline it requires. Another early feature, which we grandly called our orchard, survived until recently. It contained half a dozen fruit trees, together with bulbs naturalised in grass. In Spring, the children used to refer to this as the “minefield”. Step on a bulb, and Daddy explodes! The apple trees themselves were never really compatible with the policy of “minimum interference”. We never seemed to spray at the right time, and the apples were always disfigured by scab and/or riddled with codling moth.

In the late summer our son, Sean, up for a short fishing holiday, helped his aged parents by cutting down these trees. Shortly afterwards four friends, co-erectors of the Stone Column (see No. 73, p.312) came for the weekend, ostensibly to see our American slides. Having sat through the selected 800, without going to sleep, next morning they dug over an

extension to the conifer bed and planted four dwarf pine cultivars, grown too large for their own gardens. Not content, they also removed all the fruit-tree stumps. Now as Poll's frameyard continues its expansion across the old fruit garden, we are forced to re-assess the future of our remaining soft fruit bushes. Surrounded by woodland, with a high bird population, a cage is really necessary; but to justify such an investment requires more time on cultivation than we can spare and more mouths than two to consume the produce. Alpine gardening in the broad sense is at last totally triumphant at Askival, having forced the elimination of all rivals for our attention.

### **Over the pond.**

Regular readers of the column will be aware of our recent conversion to the concept of the alpine flower holiday, and no one is as dedicated as the convert. The seed was sown for a possible visit to the Western USA when Fred and Roberta Case sent us a copy of the 1986 Conference Report on Rocky Mountain Alpines. Having personally written one of the chapters, they are enthusiastic champions of the delights of their western States. The idea really germinated when they visited Askival in the Autumn of 1987, en route to give a lecture to the AGM of the Alpine Garden Society, and was subsequently fertilised by a favourable exchange rate.

After an interchange of ideas to and fro across the pond, plans eventually jelled for a two part trip.

In early July we flew out to Denver where Panayotti and Gwen Kelaidis kindly took us under their wing, for a couple of days. Equipped with a hired car and well-annotated maps, we set off on our own for a week's tour of some of the high spots of the Colorado Rockies. We found the mountains far more reminiscent of our Scottish Highlands than of the Alps. Imagine a dissected plateau like the Cairngorms uplifted 2,500m raising the treeline to 3,000m and over. While marking our maps, Panayotti and Gwen concentrated on the many high road passes. When we mentioned that we had done 1,250m ascents in the Alps, they smiled politely and let us find out the debilitating effects of altitude for ourselves. They did however warn us of the danger of afternoon thunderstorms. Consequently we were up very early; breakfast can usually be had in diners from 6 am, and botanised during the morning, keeping an eye on the clouds. If necessary we drove on to the next Motel and mountain area during the afternoon. Few countries are as well suited to such independent wanderings as the US, geared as it is to cars, telephones and credit cards.

The second phase started with a flight to Billings, Montana, to meet up with Fred and Boots, who had driven out from their home in Saginaw, Michigan. There followed a whistle-stop tour westwards through some of the botanically interesting and relatively accessible mountain ranges. Three weeks in the same car and not a single argument. This expedition was timed to arrive in Northern Oregon for the AGM of the American Rock Garden Society, at Mt. Hood. Like our Scottish Discussion Weekends, this was an occasion valuable for its renewal of friendships, but with the addition of well-run field trips. Afterwards, a last combined day was spent with the Cases on Mt. Rainier, whence, following a farewell dinner at Paradise Lodge, Fred and Boots headed eastwards for home via the Wenatchees and *Lewisia tweedyi*. Poll and I drove north to the Olympic Mountains and a rendezvous with *Campanula piperi*. In full flower, it made a fitting climax to our superb introduction to the mountain flora of the American West. The weather was kind, the company congenial, the plants fantastic, and Poll used no less than 40 rolls of film. Hopefully we'll be back, now that we have 'cased' the joint!

## **Some Western American Alpines**

### **A Personal Commentary**

We find it rather strange that there still appears to be a lack of appreciation of just how good the flora of the Western American mountains can be. Many ranges can well stand comparison with equivalent areas of the Himalaya, and have the added advantage that the plants tend to be rather hardier. Perhaps one factor has been the lack of information in the Journal. Since Dr. Worth's articles in the 1950s there have been very few; in the last 20 years I can find only three, two on Cascade Volcanos, and Henrick Zetterlund's recent journey. Surely among our American members there must be someone who could take up Dr. Worth's mantle? It is in light of the above that we have presumed, after only one visit, to make our personal selection of western alpines. In making our choice, our value judgements are naturally highly subjective, and in two distinct ways.

Firstly, personal prejudice has undoubtedly played a part. Most gardeners we know rate *Cypripediums* very highly indeed. We are unfashionable in feeling that they lack that certain something, that style which takes a plant beyond mere attraction, into the select company of the really beautiful. We much prefer the graceful red helleborine *Cephalantherarubra*.

Secondly we are biased towards plants suitable for our own conditions, i.e. ones likely to succeed out of doors in northern Scotland. In the Rockies, rainfall generally decreases as one descends, until it becomes too dry for trees to grow. Thus there is a lower tree-line as well as an upper.

In the steppe, or cold desert, below the trees, sagebrush is king; but there are usually choice dwarf species under and around the scrub. A great many of these, like *Lewisia rediviva*, go dormant in summer, and so are more suited to the controlled conditions of the alpine house. That said, one never really knows until one tries, plants are sometimes remarkably adaptable. Some time ago a friend wrote to ask for information on our cultivation of soldanella. Later, when replying, he asked "Is there anything that doesn't grow well up there?" The answer is yes indeed, many things including dionysia. Every species we have tried has failed. Consequently we do not rate the genus very highly; a minority opinion perhaps.

Turning to cultivation, this can be covered in a single sentence, try a deep open scree with as much exposure to light and wind as possible. Humidity in the Rockies is low, the ground drying rapidly after storms, so a deep top-dressing of gravel is indicated. Most plants are deep-rooted, so watering should be unnecessary once established.

### **Asteraceae (Compositae)**

We think it was the late Sir William Lawrence who advised alpine gardeners to "avoid 99 out of 100 composites". In the Rockies, the proliferation of the family is such that the remaining 1% contains a great many excellent species. Identification keys tend to include rather technical details in this family, and are not easy for the non-botanist to use; but one species is absolutely unmistakable, the dwarf sun-flower *Hymenoxis grandiflora*. We have found it easy to raise and grow on, but many seedlings disappoint by flowering prematurely, with a consequent reduction in flower size. In the wild the flowers can be up to 10cm across. Interestingly they always face east, above their rosettes of pinnatifid leaves. *Hymenoxis grandiflora* has proved monocarpic here, unlike its smaller relation *H. acaulis* which we actually prefer, as its scale is more in keeping with other alpiners. The latter has a very wide distribution, both above and below the trees, and consequently is quite variable, notably in the degree of silvery hairiness of the tufts of narrow oblanceolate leaves, and in length of flower stem. We saw none that were truly "acaulis" i.e. stemless, most carried the 2.5cm golden suns on stems of around 10cm. The central disc is comparatively large, and the rayflorets have three small rounded teeth at the tip.

*Happlopappus* (or *Tonestus*) *gygmaeus* is superficially rather similar to *Hymenoxis acaulis*. Found only on the high screes in the tundra zone, it differs in forming low mats rather than small tufts. The solitary flower

heads have a 'chunkier' feel with shorter, thicker stems, around 4cm long, carrying cauline leaves, and a more prominent involucre. We also liked two further yellow daisies of the Colorado high places, both included variously in *Ligularia* or *Senecio*, and both with dark purplish foliage. The leaves of *Senecio* (or *Ligularia*) *soldanella* are, as the name suggests, relatively broad and rounded, the orange flowers rather starry with well separated short ray-florets. *Senecio* (or *Ligularia*) *Holmii* had something of the feel and quality of a *cremanthodium*, the flowers nodding with long 2cm pale-yellow rays. The latter's foliage tapers gradually to the reddish petiole.

Over the last few years we have grown quite a few townsendias in the garden, with spectacular if short-lived results. Mostly natives of dry areas, high plains or foothills, they have failed to set viable seed in damp Scottish autumns, and require constant reintroduction. However there is one species which, like us, prefers the high, cold, windy places. *Townsendia rot-rockii* (Fig 19 p.133) has forsaken the sagebrush and steppe haunts of its kin for the stoney sides of snow-patches in the tundra of central Colorado. A diminutive plant, less than 2.5cm overall, the tiny rosettes are almost hidden by several, relatively huge, pale lilac flowers, sitting right down on top of them. While in the area, a small party of students arrived led by a tall bearded figure in cowboy boots and hat. He turned out to be a professor of Environmental Studies who regularly visits the area, but he had never noticed this townsendia. We pointed it out, photographs were taken, and in return he sent us seed collected on one of his later visits, "before the snow flies".

And so finally to *Erigeron*, a ubiquitous genus we saw everywhere we went. Some were unidentifiable, others tall and straggly, and quite a few, highly desirable dwarfs. One of these last, which we saw in full bloom on Mt. Rainier, is *Erigeron aureus*, a true alpine of the pumice desert, that narrow band on these Cascade volcanos between the tree-girt meadows, or parks, and the permanent snow. In this family the flowers are generally of smaller diameter, compared with their stems, than most of the above, but make up for this to some extent by having more than one row of ray-florets. In *Erigeron aureus* the flowers are self-coloured orange-yellow, up to 2cm diameter on 10cm stems. We have grown plants in a trough for a number of years, finding them free-flowering and no problem except for slugs. The same is true of the well known *E.* 'Canary-bird', which was raised by Jack Drake from seed of *E. aureus*. It has been suggested that *E.* 'Canary-bird' is a hybrid, an idea supported by our inability ever to germinate its seed. Has anyone? The only other species we saw growing near *E. aureus* was the slightly larger violet flowered *E. peregrinus*, well worth

cultivating for its own sake. In meconopsis, “blue” crossed with “yellow” produces cream, the same is possible with erigeron.

At one time *E. aureus* was without peer, but now has a rival: *E. chrysopsidis* var *brevifolius* which we saw only in cultivation, notably at Grand Ridge Nursery whence it was originally introduced. A compact plant less than 7.5cm across carried over a score of yellow daisies, on perfectly proportioned stems. We were told it has a very long flowering period. The type is a desert plant, but this variety is an endemic of the alpine zone in the Wallow Mountains of Eastern Oregon. Seed was offered in last year’s SRGC list and has germinated for us.

A species we have raised several times from the Exchange is *Erigeron compositus*, with disappointing results. The small rosettes of finely dissected foliage were promising, but the flowers turned out either to be completely rayless (*E.c. discoideus*) or else to be a dirty off-white. In the Olympic Mountains we found a lovely pure white form, its grey-green foliage so compact that it became a virtual cushion-plant. It was illustrated 30 years ago in AGS Bulletin No. 114, since when it appears to have slipped out of sight over here.

One last species we feel well worth singling out for a mention is *E. pinnatisectus*, not least because it is a true alpine of the Colorado tundra. Like *E. compositus*, it is a dwarf plant with dissected foliage, but the two are easily distinguished, as *E. pinnatisectus* has deep violet-blue rays. The leaves of the latter have simple divisions, usually more than six, arranged in opposite rows with relatively wide gaps, like the fertile fronds of a blechnum.

We saw several other good dwarf erigerons in our travels but the line must be drawn somewhere so that we can move on to:

## **Boraginaceae**

One cannot ignore eritrichiums even though we have had no lasting success with them in the garden; alas a common experience. Autumn is the danger time here, as the weather turns cold and damp fungal infections take hold. We have noticed that the seed-heads of the ordinary forget-me-not, which we treat as a weed, are severely attacked by grey mould at this time, there could be a connection, a family failing perhaps. The more we read, the more confused we get over the naming of the American eritrichiums. Some authors lump most with the circumpolar *E. nanum*, save only the non-alpine more linear-leaved *E. howardii*. Others have used the



Fig 19 *Townsendia rothrockii* (see p.131)

Polly Stone

Fig 20 *Physaria alpina* (see p.136)

Polly Stone





Fig 21 *Anemone obtusiloba* (see p.144)

Henry Taylor

Fig 22 *Gentiana carinata* (see p.144)

Henry Taylor



names *aretioides*, *argenteum* and *elongatum* at various times.

Having seen the European *E. nanum* in all its glory near Mt. Cenis, I must admit that I was a little disappointed with the condensed form we found on Mt. Evans, but Poll disagrees. She liked its diminutive form and the brilliant colour of the tiny 5mm flowers. These plants are sometimes attributed to the taxon *E. aretioides*, an appropriate label we thought. White flowers were quite common. There was no disagreement over a plant we saw slightly farther west, which carried its flowers in small clusters on 5cm stems. An inferior form well deserving the name *elongatum*.

Turning to the genus *Mertensia*, we move up in size and into an even thicker fog of names. A plant, often called *M. viridis*, which we came across in many alpine situations in Colorado, has been placed in the *M. lanceolata* complex, of the dry plains. Horticulturally the distinction is obviously worth retaining. *M. viridis* forms clumps of upright leafy stems, only slightly glaucous, generally from 15-25cm high with terminal heads of dangling true-blue tubular flowers. This would be an asset in any large rock garden, but even better is a plant we saw on Beartooth Plateau: *M. alpina*. The latter has prostrate stems radiating from a central rootstock, carrying flatter more open flowers of a paler, but still pure, blue.

Stationed in Washington during the war, Jack Drake was able to visit Colorado on leave in 1942 where he collected some seed. This spent the next few years travelling around in his uniform pockets, only to be re-discovered on his eventual return to civilian life at Inshriach. Several things germinated including *M. alpina*. One of the resulting plants subsequently gained a Forrest medal at the 1948 Glasgow Show, under the name *M. coriacea*. This epithet rightly belongs in the *M. lanceolata* group, as a synonym of *M. viridis* var *dilatata*, quite a different plant. Another successful germination, he tells us, resulted in the blue spruce which still stands by the alpine house at Inshriach.

## **Brassicaceae (Cruciferae)**

Like Compositae, Cruciferae has its detractors. I can remember a discussion with friends some years ago, as to whether there were any worthwhile crucifers at all. In the end they had to admit that *Thlaspi rotundifolium*, *Petrocallis pyrenaica*, *Teesdaliopsis conferta* and the white flowered *Draba dedeana* were exceptions to the rule. On the other hand *Draba* contains a great many species which make *Cardamine hirsuta* (poppers) look relatively showy! Among the yellow flowered cushion

drabas, there is considerable anonymity of form, but if one likes them we can recommend two species: *D. oligosperma* and *D. streptocarpa*. The former makes tight cushions of little rounded rosettes after the style of *D. mollissima*, with similar tiny yellow flowers. It has not proved long-lived with us, but persists on a trough by self-sowing. In the wild it can form large mats. It is a wide-spread species, only partly alpine; perhaps we have a dry-ground form.

The foliage of *D. streptocarpa* also forms rosettes but they are rather larger, up to 2cm and the individual leaves show up more distinctly. The flowers are a more golden yellow, carried in racemes on leafy stems. Some of the small high alpine forms have a good flower-foliage ratio.

If it is a cut-leaved alpine crucifer with white flowers, then it must be *Smelowskia*, we were told. Not in itself a promising description but with rounded heads of fragrant flowers on stems of 15cm or less, it is actually quite a pretty plant, which Farrer liked. We found two species *S. calycina* in several high screes of Colorado, and *S. ovalis* in the pumice desert zone on Mt. Rainier. They differ only in minor detail.

We have kept the best until last; a truly magnificent plant which puts all the foregoing crucifers firmly into the shade – *Physaria alpina*. (Fig. 20 p.133). Before our trip, we had not heard of the genus, which is quite distinct in form from any European crucifer we know. *P. alpina* was actually the second species we saw, the first was *P. bellii*, in seed on a shale barren of metalliferous soil, at the roadside not far from Boulder, Co. There are many other “steppe” species but *P. alpina* is a true high alpine, growing alongside that other escapee *Townsendia rothrockii*. The obovate, overlapping, leaves lie flat to form a brilliant silver rosette, 5-10cm across, from which radiate the flower stems. These are technically racemes, but they combine to form a complete close ring of rich orange yellow. The individual flowers are large, about 1.5cm in diameter, and are followed by inflated seed-pods. Since they were tap-rooted we did not attempt collection, but our cowboy professor, Chuck, sent us seed, which has germinated well. Let us hope the seedlings overwinter, since this Colorado endemic deserves, indeed almost demands, wide-spread cultivation. As we left their wild habitat, a thunderstorm was giving the area a thorough soaking, which bodes well.

## Campanulaceae

The American mountains are not particularly well endowed with campanulas. We have already mentioned *C. piperi* which needs no

recommendation from us. In fact we have found it difficult to grow on, standing still, then gradually dying back. Likewise its close relative *C. shetleri* from California. In Colorado there was *C. uniflora*, its upward facing dark blue bell so tiny that we only noticed it when Poll bent down to photograph something else. Virtually everywhere we went we found *C. rotundifolia*, our own native bluebell or harebell. It was in particularly fine form in the Olympics almost over-lapping with its aristocratic relative, *C. piperi*. Finest of all was, however a dwarf single-flowered plant Fred Case found on the Beartooth Plateau. The hanging bells were almost white, with just a hint of blue, set off by dark calyces. Professor Weber considers that these high alpine plants with linear cauline leaves represent a fixed sub-species; a parallel with the European *C. scheuchzeri* perhaps? If it is indeed genetically fixed, it should stay dwarf in cultivation.

### **Caryophyllaceae**

We have heard it said that the American forms of *Silene acaulis* are poor things, not worth growing, a sentiment with which we heartily disagree. In the Mosquito range of Colorado it was particularly fine, with relatively long leaves of a rich dark green. The flowers were deep pink and short stemmed, down on the cushions, the petals so broad in some specimens that they overlapped. Away in the far West, Grand Ridge Nursery are growing a tightly congested selection from the Olympic Mountains, which reminded us of the high altitude *S. a. exscapa* we have seen in Europe.

Often growing alongside *Silene acaulis* in the tundra zone, was the related *Arenaria* or *Minuartia obtusiloba*. This forms tight cushions of shorter, stiffer leaves, and has solitary white flowers up to 1cm across. We thought it quite desirable, the equal of many phloxes and a true alpine to boot.

Back down in nurseries we found plants for sale labelled “Scotch(sic) Moss”. They were our old enemy *Sagina procumbens* in two foliage colours, apple and deep green. Perhaps we should adopt the Cambridge Botanic Garden tactic with their horsetails – if you can’t beat it, label it. Better still, copy the land of free enterprise and put a price tag on it. I wonder if there is a wholesale export market here?

### **Ericaceae**

With this family more than any other we had the same sense of visiting old friends at home that we previously experienced in the Alps. Although

most are familiar inhabitants of Scottish gardens, there were still some surprises. A rock crevice on Mt. Lassen contained both *Cassiope mertensiana* and *Penstemon newberryi* in full flower. In the garden the former is stereotyped as a peat-bed plant, the latter for the scree. Not far away *Phyllodoce breweri* was displaying the last of its upright racemes of open funnel shaped flowers. With their exserted maroon stamens, these are quite different from the typical Ericaceous bells of the other phyllodoces, and reminded us not a little of *Kalmiopsis*, with which it crosses so readily in our garden. As *Phyllodoce breweri* is difficult to propagate except by seed, and our own usually gives rise to hybrids, we were particularly pleased to find plenty of the previous year's capsules still on the plants. This old seed can germinate well, unlike immature green capsules which are a waste of time in our experience. There is an excellent comprehensive article on *Phyllodoce* in Journal No. 56, by Dr. Cullen.

We were very impressed by another familiar plant, *Kalmia microphylla*, in the wild. This ranges right across the Western mountains; we saw it on our second mountain day in Colorado, and it was still in full flower at Mt. Rainier on our second last, and at many places in between. Growing in short moist turf near streams, often with calthas, its low mats of upright 5cm woody stems each carried several deep pink saucers. In some places they were in sufficient quantity to stain the alpine meadow pink, as do low-growing primulas in the Alps. We have found it easy to grow and blooms well, superior as a garden plant to the Eastern bog laurel *Kalmia polifolia* which gets rather straggly. Always a mountain plant, other growers have found *K. microphylla* intolerant of excessive heat.

The above accusation cannot be levelled at *Arctostaphylos nevadensis* var *coloradoensis* which flourishes in the continental climate at Denver Botanic Garden. Originally from the Uncompahgre plateau in South Western Colorado, this either represents a disjunct from *A. nevadensis*, which we saw in the high pine woods of the Californian Sierra, or a hybrid between the bushy grey-leaved *A. patula* and our own circumpolar *A. uva-ursi*. Whatever its true status, it could become a valuable ground cover here also if it can adapt to a maritime climate. The portents are good as a similar hybrid *A. x media* (*A. columbiana* x *A. uva-ursi*) has grown well for us. These hybrids are only semi-prostrate, up to 30cm high, but with the glaucous cast in their evergreen foliage, add a new dimension to an ericaceous bed.

One day in Northern Oregon we parked for lunch on a forest track, in the shade; we had Fred well-trained by then. Within a few metres of the car were five different *Pyrolaceae*; *Chimaphila umbellata*, *C. menziesii*,

*Pyrola picta*, *P. "aphylla"* and the familiar one-sided wintergreen *Orthilia secunda*. Blue markers on the trees show that this area was soon to be felled, with dire consequences for the understory. Across the track, cleared some time previously, only tree-stumps and coarse grasses remained. We had been looking for just such a place, where one could collect with a clear conscience, as we know of no other way to establish these plants in cultivation.

*Chimaphila umbellata* was the largest, its whorls of brilliantly glossy bright green leaves are all cauline with oblanceolate blades 5-7.5cm long. Above these flowers stems reach 25cm, carrying pendant corymbs of waxy pink saucer shaped flowers. *C. menziesii* is rather smaller, and did not form expensive patches like the above. Its foliage is a much darker green, the leaves elliptic, 2.5-5cm long on reddish stems, in winter this red spreading into the blades. It had an unusual dimorphic root system, that part in the forest duff the usual white spaghetti, below, in the mineral soil, it suddenly changed to become thin dark and wiry.

*Pyrola "aphylla"* is now thought to be a redundant name, these plants merely representing a leafless phase of some other pyrola, in this case our old rampant friend *P. asarifolia* with its pink flowers. *P. picta* we had met before on our first evening with the Cases in the woods below the Big Horns. It had impressed then, with its deep green leathery foliage mottled with pale streaks above the main veins. These basal ovate leaves varied in size, (depending on the maturity of the tuft?) those on flowering specimens up to 7.5cm long. The reddish stems carried the usual raceme of pyrola flowers, with greenish white corollas. So far our plants look healthy, a beautiful reddish cast gradually suffusing the foliage. If they do establish they will undoubtedly be a superb addition to the garden, but we have a feeling their ecological requirements will prove exacting.

### **Fabaceae (Leguminosae)**

Not one of our favourite families, so I intend to pass rapidly through it en route to the gentians. The cushion astragali have been fulsomely praised by other authors; we saw only one in a true alpine context, a tiny greyish mat with fairly insignificant purplish flowers. Poll rather liked a species we found on the inland slope of the Sierra Nevada, a small low plant with large white woolly seedpods, but it is most probably not a plant for Scotland. None of the oxytropis we saw were any real advance on our own *O. halleri*. The smallest high alpine clover *Trifolium nanum* forms tight little mats at high altitudes in Colorado, but we thought its stemless pink pea-flowers lacked real substance and reflectivity, appearing somewhat dull even in sunlight.

There were lupins everywhere we went, in all sizes from inferior blue-purple "Russell-like" border plants, down to prostrate silver mats. Many readers will be familiar with one of these latter types, *Lupinus lepidus* var *lobbii*, which we saw in fine form in the pumice on Mt. Rainier. We have raised and flowered it several times, but it has never set viable seed here, or lived to flower a second time. We have qualms about the requirement of continually reimporting wild seed, as we have had with such Himalayan primulas as *P. obliqua*. Perhaps others have had success in retaining a self-sustaining population in cultivation. Further south in the Sierra the high altitude roadside verges were home to another decumbent species *L. breweri*, its spatulate silver-hairy leaflets having blunter tips. It is slightly smaller, and greener, than *L. lepidus* var *lobbii* with paler violet racemes. *Lupinus argenteus* var *depressus* is a size larger, up to 30cm high, the flower stems fully upright, unlike the above pair, where they lie flat before turning upwards at the base of the raceme. En masse it was quite attractive on the Beartooths. Of similar size to the last was *L. obtusilobus* which was common on Mt. Lassen. The usual compound palmate foliage was an intense silver, the wide patches appearing strangely out of context in the rocky coniferous woodland it frequented.

## Gentianaceae

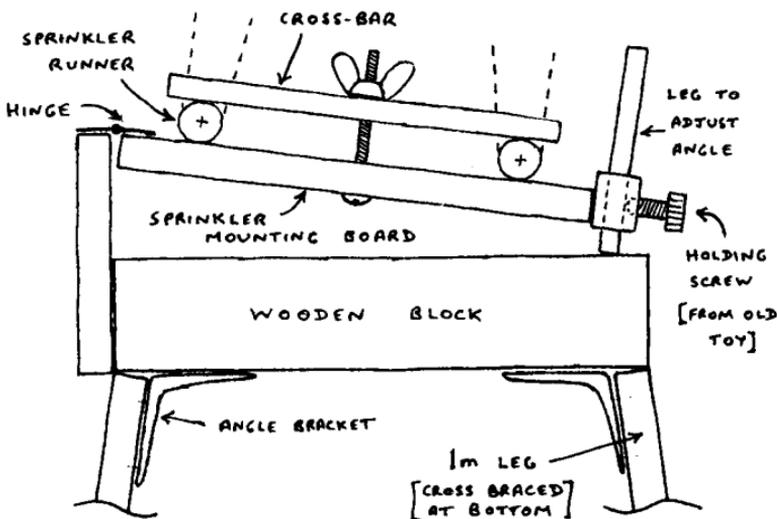
North America is not generally renowned for its gentians, but, if one can rid one's mind of comparisons with the Verna and Ornata groups, there are alpine species of much merit. The Archibalds refer to *G. algida* as one of the most breath-taking high alpiners they have seen, over-selling it slightly perhaps, but it is a very striking plant. We were in luck on the Beartooth Plateau, the early season meant that it had just started to flower while we were there. From a stout, deep diving, rootstock radiate rosettes of strap-shaped leaves, up to 10cm long; the leafy flower stems up to 20cm but often shorter, each carrying one, or more, creamy-white upward facing trumpets. The corollas are sizeable 3.5-5cm long, somewhat broadened towards the base, and streaked, spotted or blotched with dark purple externally. We have grown this species for many years, re-raising it from our own seed, as mature plants sometimes collapse for no obvious reason.

*Gentiana newberryi* of the Sierra and Cascades also has basal leaves but these are broadly spatulate, and rather smaller, 2.5-6cm long. The flower stems are also smaller, less upright, and single flowered. In colour the trumpets generally resemble *G. algida*, but can often have a greener tinge and the external dark brownish bands are relatively broader. The species is variable and the southern population of the high meadows has been

called *G. tiogana*. We once grew a beautiful pale blue form, originating from the Cascades, but it was one of the victims of our overpowering "dwarf" conifers before we segregated them.

*G. calycosa* is another alpine species but it lacks the basal rosettes of the above. The cauline leaves are broadly ovate, in opposite sessile pairs, appearing quite crowded on the single-flowered shoots. It can apparently be up to 30cm high but has always been around half that height here. The corollas are medium blue, about 3cm long with finely divided plicae between the lobes. The above description refers to plants we raised from seed originating in Oregon, but while in Idaho's White Cloud Peaks we came across a somewhat different form of this species. The stems were semi-decumbent, only turning up at the end. The corolla was slightly larger, (4cm) and of a richer purplish blue. Looking at our slide we see that the calyx is somewhat truncated, without lobes, so this population may represent the taxon *G. calycosa* var *asepala*, at one time segregated as *G. idahoensis*. Many of the summer flowering gentians grouped around *G. septemfida* are rather coarse-growing plants better suited to the border than alpine garden. This form of *G. calycosa* would be far more in keeping, especially if it retains its compact habit. To this end scree is perhaps indicated, although it inhabits grassy stream banks in the high cirques of the Idaho mountains.

. . . to be continued



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# The blue corydalis

MARGARET AND HENRY TAYLOR

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## Why so easy?

WE have all dreamt of an expedition to the Himalaya. You know the thing. The rope breaks and half the party falls over the precipice into the history book, horizontal driving snow and only one bar of Kendal Mint Cake left, when suddenly the ice axe stabs a blue corydalis.

But it is not quite like that nowadays. Yes there was a flurry of snow when we stepped out of our Jeep at 3600m. on to gorgeous roadside turf holding not only *Corydalis cashmeriana* but lots of other desirables. Admittedly our taxi was slightly lacking in windows so that snow flurries mixed with the petrol fumes to cause minor discomfort, but nothing compared with the suffering of the old boys who trekked for weeks through leech-infested jungle. It is remarkably easy to be a plant hunter now.

Why? The usual story, where there is military there is money. To facilitate troop movement into northern disputed territory, the Indians have built a tarmac road over the 3962m Rohtang La with the welcome side effect of giving easy access to high Himalayan plants.

## Excitements all around.

To start at the beginning, a holiday company's botanical leader dropped out. I got the chance to replace him and Margaret came along as a paying client. On 3 July we flew to Delhi then bussed north across the Punjab plain to the hill station of Manali at 1980m, the last settlement in the Kulu valley before the high passes in Himachal Pradesh. This region is considerably farther north than the standard plant-hunting areas of Nepal, so hardy plants can be found at lower altitudes, also, having daylengths more similar to ours in Britain, perhaps the plants may be more amenable to cultivation. After climbing through magnificent cedars then abies forest towards the pass of Manaslu Nal at around 3000m we found masses of the showy orchid *Calanthe tricarinata*. It grew in part shade in moss and leaf mould with flowering stems reaching 45cm tall. Though exotic looking, this orchid seems hardy and has flourished for many years at Branklyn garden in Perth. Near the calanthe in even more dense shade there was a puzzling plant slightly resembling *Primula denticulata* but covered all over in white farina, perhaps *P. crosa*. We were to see normal rugged-leaved *P. denticulata* later at higher altitude flowering near the snowline in full sun.

Above Manali in the shady cedar forest there is a Hindu temple occupied by the goddess Hadimba. One morning we heard a mounting crescendo of drumming and trumpeting, so along with everyone in the neighbourhood we climbed through the forest to the temple. When the music stopped the head priest went into a shaking trance. We guessed he was foretelling the future and everyone seemed rather frightened as he has the power to bring good or evil. Then the decorated wooden goddess was carried round the temple followed by a sacrificial bull. The crowd scattered when he was killed on the doorstep, and his blood was spilled on the four corners of the temple. Huge pots of rice were already cooking on bonfires. Hindus are practical people who feed their gods then feed the crowd by cooking the sacrificed animal. Perhaps the objective of the festival was to bring rain as the failed monsoon was liable to cause famine.

### **The footsteps of the plant hunters.**

We took our taxi up the Rohtang road past a dead cow with vultures feeding on it and stopped at 3000m beside a steep rocky bank to find the silver leaved nivalid *Primula macrophylla*. This has purple flowers with a black eye on stems 20 cm tall. On damper ground near a stream the pale pink *Primula involucreta* had even taller spindly stems which refused to stand still for a photograph. But the most striking plant here was *Thermopsis barbata*; it grew 30cm tall with silvery leaves and black pea flowers with a grape-like bloom to the petals. We were too early for seed but a friend who visited in the autumn collected some. These resembled sweet pea seeds. Perhaps we should have chipped them, since as yet a year after sowing we have had no germination.

The real excitement started above the small summer encampment of Marhi at 3270m. A purplish red spot high on a cliff turned out to be *Rhododendron lepidotum*; it grew rather like heather only 15cm tall hanging down over rock ledges bearing flat faced flowers. On a shady ledge we noticed the scented white flowers of *Primula reidii*, but the star attraction was *Meconopsis aculeata* growing very happily on dry stony mica-schist rubble. Why at home do we think of all meconopsis as peat bed plants? The translucent blue of the meconopsis epitomises the Himalaya – now we felt ourselves truly in the footsteps of the old plant hunters. Into the Jeep and up another 150m to see thousands of shocking pink *Primula rosea* in a steep meadow close to the melting snow. The flowers only varied slightly in colour but we have the perverse habit of not being content with the norm, so a lengthy search eventually produced a photo of a beautiful white *P.rosea*.

Where the snow was longer gone, *Iris kemaonensis* was just coming into flower. These roadside flowers of the Rohtang are most spectacular despite

the the whole pass being a major pathway for thousands of sheep migrating north in early summer and returning south in the autumn to overwinter in the warm low foothills of the Himalaya. The iris must be unpalatable as it flourishes in thousands, an unforgettable sight. It is 15cm tall at flowering with deep purple spots on the falls but the main colour varies from lilac to violet and blue and occasionally white. Some plants had splendid broad frilled petals, and in addition to seedling variation it obviously spreads vegetatively as we noticed one white clone forming a patch 1.5m across. There was a carpet of pink *Androsace sempervivoides* between the clumps of iris.

Several plants had a wide altitudinal range from here to the summit of the pass. *Anemone obtusiloba*, (Fig. 21 p.134) known in Britain as the Blue Buttercup, was not only blue but purple, white and more predominantly yellow. In this region all the plants had very hairy leaves like the cultivated *A. obtusiloba patula* which is said to have been introduced from the other end of the Himalaya in Burma. On the Rohtang the flower stems were only 8cm tall, whereas in cultivation they lengthen to nearer 30cm.

Also widespread were the so called annual gentians, *Gentiana marginata* and *G. carinata*. These plants certainly do not seem to be annual, though they may be monocarpic. Those we saw in flower close to the melting snow had obviously put on most of their growth in the preceding year. Seed of *Gentiana carinata* (Fig.22 p.134) brought back and sown immediately in a trough produced flower buds on only two of the seedlings after 15 months, the remainder will flower next year hopefully. Whether the plants will die after flowering remains to be seen. The small brilliantly coloured blooms on plants only 2cm tall could prove ideal for miniature trough gardens. Another excellent blue rarity was the erichium-like *Trigonotis rotundifolia*.

A vast amount of snow was still lying at the summit of the 3962m pass, but as usual in high mountains the bare patches between the snowfields were worthy of close inspection. In damp mica silt *Oxygraphis endlicheri* studded the ground with yellow stars. It resembles a tiny celandine and seed has proved very fertile when sown fresh off the plant. We tramped over *Primula minutissima*, with tiny leaves and comparatively large pink flowers, drawn by the creme de la creme *Primula macrophylla moorcroftiana*. (see front cover). This has narrow silver leaves and clusters of white-eyed soft lilac flowers on 10cm stems. Unfortunately, though flowering gorgeously, it was too early for seed.

### **Of gods and such**

6 July is the Dalai Lama's birthday and because of the large Tibetan refugee colony in Manali we were excited witnesses of a Buddhist pro-

cession. A photo of the Dalai Lama on a palanquin was carried down the main street to the Gompa accompanied by red-robed monks wearing golden headdresses and blowing 3m long trumpets. For two people who started rock gardening in the heyday of the Sherriffs at Ascreavie, can you imagine the thrill when we heard these strange sounding trumpets? It was a picture straight out of the old films taken by George Sherriff in Lhasa. We took our shoes off and entered the temple where it was strange to see the non-violent Buddha seated alongside the fierce Hindu goddess Kali who wears a necklace of skulls and enjoys sacrifices. An Indian friend has since told us that his gods are very tolerant of each other, a notion which seems strange to us accustomed to Western religions.

But even in the East, religions can be contentious. One day we walked into a Sikh-Hindu riot. The trouble arose because on the Punjab plain Sikhs had stopped 3 buses and killed 70 Hindus. In retaliation Hindu "bad elements" from Delhi and Chandigarh started smashing Sikh shops in Manali. We had to hunt for a missing member of our group and found ourselves walking into a noise like a chanting football crowd with smashing and burning of pyramids of Sikh goods in the middle of the street. Frightening, but we discovered that a non-participant could walk quite unharmed through a riot, and, yes, we found our friend safe and well. A word about the people if the above sounds worrying. There has been racial trouble in India for a few thousand years, so if you delay a visit until perfect peace you may have to wait another thousand years. Our hill Indians were pleasant natured and very attractive looking; it was quite a shock when we returned to London and saw the coarse-featured British. Before we move on to the more hazardous part of our trip, remember that the Rohtang area should have been under steady mist and monsoon rain. But the unseasonable sunshine of our visit did not prevent the plants from flowering as they had ample water from snowmelt.

### **Chapattis for four**

After several days on the Rohtang, returning each night to Negi's Mayflower Guesthouse, a diminished group of four Europeans (if you count a remarkably sensible quiet-spoken American as European) set off with Indian guides and cooks to camp farther north in the semi desert rain-shadow zone. The flowers in the arid region are less plentiful but there are some outstanding specialities. All our travel arrangements organised by West Himalayan Holidays Ltd. worked like clockwork. At 5 a.m. we set off in our bus over the Rohtang. Descending the cold north side of the pass, we had to drop one thousand metres before we cleared the snow and got down to flowering plants. Acres of *Cassiope fastigiata*, rather brown and scruffy grew along with the attractive pale cream coloured

*Rhododendron anthopogon hypenanthum*, a large name for a plant only 15cm tall. *Gaultheria trichophylla* threaded its way through everything. It was only 5cm tall with pink bells held well above the foliage.

Our bus continued northwards along a dirt road on precarious ledges until late in the evening we arrived at Darcha and scrambled up to our campsite at 3300m. Apart from slightly stuffy noses and lack of breath doing anything as strenuous as wriggling into a sleepingbag, none of us suffered from the altitude. We had no stomach upsets either, our camp cook was superb, cooking on a Primus constructed from recognisable pieces of a car engine. His freshly-made chapattis were delicious, much superior to town wrapped sliced bread (as ghastly as Glasgow bread).

One of the striking plants of this dry zone was *Anemone rupicola*, only 5cm tall with huge white saucers. *Astragalus munroi* had insignificant yellow pea flowers but fantastic long silvery hairs all over the leaves and on the large inflated seed pods. Curses, all the seed was unripe. In this rain-shadow area the mountainsides are laced with water channels leading snowmelt to tiny potato fields, and the showiest flowers grew adjacent to these channels. *Rosa webbiana* was covered with large deep pink flowers accompanied by a vicious array of prickles. *Aquilegia fragrans*, nicely scented as the name implies, had pale cream flowers with just a tinge of blue but was too tall to qualify as a rock plant. There were many more attractive plants but it is time to return. On our bus journey south we rounded one corner to find that a section of road had fallen into the chasm. All out for a vigorous spell of road building, then onward over the Rohtang. The iris flowers were now past their best, but a new flower was springing from the turf.

### **The corydalis is different**

*Corydalis cashmeriana* in its unbelievable blue was just beside the road at 3600m on the wet southern side of the pass. In Scotland many of us grow *C. cashmeriana* from the Ludlow and Sherriff introduction of 1933 collected in Bhutan. A careful comparison of this with the Rohtang form reveals a few differences maybe insignificant to a botanist, but we gardeners are more discriminating. The Bhutanese has slightly smaller flowers with an acutely pointed lip. It usually has 6 flowers in a compact head with the upper ones still in bud when the lower are fully open. The Rohtang form has larger 2.5cm long flowers with an obtusely pointed lip and four flowers all open at the same time in a broad lax head.

Be your own Ludlow and Sherriff; every different region can produce a subtly different plant, and there is immense pleasure in the search.

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# In praise of mulch

EVELYN STEVENS

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I always enjoy reading Dr. Jim Cobb's articles for the information, interest and gorgeously witty style therein. In his article (The Rock Garden, Vol XX, p455-458) he suggests that his readers will have had their blood pressure raised if they had read Peter Willmott's article in the May 1987 issue of the Royal Horticultural Society's journal. Yes, mine was, but so was it also by Dr. Cobb's article. I can't hope to emulate his wit, but I feel it is needful to challenge some of his assertions.

Dr. Cobb says that the purpose of his article is "to dissuade you from topdressing your peat bed with peat, or worse pulverised bark or such like, especially where all your treasures grow". He goes on to say that what we should use is leaf-litter/leaf-mould (for a definition of these see my article – The Rock Garden, Vol XX, p287). He makes the valid point that leaf-litter and leaf-mould are hard to come by and discusses various alternatives. Dr. Cobb implies that the purpose of top dressing is for nutritional purposes, i.e. to give plants a feeding boost. I agree with this, but there is another reason for applying things like leaf-mould, peat and forest bark, and this is as a mulch.

Mulching, like top-dressing, is the periodic application of a layer of some suitable material to the surface of cultivated soil. Mulching is important for i) helping to retain soil moisture during dry weather, ii) weed suppression, iii) preventing the formation of a compacted layer on the surface of the soil in heavy rain which results in reduced aeration of the soil below, iv) aesthetic purposes to give an attractive background to your plants. Depending on what material is used, mulches may also add nutrients to the soil and improve soil structure (see my article referred to above, pages 281-282 and 288-290), even if a relatively long time has to elapse before the latter benefits materialise.

As a mulch I think all the materials listed above (leaf-litter/leaf-mould, peat and forest bark) are suitable, along with other things like conifer needles, straw and manure, lawn clippings, bracken and fine gravel and, as Dr. Cobb said, for those who live near the sea, sea-weed. Yet another material suitable in certain situations, is black polythene.

I will now comment on the use of most of these varied materials: I have no experience of sea-weed and I think black polythene is not very appropriate in an alpine context.

Both as a top-dressing and mulch, leaf-litter/leaf-mould is obviously

the material of choice for plants which are at home in woodland/peat-garden conditions, this being Nature's way. As Dr. Cobb points out, this is difficult to obtain in large amounts, but I have found it definitely worthwhile to make leaf-mould by collecting fallen leaves, piling them up and leaving them to decay, this taking about two years to achieve. I have been told that the use of an electric shredder, which operates like a kitchen mincer in first shredding leaves and twigs before piling them up to decompose, reduces this time considerably. The only disadvantage of leaf-litter is the probable presence in it of weed seeds, pathogenic fungi, plant-eating insects and slugs.

Peat is an expensive commodity and for this reason I have not used it myself extensively. However, in the light of Dr. Cobb's article, I have re-read Alf Evan's widely acclaimed book, "The Peat Garden", which describes the famous peat garden at the Royal Botanic Garden in Edinburgh with its multitude of woodland plants, many of which I am sure Jim Cobb would include in a list of "treasures", (shortias, nomocharis, trilliums, primulas including the petiolarids, cypripediums and other orchids, numerous members of the Ericaceae, erythroniums, fritillarias, lillies, adonis, arisaema and omphalogrammas). The peat beds consist of a series of terraces, the walls holding the terraces in place being built of peat blocks and the terraces themselves being composed of 50% peat and 50% sandy soil. I have spoken with Ron McBeath who is at present in charge of this garden. Ron tells me that the peat beds are usually "top-dressed" annually (to boost the nutrient status) and "mulched" (for weed suppression) with the same compost (i.e. 50:50 peat and soil, the soil being sterilised to kill weed seeds).

In recent years an alternative that has come to the fore has been pulverised forest bark. Pulverised forest bark is conifer bark which has first been crushed and then allowed to partially decompose for some time before marketing. Such a product is marketed by Silvaperl of Harrogate as "Woodland Bark". In texture and general appearance it is rather similar to bracken leaf-mould (see below). Pulverised forest bark must be distinguished from 'Bark Chips' also marketed by Silvaperl; a very similar material is obtainable from many saw-mills. The name is self-explanatory and it is a much coarser material often seen as a mulch amongst shrub plantings by local authorities. It is nowhere like as attractive in appearance as pulverised bark. And it is obviously unsuitable as a mulch in beds containing small and choice plants.

Ron McBeath tells me that one recently remade bed at the RBG has been mulched with this pulverised forest bark, and I have seen it in use elsewhere including the famous west coast garden of Arduaine, the happy home of many choice woodland plants.

Beth Chatto in "The Damp Garden" makes it clear that the discovery by her of forest bark around 10 years ago was a major breakthrough in her gardening activities. She explains that its use cuts down tremendously the amount of weeding needed. Not only does this save valuable time, but it also saves the removal of successive layers of her valuable top-soil which was being removed 'like a carpet' along with the weeds.

Beth Chatto advises in her use of forest bark, leaving freshly pulverised bark, (which she buys from a local saw-mill), to partially decompose for 6 months to a year, and then the application to the soil of a little general purpose fertiliser before laying forest bark as a mulch. The reason for the application of fertiliser is to compensate, during the early stages of the decomposition of forest bark, for the use of soluble soil nutrients by soil micro-organisms while they are feeding on and thereby breaking down the bark and in so doing reducing the amount of soluble soil nutrients available to plants. Eventually, however, when the forest bark is sufficiently broken down by the soil micro-organisms, nutrients derived from it become available to plants.

To prevent small and choice plants becoming covered over by her application of forest bark, Beth Chatto does the application in two stages, letting a thin layer settle around the plants initially, following it with a second layer a little while later. She reckons, by applying at least one inch of forest bark to only have to re-mulch every two or three years.

Finally, in defence of forest bark, our Editor told me that Dr. Cobb's article had not put him off buying twenty bags of forest bark!

As for pine/larch/spruce needles as an alternative to leaf-litter/leaf-mould, if one lives in a part of the country where these are readily available they are a cheap and good material for mulching. I have been pleased with my own results using larch needles around dwarf rhododendrons, and other ericaceous plants like cassopias, gaultherias and phyllodoces. These needles may increase the acidity of my soil too much if used over many years (not that they have after two years as I have just established by measuring the pH of the soil in these beds) without treating them first with lime and I plan to do this soon. This is recommended by Dr. Paul Christian, the grower of many choice bulbs and woodland plants. To a 25kg compost bag of "fir-needles" Paul Christian adds a good cupful of ground chalk, limestone or dolomite and a handful of general purpose fertiliser and leaves the needles to "settle" for a few months before using them, "either as a mulch or growing medium/additive for such plants as trillium, cypripedium, anemone, asarum, hepatica and polygonatum".

Manure and straw can be used as a mulch as well as a provider of nutrients. Last year, while preparing a number of beds in the process of laying out our new garden, I mulched them with straw from a cattle court on which several hundred sheep had been bedded for three weeks during a very cold spell. The material was not proper manure, but I found that it proved an excellent mulch in the sense that it meant virtually no weeding for the whole season and watering was not necessary during dry spells. I suppose nutrients in the soil were being “stolen” by micro-organisms feeding on the straw/manure, but the soil is probably quite rich in nutrients as it was freshly prepared loam resulting from the rotting down of turves, I considered that was a small price to pay in return for no weeding or watering. The straw/manure was not very attractive, but, as at that stage there was not even a lawn to frame the beds, I considered that unimportant and now, a year later, with a newly grown lawn, the manure/straw has rotted down and looks not unattractive. With further decomposition it will become incorporated into the soil, add to the nutrients and improve the structure and water-retentiveness of the soil.

Since embarking on the project just described I have read Beth Chatto’s book and was interested to see that she uses straw that she buys in bales at harvest time for mulching the centres of her large beds where she feels the appearance of the straw can be tolerated, and she uses forest bark in areas “nearer to hand” and around small plants. In both cases, and also with peat mulches, Beth Chatto advises applying a little general purpose fertiliser before the mulch.

Having a similar texture to straw and being, in fact, a particular type of leaf-mould, another material that can be used as a mulch is dead bracken. Either the recently dead and not yet decomposed stems and leaves can be laid over the soil, or one can collect the decomposed friable and crumbly material that accumulates around the crown of a bracken plant, the remains of the fronds of many years previously. Bracken as a mulch is being used very happily by Lyn and Ron Bezzant in their new garden in West Perthshire. I have also been informed by Lawrence and Lillian Greenwood that they have used bracken leaf-mould as a mulch for many years and found no undesirable lowering of the pH of their soil and they have very good results in the growth of their woodland plants.

I believe that lawn clippings are also used as a mulch by some people, but when I have attempted to use them I found them unacceptably soggy in texture and ugly in appearance, so from my own experience I cannot recommend their use. But I do quite like using “thatch” raked out of the lawn in September. This material is already partly decomposed and makes an acceptable mulch.

Fine gravel or grit constitutes an appropriate mulching material for



Fig 23 *Rhododendron lowii* (see p.157)

Forbes Robertson

Fig 24 *Rhododendron ericoides* (see p.157)

Forbes Robertson





Fig 25 *Penstemon rupicola* (see p.184)

Alastair McKelvie

Fig 26 *Bergenia purpurascens* (see p.180)

Harold Esslemont



many alpiners growing in troughs, raised beds, screes, in “non-woodlandy” parts of rock gardens, and for many plants growing in pots in frames and alpine houses. A centimetre or more of gravel or grit applied to the soil surface helps weed suppression and water retention and gives an attractive finish to these planting areas. It also protects the crowns of alpiners which are prone to rotting when exposed to excessive wetness. When it later becomes necessary, after the initial planting up, to top-dress such areas to replenish nutrients, some compost made up of materials like well-rotted loam (see my previous article, page 281), peat, leaf-mould, and sharp sand and/or grit, together with say, bone-meal or some other fertiliser, can be prepared and then worked into the old mulch layer. Finally a fresh layer of gravel mulch can then be applied.

Since first writing the bulk of this article early this year I have carried out a little experiment. I have mulched successive sections of a rectangular raised peaty bed with i) Silvaperl Woodland Bark (i.e. the pulverised, partly decomposed conifer bark), ii) undecomposed larch needles, iii) sphagnum peat moss and iv) bracken leaf-mould. I cannot yet say anything about whether the plants will self-seed into these mulches, but my conclusions on appearance, weed suppression and water retention is that they are all satisfyingly effective and it is difficult to choose between them. But if I *had* to put them in order, I think it would be: pulverised forest bark, bracken leaf-mould, larch needles and lastly, peat.

To support most of my assertions on the use of various mulching materials I have cited a number of gardens or expert plantspeople, as well as given my own experiences. I have tried to emphasise that both top-dressing (to replenish nutrients) and mulching are valuable in maintaining good soil conditions and therefore good growth of plants; mulching also saves the gardener valuable time by reducing weeding and watering time and maybe makes the garden more attractive than it otherwise would be with bare soil surrounding the plants.

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# Gunung Kinabalu

FORBES W. ROBERTSON

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RECENTLY my wife and I had the good fortune to spend the best part of a week in Kinabalu National Park, Sabah, Malaysia, in the course of which we went up Gunung Kinabalu, the chief glory of this 745 square km park at the northern end of the Island of Borneo. At 4,100m. this is the highest mountain between the Himalayas and the mountains of New Guinea and is rightly regarded as a botanical treasure house. Apart from the dramatic zonation of the vegetation, according to altitude, exposure and soil, it is the home of many ancient, very often endemic species, whose affinities lie with the floras of Australia, Sino-Asia or the Himalayas.

By geological standards Kinabalu is a young mountain. In the Upper Miocene a granitic pluton was intruded deep below the surface. It lay there until 1-2 million years ago when, by the mysterious processes known only to geologists, it began to rise at the rate of about half a centimetre per year. It burst through the heavily eroded Crocker Range of intensely folded sandstones and shales to form the impressive mountain which dominates the scene at this end of Borneo. The geologists assure us that it is still rising at the same rate.

Until after the last glaciation most of the upper 600m. was covered by an ice cap. There is abundant glacial evidence in the bare, scraped and often striated rock. There has also been extensive weathering or exfoliation, in which layers of rock peel away to litter the surface with flat plates. Although the top can be bitterly cold and windy and torrential rain often sweeps across the summit, due to its near equatorial location, the temperature rarely falls much below freezing, judged by how often ice forms on the little pool near the summit.

On the whole, Kinabalu is a wet mountain. Mist often veils the tops and at about 1,900 to 2,200m. there is a regular band of clammy mist, the cloud forest zone, with a rich growth of epiphytes and mosses clothing the trunks and branches of the trees. It often rains in the afternoon. Plant habitats are chiefly determined by the available water, soil type and the temperature range dictated by elevation in a tropical location. Except for the uppermost 600 to 750m. the mountain is clothed in continuous, often dense vegetation so that the contrast between the bare or sparsely covered tops and the lower, green mantle is very striking. When the mist trails away the summit ridge fairly gleams in the sun. Huge, polished, granitic

pinnacles of different shape and disposition bestow an unmistakable appearance on its distant outline.

Although it is both conventional and convenient to quote altitudinal limits for the zones of vegetation, these can only be approximate. On more exposed ridges or in shaded ravines we find plants which are usually met with at respectively higher or lower elevations. At the lowest level the mountain rises out of a climax community of lowland Dipterocarp forest, although much of it has been removed. By about 1,500m. the level of the Park HQ, the Dipterocarps have thinned out, apart from a few upland species, and in their place oaks and chestnuts take over, along with laurels, myrtles and many others in the bewildering array of closely related species, so characteristic of the South East Asian rain-forest flora.

The ascent trail starts at 1,800m. A common species about here is *Impatiens platyphylla*, a tender balsam with cheerful pink flowers. At about 1,900m. we encounter the cool cloud forest zone with mosses and epiphytes draping the branches along with innumerable orchids one so rarely sees in flower. Handsome treeferns of the genus *Cyathea* are abundant. Along this part of the trail grows a species of tall moss of the genus *Dawsonia*, reported to grow one metre high in some places.

At about 2,400m. the vegetation changes quite sharply due to an outcrop of ultra-basic rock which imparts a reddish colour to the soil, which has also a high nickel and cadmium content. Here the dominant species is *Leptospermum recurvum* a shrubby tree of Antipodean affinity. The small flowers are produced so abundantly that the hillside is powdered white. This is a very plastic species which shrinks to rock-garden proportions on exposed sites at higher elevations. A closely related species of wider distribution, *L. flavescens* occurs at lower elevations. Pitcher plants of several species are not uncommon here. One of the most impressive is *Nepenthes villosa*, whose huge, globose pitchers with a strongly ridged orange-red rim, rest half covered in the ground litter.

As we climb higher along the well maintained but often steep trail, increasingly aware of the elevation, the vegetation diminishes in height and becomes more open, with the occasional sedge, grass or herb appearing in the openings. By 3,000-3,300m. we emerge into a very different scene where bare rock is everywhere. Vegetation is confined to the cracks and hollows where humus has gathered since the rest of the soil was scoured away by glacial action. Here small, herbaceous plants are more abundant and we soon encounter some familiar genera. This is the home of the Kinabalu buttercup, *Ranunculus lowii*, an endemic although related to species in Celebes, New Guinea and New Zealand. It, like several other endemic species, was named after Sir Hugh Low who made the first recorded ascent in 1851. Not far away I found two of the three species

of *Potentilla* on Kinabalu, *P. borneensis* and *P. parvula*. An eyebright, *Euphrasia borneensis* is quite common at this elevation. It is said to be related to the Australian and New Zealand euphrasias. There are also records of two species of gentian and two violas, as well as several umbelliferous herbs, of which the commonest is an attractive, pink flowered member of the essentially Australian genus *Trachymene*, *T. saniculifolia*. The gray rock near the summit is enlivened by the bright red young leaves of bushes of *Vaccinium stapfianum*, an example of anthocyanin protection against strong ultra-violet radiation.

Nobody in their right mind does the ascent in one day. At 3,300m. there is a comfortable rest house, Laban Rata, where the night is spent in preparation for the climb to the top next morning. A rather ridiculous custom has developed whereby climbers rise at 2.00 a.m. to set off an hour later, armed with torches, to stumble up steep ladder-ways and haul up on fixed ropes in the chilly dark, to reach the top in time for the dawn, which may or may not be revealed in as much glory as anticipated. It seems more sensible to leave to say 6.00 a.m. and go up the mountain in sunshine and unbroken solitude, apart from the mandatory guide, even though there is greater risk of being caught in the rain on the way down. However, we were lucky and had dazzling sunshine there and back. On the other side of the summit ridge the mountain plunges away into a yawning chasm, Low's Gully, the route of a former glacier.

The flora of this astonishing mountain is immensely rich and mostly very ancient. As already noted it has affinities with the floras of Australia, Sino - Asia and the Himalayas, as well as a high incidence of endemism. The Upper Montane zone is particularly rich in ancient species, which often crop up at high elevations elsewhere in Borneo and New Guinea. How such an ancient flora comes to occupy such a recent habitat is accounted for by its relict nature. Not so long ago the climate was a good deal cooler than now and these species were much more widespread at lower elevations. It is believed that the Montane zone came down to within a few hundred metres of sea level. With progressive rise in temperature such cold adapted species retreated to the tops and more lowland vegetation spread into their former territory. The affinities with Australia, Sino - Asia and the Himalayas imply a former continuity of distribution which was disrupted by continental drift and the submergence of land connections.

Such a rich and diversified flora is overwhelming to a newcomer and I can only highlight a few features. Certain plant families attract attention because they are richly represented here as well as in north temperate zones. This is particularly true of the *Ericaceae*. Although there are two dozen species of *Gaultheria* in the floristic region known as Malesia, which

includes Malaysia, Indonesia, Borneo and New Guinea, only one of these occurs on Kinabalu, although for a closely related genus, *Diploysia*, with 93 Malesian species, 25 species are recorded from Kinabalu, of which 22 are endemic. The genus *Vaccinium*, which we tend to think of as northern, is abundantly represented in South-East Asia, with 11 species on Kinabalu, of which 6 are endemic. But, undoubtedly, the most notable members of the family are the rhododendrons, of which some 280 species are Malesian, with 26 on Kinabalu, of which 9 are endemic.

One of the most interesting of the endemic species is *R. ericoides*, (Fig. 24 p.151) which starts appearing about 2,700m. and becomes increasingly abundant at high elevations and extends almost to the summit. Although variable in size it commonly grows to 20cm has small, needle shaped leaves and scarlet, one cm tubular, waxy bells which are either solitary or come in pairs. *R. lowii*, (Fig. 23 p.151) at 2,400-2,700m. has a more conventional rhododendron growth form and unexpectedly opulent, golden yellow flowers. *R. buxifolium*, with very small leaves, as well as *R. rugosum*, with much larger leaves, splash the upper slopes of the mountain with their scarlet flowers. Both these and other species of the genus often hybridise and create problems of classification.

The distribution of many of the plant species found on Kinabalu is often surprising. To my mind one of the botanical curiosities is none other than *Cardamine hirsuta*, familiar to us as hairy bittercress. This occurs in damp places between 1,500 and 2,400m. and has the distinction of being the only crucifer in Borneo. It appears to be a genuine native and must rank among the world's most widespread species. Another common plant worth noting is *Drimys piperata*, which belongs to the primitive family *Winteraceae*. Species of this small genus are about equally divided between South America and Australia and, of the latter, only *D. piperata* spreads as far as South East Asia. Perhaps some day the distribution of the non-endemic species will be compared with that of the nearest relatives of the endemics, to shed light on both the general incidence of endemism and also how far Borneo is indeed the kind of botanical cross-roads suggested by the flora of Kinabalu.

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# A pilgrimage for poppies

JOHN GRIMSHAW

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IT is ten years since I first encountered the genus *Meconopsis*. The revelation came looking over the gate into the nursery at Aberchaldler, seeing the many spikes of red, yellow and blue growing there. A couple of days later we visited the garden itself and found out what these wonderful plants were. I was aged ten at the time, but at that point a love affair began.

Ten years later, almost to the day, I found my first meconopsis in the wild. I had been trekking for twelve days through the Nepalese foothill ranges and was now above 4400m in amongst the main Himalayan range, but still there was no sign of meconopsis. For days I had been wagering to myself – will it be today? The strongest competitor, the day on which the Lamjura La, a pass of 3400m, had been crossed, had proved fruitless, although it had yielded the first primula as speculated – *P. denticulata* and some, out of flower, unidentifiable petiolarids.

The mist had come down and the track was ascending through boulder strewn terrain and the snout of a glacier, when on rounding a bend, there it was, sheltering under a rock – *Meconopsis horridula*, its petals weighted and spoilt by the rain. But what petals. Not the dirty purplish grey of the cultivated plants whose seedpods I had so frequently stabbed my fingers on, but a most intense bright blue, beating any meconopsis I had ever seen into oblivion, and of a size to match, with a fat bunch of golden anthers on blue filaments inside. After a few minutes of silent contemplation, out came the camera to record the sight. Proceeding, the Gokyo valley opened out, and the meconopsis was seen to be frequent, although the plants were scattered. Flowering had only just started and most plants bore clusters of prickly black buds above the loose rosette of spiny leaves. Their height did not exceed 30cm at this stage although the stems may elongate in fruit. Each flower was borne individually on a leafless stalk from the rosette, not from a multiflowered scape as usually seen in cultivation.

Unfortunately that day was wet and, at an elevation of over 4600m, cold, so despite the floral riches and obvious scenic beauty of what could be seen of the valley I did not linger there long. I did, however, find *Corydalis cashmeriana* and was able to compare the two, finding that the blue was very similar between the two plants.

On the way down from Gokyo to Namche Bazar a careful search among rocks by a delightful stream revealed the long-stemmed seed pods

of *M. simplicifolia*, and a little later, at a village named Dole, there were more amongst bushes with *Primula sikkimensis*. Unfortunately no flowers remained, and the seeds were not ripe – that infuriating period when the botanist or gardener is impotent.

The next week, the last in July, found me in the Khumbu valley. At Pheriche, a yak-herding settlement situated at nearly 4200m, I found more plants of *M. simplicifolia*, some of whose seed pods were ripe enough to collect and ripen off in packets. In this valley, as at Gokyo, *M. horridula* did not put in an appearance until an elevation of at least 4300m had been reached, but thereafter it was omnipresent, frequently sheltering under rocks. It was still occurring at over 5400m on Kala Pattar, the eminence below Everest that is the high point of the trek (in more ways than one, for a superb view is gained from its top) for most people. The hardy poppy has been reported from above 5700m on Everest itself. The weather here was good, fortunately, and I was able to see both view and meconopsis in full glory. Not all the plants were of the same impeccable blue a few veered towards the purples that bedevil the plant in cultivation.

Descending the valley, I reached Tengboche, the site of the famous monastery, with the realisation that, although I had seen a wonderful array of alpine plants, I had not found the one I had come to see. This was a tall monocarpic meconopsis, preferably *M. napaulensis*, but any would do. So I established myself in a lodge there and next morning went out to survey the hillside to the east of the monastery, as it looked wetter than any I had been on so far. It certainly was, and its chief characteristic was the knee deep rhododendron moorland, very reminiscent of a Scottish grouse moor, but not so scratchy on the socks as calluna. No meconopsis loomed through the mist, so I returned to the lodge, to find an American botanist installed, so we spent the afternoon talking plants.

Next day, which I guessed would be my last chance, I descended by a very steep track to the river, crossing the torrent on a plank bridge, to be faced by an equally steep ascent up the opposite hillside, to the village of Phortse. Continuing round the shoulder of the hill I came to the hanging valley where the hamlet of Konar is situated. I had seen this place from across the main valley, and had thought it looked promising. The village was utterly deserted, the people being with the yaks in the high pastures while the potato crop was left to fend for itself. I had climbed up the south-east side of the valley, cut across the screes at the end, finding only plants I had seen before (and seeing a musk deer), and was descending the northern side, when in a steep ravine in the cliff ahead I saw the unmistakable pale green spire of a fruiting meconopsis. Hurrying to the place I found about ten spikes, and several young rosettes of leaves clad in long russet hairs, of

*M. paniculata*. A few soft yellow flowers were left on one of the plants, but some of the others already had ripe seed (which I collected as JMG N17). The plants were growing in a narrow gully down which a stream was flowing: their rosettes were actually up to their necks in water. There was also much dryopteris whose fronds were remarkably similar to the leaves of the poppy. It was a great relief to have found the sought after, and I was able to return to Namche next day with absolutely no regrets.

The return trek, however, had a big surprise in store. After crossing the Lamjura La, again shrouded in mist, and descending the other side, the track passes through a mighty rhododendron grove, emerging to an open area on the side of the hill. Here, to my immense astonishment, was a meconopsis, the long hoped for *M. napaulensis* in fact, just coming into bloom. This was just as well, as it relieved me of collecting seed for, unfortunately, the colour was a singularly muddy pink. The plants were in the same mould as the ice blue form sometimes known as *M. n. wallichii*: in its typical form as grown in gardens this is worthy of specific rank, as James Cobb suggests (The Rock Garden, January 1987), but clearly it intergrades with the reds that are more typical of *M. napaulensis*. Farrer knew this, writing "... it is precisely to such dim and dusky purples that *M. wallichii* itself too frequently varies", but then takes the view that *M. napaulensis* should be sunk into *M. wallichii*, the reverse of that taken today.

So my initial speculation had been right - there was meconopsis on Lamjura La, but out of flower it had not been noticeable, Four meconopsis seen, with seed collected of two, and an appetite whetted for more.

I should like to thank my sponsors who made the trip possible, especially the Scottish Rock Garden Club, Alpine Garden Society, The Explorers Club of New York, the Spoore, Merry and Rixman Trust of Maidenhead and Mr. and Mrs. G. Harter of California.

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## Meconopsis – Kingsbarns hybrid

JAMES COBB

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ONE of the best known and loved of all meconopsis is the hybrid between *M. grandis* and *betonicifolia* that is usually known as *M. x sheldonii*. This plant was given the A M as long ago as 1937 when it was shown by the raiser, Sheldon. There are quite a number of other plants in cultivation that are the same cross, notably 'Slieve Donard' and 'Ormswell' both produced by Dr. Curle of Edinburgh and which went their separate ways and collected different names. It is likely that other gardeners have deliberately or accidentally created this same cross and it may be that different types of *M. grandis* have been used to produce variation in *M. x sheldonii*. The blue poppies known as 'Crewdson Hybrids' are less robust than *M. x sheldonii* and it is possible that the narrow leaved Sikkim form of *M. grandis* was involved.

The hybrid *M. x sheldonii* is available in the nursery trade in small numbers only because it requires vegetative propagation by division. It has occasionally been described as setting seed but usually the characteristically small seed capsules contain only a puff of dust. The seed offered in the seed exchanges as *x sheldonii* is almost invariably the typical small seed of a form of *M. betonicifolia*. In the autumn of 1985 I noticed one seed pod on a plant of *M. x sheldonii* was quite different to the usual small capsule covered with reddish hairs and was the expanded dark green hairless sort one associates with *M. grandis*. The pod eventually ripened to produce a capsule full of large seed (at least twice the size of *M. betonicifolia* seed). Examination under the scanning electron microscope shows this seed to be almost identical to that of *M. grandis*. The seed germinated rapidly in spring and 48 plants were pricked on and grew away rapidly under standard humid, rich growing conditions. I planted out about half these plants in a rich, but alkaline, bed where all grew on to be polycarpic plants which flowered for the first time in the summer of 1988. The plants were very variable in size and form. Two or three were particularly robust and flowered on one metre basal scapes. Some resembled the more delicate structure of 'Crewdson Hybrids' and yet others were close to *M. x sheldonii* itself with gracefully fluted petals. It has to be said all the colours were purple blue but then so are all my blue poppies as the alkaline soil influence begins to dominate. I am about to start again with 30 m<sup>3</sup> of peat and get back to having real blue poppies again. I am sure in an acid soil many will have excellent colours and indeed there have been some very

favourable reports from friends given plants two years ago.

You may well having read this far, say “so what”. The point is that all the progeny are setting masses of excellent fertile seed and I see no reason to suppose that they will not continue to do so. My garden is full of meconopsis cultivars and species and I suspect these plants are backcrosses to one of the parents. The nearest plants were a very good form of *M. betonicifolia* that I suspect may be tetra-ploid (although I still have not obtained an accurate chromosome count for all my trying). There were also fertile plants of the Binns (BMW 109) Nepal form of *M. grandis* about 20m away and as the new hybrids are more like *M. grandis* than *x sheldonii* itself this may be the most likely. It is not in fact entirely clear why *M. x sheldonii* itself is usually infertile since both species produce fertile hybrids with *M. integrifolia* (*M. x sarsonsii* and *x beamishii*). The plants are robust and easy to grow and it may be a good way of spreading new blue poppies to parts of the world where import of vegetatively propagated material is not possible. Seed has been sent in to this year’s seed exchange and hopefully will be in the future.

The reason I have called them Kingsbarn’s hybrid is that the name *M. x sheldonii* should only really be applied to the original cross and not to what I suspect is a new backcross. It may be possible in the fullness of time to select really exceptional forms from this new hybrid swarm and give them named cultivar status, but that is for the future.

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# Meconopsis x sheldonii

GORDON THOMSON

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*The reader is referred to the colour photograph in the last issue (Fig. 10 p. 67) taken by the author.*

Arguably the alpha and omega of Himalayan Blue Poppies, this splendid plant first manifested itself in the garden of Sheldon at Oxted, Surrey and when shown in 1937 earned an A.M. Whether this original strain has survived in cultivation is doubtful. Latterly the 'x sheldonii' designation has come to signify all hybrids between *M. betonicifolia* and *M. grandis* and, consequently, is a variable plant in its many named forms.

Reliably perennial, the x sheldonii group falls midway between *M. betonicifolia* and *M. grandis* in habit and appearance, sometimes leaning more towards one or other parent. In general, it quickly builds up to vigorous clumps of leafy stems and ginger-haired, toothed leaves. The flowers which unfurl in late May and June are, in the best forms, a piercing, pure kingfisher blue and, in some instances, of teaplate dimensions – although saucers are the more general rule.

Any attempt to essay the offspring cannot ignore the parents and it may be useful to remind ourselves of these, particularly where they differ: *M. betonicifolia*: 120–150cm. Sky-blue to rosy-lavender flowers (occasionally white) in groups on short terminal flower-stalks atop a leafy stem often clad in reddish hairs; also from upper leaf axles. Usually 4-petalled and 6–7.5cm. in diameter. Basal leaves truncate or cordate, margin lobed or deeply serrate, 10–15cm. long and 5–7.5cm. wide, coarsely hairy. June and July.

*M. grandis*: To 90cm. Royal blue to purple 'lampshade' flowers, solitary on long, virtually leafless flowerstalks, 30cm. or more arising from a cluster of leaves atop a 15–45cm. main stem: also directly from near ground-level. 4-petalled or more, up to 14cm. diameter (first flowers largest). Basal leaves simple, erect, narrowly lanceolate, tapering at both ends, margin only slightly lobed, 15–18cm. long and 3–4cm. wide. May–June.

The most spectacular result of the marriage between these two species is undoubtedly the 'Branklyn' form with huge empyreal blooms up to 20cm across and lacking any hint of mauve – a tint which debases some lesser brethren – and coarsely toothed leaves. It makes enormous clumps and may top 180cm. The much-coveted form of *M. grandis* known as G.S.600, introduced by Sheriff from Tibet, shares many features including the deep purple leaves of early growth, and it too may belong in this

group as a naturally occurring hybrid. Both G.S.600 and 'Branklyn' are very infertile, even when hand-pollinated. This sterility is very prevalent amongst some meconopsis hybrids and is one reason why the finest *sheldonii* forms remain expensive and often difficult to locate. Many forms retailed as *grandis* are probably 'sheldonii' hybrids and the true *M. grandis* remains an elusive plant, except where it is propagated vegetatively, as it is at Edinburgh Botanic Garden. One of the most satisfactory 'sheldonii' crosses originated in Edinburgh in the 1930's, whence it found its way to Mount Stewart, N. Ireland and subsequently was marketed by the Slieve Donard Nursery there in error as *M. grandis* 'Prain's Variety' (a quite different plant). Since rectified, it is now known as *M. x sheldonii* 'Slieve Donard' - yet another example of the Irish stealing our best tunes. Less histrionic than 'Branklyn' it remains, nevertheless, a beautiful plant of fine habit and particularly vivid colour, with 10cm flowers held above one metre stems and virtually unlobed leaves, soon forming vigorous colonies. It was much praised by the late Edward Hyams (who knew about these things). 'Quarriston' is another form from the Emerald Isle. Of other named hybrids: 'Aberchalder', nearer to *M. grandis*; 'Springhill', from Logan Botanic Garden, Wigtownshire; 'Crewdson Hybrids', raised around 1940 by the 'Queen of Meconopsis', the late Mrs Cicely Crewdson. This attains up to 150cm. and the elegant flowers are a striking turquoise blue. Another desirable goes by the name of 'Archie Campbell'. Many of these beauties are available from the Jack Drake Nursery.

When fresh seed is to be had it may be sown at once, but will keep perfectly well dry in a fridge. It should be sown in February, not too densely, on an open, well-drained medium topped with fine grit or vermiculite, and watered in. Meconopsis seed stored at room temperature over a period will degenerate badly. Germination and subsequent growth will proceed apace in conditions of reasonable light and humidity and a day temperature not exceeding 20 degrees C. Don't be in too much of a hurry to prick off - a cause of many meconopsis losses. Wait for at least one pair of well-developed true leaves and then transfer into a dryish open-textured mix (meconopsis are allergic to hard potting), watering only when growth restarts. Young plants grow vigorously and should be potted on as necessary and never checked, till they are ready for planting out by late August or September. If overwintering in pots is unavoidable keep them on the dry side, but never bone-dry, and plant in March. The potless system is perhaps even more suitable for these perennial varieties. They should flower within two years.

These plants are not lime-haters *per se* but the best results and colours are undoubtedly obtained on rich, well-drained woody soil - not bog - around pH5.5-6.5. They also wax fatter in the cooler, less parched summers of

Caledonia than the droughts of more southern shires. In Celtic climes the customary stern injunctions anent the virtues of shade are not to be taken too seriously. Regular division at least every fourth year, preferably every third, is necessary, not least for the benefit of grateful friends and neighbours. Ideally this should be performed in late March - early April when growth is well into its stride, each division consisting of several growing points or crowns. Late summer is also possible, as is winter, but in this last instance divisions should be potted and kept under cover till spring. These plants are voracious feeders and will repay with interest any effort expended on providing a congenial home for them. Ground should be well dug to a good depth and heavily enriched with muck or compost; heavy soils will require a leavening of grit or sand also. The fat resting buds should never be buried and a spacing of at least 45cm. is desirable. Unlike most people these plants are better in the mass - the more generous the drift the bigger the crowd at your garden gate. An established colony will thank you for a top-dressing of leaf-mould/peat and grit with a good general fertilizer worked in (Growmore is fine) applied in early spring before the fireworks begin. In dry summers - should they ever return - additional watering may be called for and precautionary fungicidal spraying to ward off mildew would seem a wise counsel.

Anyone who wishes to delve further is referred to the recent and exhaustive survey of the genus by Dr. Cobb which appeared in these pages, and to whom I am indebted.

Since the foregoing was written I have been informed by David Tattersfield of Branklyn that *M.* 'Branklyn' is no longer in captivity there. He would be more than grateful for information leading to its return. (All attempted re-introductions so far have proved to be impostors.)

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# Show Reports

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## Perth – 23 April 1988

The move across the road to the Rodney Pavilion gave the show a fine hall to display the many fine entries. In Section 1 honours were very even with Margaret and Henry Taylor just edging ahead of Fred Hunt for the L. C. Middleton Challenge Trophy for most points in this section.

Fred Hunt took the Alexander Caird Trophy in the six pan class with a breathtaking group consisting of *Cypripedium formosanum*, *Clematis marmoraria*, *Lewisia cotyledon* 'John's Special', *Fritillaria pallidiflora*, *Erigeron aureus* 'Canary Bird' and *Primula marginata* 'Linda Pope'. If you consider that anyone would be proud to have any one of these pans then all six was even more wonderful. The George Forrest Memorial Medal went to the *Clematis marmoraria* as did the Major-General D. M. Murray-Lyon Trophy for the best plant in the show exhibited by a resident of Tayside.

In class 2 the Dundas Quaich went to Margaret and Henry Taylor with a set that included a fine *Clematis petrei*. The Taylors again showed their abilities in growing from seed and hybridising in showing three different clematis plants in the two classes for plants from seed. *Clematis x cartmanii* 'Joe' gained the Joyce Halley Award for the best plant grown from seed. The other two clematis plants shown were seedlings with 'Joe' as one parent in an attempt to produce a more compact plant with the flowers of 'Joe'. Fred Hunt's female form of *C. marmoraria* showed clearly the difference between the plants.

In the *Lewisia* class Jean Wyllie from Dunblane showed a large long tom of *L. brachycalyx*, with over 40 blooms, which she had grown from seed. Primulas on show included the deep purple, small flowered and honey scented *P. griffithii* from the Taylors, and the R. S. Masterton Trophy was won by two pans of *P. petiolaris* LS 19856 and *P. aureata* exhibited by Evelyn Stevens.

James Cobb from Kingsbarns showed that his growing of *meconopsis* is of a practical nature rather than theoretical by showing a dramatic scarlet-red *Meconopsis punicea*, which has been recently re-introduced to cultivation.

The bulb trophy went to Harold Esslemont with a large pan of *Trillium grandiflora* 'plena' and in the pleione class a fine pan of *P. forrestii* caught the eye.

Buttercups can never look the same after seeing the beautiful clear colours of the *Ranunculus* class and another eye-catching sight was a yellow dome of *Draba mollissima*.

Section 2 was won by Mr. and Mrs. Young from Aberdeen who showed some very fine plants including *Lewisia cotyledon howellii* as well as a fine Rhododendron *R. orthocladum microleucum* which gained them the Cox Trophy for the best rhododendron in the show. The Youngs were also winners of a Bronze Medal as well as The Perth Salver, a new trophy presented by the Perth Group to mark Rhoda Fothergill's years of valuable service as Show Secretary.

The Perth Trophy was won by Richard Salvin, the new Show Secretary, being the Perth Group member gaining the most points in the show, and the Junior Prize went to Lisa Christie of Kirriemuir. Certificates of Merit were awarded to Lawrence Greenwood and Mike Almond for very fine displays of flower paintings and Turkey photographs respectively.

Thanks go to Royal Botanic Gardens, Edinburgh for once again putting on a professional eye-catching display of plants and to judges Ron McBeath, Sandy Leven, Sheila Maule, Margaret Taylor, Fred Hunt and John Lawson.

DAVID HOWAT

### **Aberdeen – 21 May 1988**

The Show opened on a warm sunny morning. A number of interesting plants in fine condition were on the benches but entries were down on last year especially in Section I.

The Walker of Portlethen Trophy for most points in Section I went to Mr. and Mrs. Ian Young of Aberdeen; a well-deserved recognition of their large entry and willingness to move some very large clay pots. The Forrest Medal was taken by Mr. Hunt of Invergowrie for the pink *Phlox mesaleuca*. His *Cypripedium macranthum* var. *hotei astsumorianum*, grown in soil-less compost, was awarded a Certificate of Merit, as was Mr. and Mrs. Young's *Rhododendron* 'Sarled', a *sargentianum* x *trichostomum* hybrid which was also awarded the Simpson Salver for the best Rhododendron. Also very striking were their cream *yakushimanum* hybrid 'Dusty Miller' and pink *williamsianum* hybrid 'Osmar.'

A new award, the Craig Cup for the best Primula, went to Mr. R. Maxwell of Aberdeen for a fine pan of *P. auriculata*. Noteworthy from seed was Mr. H. Esslemont's neat cushion of *Dionysia integrifolia*, flowers pink with a red and yellow eye, and the rare and difficult *Jankaea heldreichii* with its velvety leaves. In the cushion plant class Mr. and Mrs. Young's large perfect hump of *Dianthus erinaceus* was unusual and attractive. Asiatic Primulas were well represented. A delightful fragrance came from *P. reidii* in both lilac and white forms, shown by Mr. T. G. Sprunt of Bridge of

Allan and Mr. and Mrs. Young. A dainty *P. saxatilis* was shown by Mr. W. Holmes of Banchory.

Lewisias made a brilliant display. Particularly striking was a deep cerise *L. cotyledon* shown by Mr. Maxwell. In Section II a fine pink *L. brachycalyx* from Mr. S. McGrath, a neat *L. rediviva* from Mrs. J. Lawrence and a pink *L. cotyledon* from Mr. Sutherland (all Aberdeen) were placed in order. The late-flowering tulips, the apricot *T. batalinii* (Mrs. H. Salzen - Aberdeen) and red *T. linifolia* (Mr. D. Atkinson - Alford) provided more colour in Section II.

The Bronze Medal for most points in Section II went to Mr. D. Atkinson and the Aberdeen Quaich for the best plant in Section II to Dr. G. M. Macintosh of Aberdeen for *Aquilegia alpina*.

A colourful display staged by the Cruikshank Botanic Garden included, among many interesting plants, fine pans of rhodohypoxis and the purple and yellow roscoeas, members of the ginger family from the Himalaya. From the same area came the curious green aroid *Arisaema intermedium* with a long thread-like appendage, grown from seed collected in Nepal.

A display of rock garden plants staged by the City of Aberdeen Department of Leisure and Recreation decorated the entrance to the Cowdray Hall.

Mrs. H. Salzen showed an exhibit of paintings of spring bulbs and alpiners and was awarded a Gold Medal.

HEATHER SALZEN

### **Glasgow – 7 May 1988**

The SRGC Glasgow Show was a glittering affair in the Exhibition Hall of the Glasgow Garden Festival and was one of the highlights of that truly wonderful spectacle of the summer of 1988. For many of the visitors it must have been their first sight of a rock garden show of any kind. It is interesting to note that when the Empire Exhibition was held in Glasgow in 1938 the SRGC made no mention of it and was not apparently involved. As befitted the occasion the quality of the plants was superb.

In his winning entry in the 6-pan class, Fred Hunt included *Viola delphinantha*, a difficult gem among the shrubby violas described by Wilhelm Schacht as the finest alpine he had ever seen. Fred's entry also included *Primula pedemontana*, a neat alpine primula like a small *P. hirsuta* with crinkled heads of deep lilac flowers.

*Clematis marmoraria* seems to be one of the fashionable plants of the moment and several good specimens were exhibited but the judges for once passed them all over for the Forrest Medal which went to an enormous (40cm diam.) well-flowered plant of *Gentiana acaulis* shown by D. Kirby.

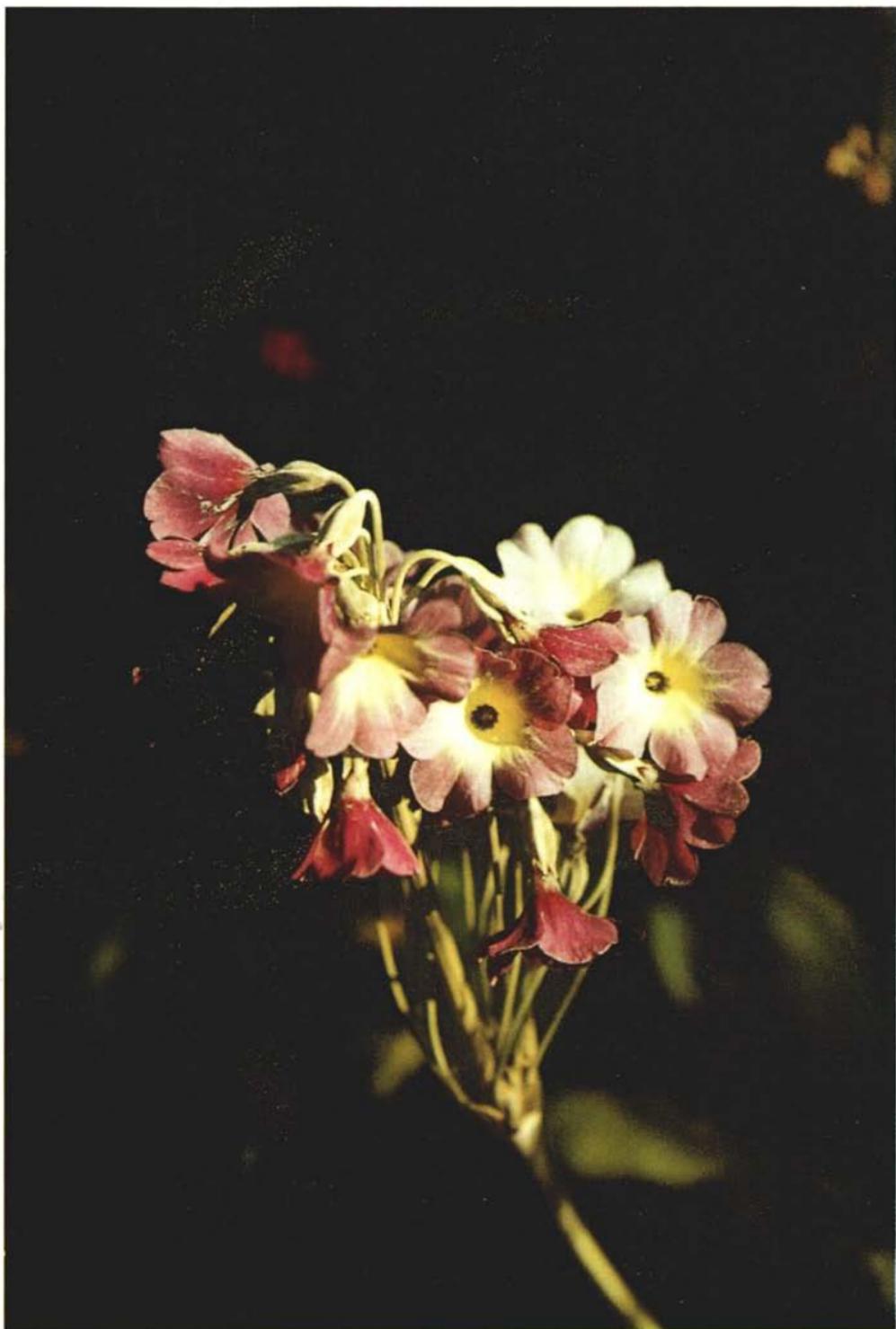


Fig 27 *Primula alpicola* (see p.185)

Alastair McKelvie



Fig 28 *Shortia uniflora* (see p.182)

Harold Eslemont

Fig 29 *Crocopsis fulgens* (see p.180)

Fred Hunt





Fig 30 *Saxifraga oppositifolia* (see p.183)

Harold Eslemont

Fig 31 *Dactylorhiza elata* (see p.182)

Harold Eslemont

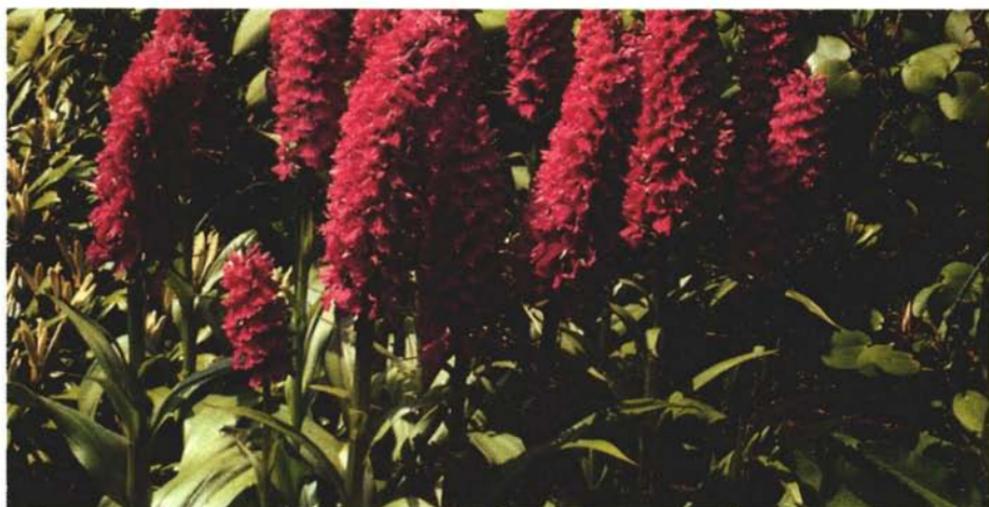




Fig 32 *Ranunculus calandrinioides* (see p.201)

Fred Hunt

There were two good plants of British native orchids, *Orchis mascula* and *Orchis morio*, rather similar but more lax, shown by Fred Hunt.

*Primula deuteranana*, from the Himalayas, is often a rather undistinguished species but the form shown by Fred Hunt was quite splendid with large neat deep purple petals, beautifully notched. It was good to see new competitors doing well. Ian and Margaret Young from Aberdeen gained several prizes with their rhododendrons which included *Rh.* 'Dora Amateis', 'Curlew' and 'Pink Drift'.

In the Scottish native class, Roma Fiddes had a delightful *Viola lutea* with enormous yellow flowers. It was good to see a really distinguished plant in this class.

It was rather late for primulas but I noticed *P. rotundifolia* from Nepal/Sikkim which is now fairly well established, *P. veris* with 30 flowering stems showing it to be as distinguished as any foreign species and a neat *P. sieboldii* with fringed pale lilac flowers. Among Primulaceae was a most desirable *Omphalogramma elegans*, deep velvety purple fully justifying its specific name.

Unusual Ranunculaceae were *Atragene alpina alba* with large downward pointing petals, surely a gem if it is easy to grow, and *Ranunculus millefoliatus* with deeply cut leaves and bright yellow flowers on 30cm tall stems.

Particularly impressive among Papaveraceae were *Hylomecon japonicum* with 5cm diam. deep yellow flowers shown by Ian and Carole Bainbridge and *Meconopsis sherriffi* with large crinkled deep pink flowers shown by Margaret and Henry Taylor.

Bulbs were not greatly evident but an unusual species was *Fritillaria liliacea* shown by Fred Hunt while Harold Esslemont's double *Trillium grandiflorum* was quite outstanding. It is very slow to build up so this plant must have required patience.

Lewisias as usual helped greatly the colourful display in the Hall. It was interesting to note that a deep red hybrid which won a first prize was simply bought the year before from a Trade Stand at a Show. An eye-catching plant which received a Certificate of Merit was *Shortia soldanelloides illicifolia* shown by Ann and Viv Chambers. It was covered in frilled pink flowers over tiny green leaves. Other Certificates of Merit went to Harold Esslemont's *Phylliopsis hillieri* 'Pinocchio' and *Trillium erectum grandiflorum*. A splendid 'dwarf' conifer was *Pinus mugo*, 18 years old, 45cm tall and 50cm wide with both flowers and cones present, shown by Ian and Margaret Young.

Section II was well supported. Plants which caught the eye were *Narcissus* 'Sundisk', a 30cm tall rupicola type and a very neat *Oxalis enneaphylla*. Among the bulbs was a large pan of immaculate *Fritillaria*

*meleagris* with 30 huge chequered purple flowers shown by Mrs. Ward, and *Tulipa batalinii* 'Bright Gem' shown by Chris Jones, with 20 flowers all at the peak of perfection.

In a Gold Medal Display from RBG Edinburgh was an attractive *Trillium erectum albiflorum* with fascinating dark centres. Another Gold Medal was awarded to Mrs. Gillison Todd for a lovely display of European mountain plant paintings.

The SRGC can be justifiably proud of the stunning display it put on at the 1988 Glasgow Garden Festival.

ALASTAIR McKELVIE

### Edinburgh – 9 April 1988

Changes in the weather, an earlier show date, and also a change of venue to Cluny Church Centre in Morningside, made the committee a little nervous especially about attendance, but the new hall proved to be an excellent choice, larger and with much better lighting. However our Secretary's anxieties were dispelled by the number and quality of the exhibits, the colour and variety of the plants, and the fact that more people than ever before visited the Show.

The George Forrest Memorial Medal was won by James Cobb of Kingsbarns with the largest pan of *Primula* 'Linda Pope' that I have ever seen, which also gained the Corsair Challenge Trophy for the best *Primula* in the Show. The Best Asiatic *Primula* was awarded to Mike Dale of Newcastle with *Primula aureata*, gaining for him the R E Cooper Bhutan Drinking Cup.

Our President, Eric Watson of Newcastle, was able to send for our enjoyment in the '3 plants of different genera grown from Seed' - *Dionysia involucrata*, *Saxifraga florulenta* and *Haastia pulvinaris*, winning the A O Curle Memorial Trophy. He also had another lovely *Dionysia microphylla* GWM 1302 in another section. The Henry Archibald Rose Bowl - 3 plants of different genera, was awarded to Evelyn Stevens of Dunblane, with *Primula allionii* 'Beatrice Wooster', *Douglasia laevigata* and *Rhododendron pumilum*. Evelyn also gained most points in Section I, thereby winning the Reid Rose Bowl, as well as the Midlothian Vase and a Certificate of Merit for *Rhododendron pumilum*, which was simply covered in delightful soft pink bells and voted the best rhododendron in the show.

Fred Hunt of Invergowrie won the Elsie Harvey Memorial Trophy, with plants of *Anemone thalictroides* 'Oscar Shoaff', *Ophrys tenthredinifera* and the beautiful yellow *Gentiana oshtenica*.

There were some fine pans of *Fritillaria* on the benches, and the Henry Tod Carnethy Quaich for the best bulb, corm or tuber was awarded to Sandy Leven of Stirling for *Fritillaria hermanis amana*; he also won a Certificate of Merit for a beautiful pan of *Pulsatilla vernalis*, whose stems were clothed in shining silky hairs and which has a wide distribution throughout the European Alps.

The miniature gardens were excellent - small works of art - Mr. R. Brown of Hexham winning the Boonslie Cup for his plant-studded trough, and in addition prizes with some dwarf conifers, *Chamaecyparis* 'Green Globe' and in the two pan class *Pinus schmidtii* and *Tsuga canadensis minima*.

Plants native to America were well represented; Sheila Maule of Edinburgh, with her plant of *Trillium rivale* - pink form, taking first place; while plants native to Australasia also had many exhibits, Fred Hunt winning with *Clematis marmoraria*. A Scottish native plant, *Phyllodoce caerulea*, superbly flowered, was exhibited by Evelyn Stevens.

Lewisias and cyclamens were also plentiful. Jean Wyllie of Dunblane won with a fine *Lewisia brachycalyx* and Harley Milne of Edinburgh also took a first prize with a beautiful *Cyclamen pseudibericum*. Among the plants of New Zealand's 'vegetable sheep', Betty Craig of Edinburgh took first place with her lovely little plant of *Raoulia eximea*, grown from seed, and Bob Maxwell of Aberdeen also won a first for a nice compact pan of the silvery *Raoulia x loganii*. One other plant I would like to mention was Henry and Margaret Taylor's (Invergowrie) *Clematis x cartmanii* 'Joe' with its lovely dainty white flowers, greenish centres and dark green leaves.

In Section II, there were many fine entries and 'super' plants. The Midlothian Bowl for the Best Plant in Section II was awarded to David Rankin of Edinburgh for a glorious pan of *Pulsatilla vulgaris*, in full flower, which also gained a Certificate of Merit. David and Stella Rankin also won the Kilbride Cup for a lovely Spring Floral Arrangement, while the Bronze Medal for the most points gained in Section II was won by Ian and Margaret Young of Aberdeen.

It is encouraging to see younger members bringing their plants to the show, and Heather Dale of Newcastle won a first prize with a lovely plant of *Soldanella carpatica*. I do hope they will continue to bring their treasures and enjoy exhibiting them each year.

The judges were Mrs B. Ivey, Mr. S. Leven, Mr. P. Foley, Mrs S Maule, Mr. G. Kilpatrick, Mr. H. Milne, Mr. J. Main and Mr. J. Jermyn.

EDITH ARMISTEAD

## Stirling - 26 March 1988

In spite of an odd sort of winter and spring the Stirling Show in the Albert Hall was its usual riot of colour with a high standard in the plant exhibits.

The George Forrest Memorial Medal of the Show went to Dr. Evelyn Stevens for a large pan of well-flowered *Primula allionii* Hartside No. 12. It also won the Ben Ledi Plants Trophy for the best European Plant in Section I and the Spiller Trophy for the best *Primula* in the Show. The Carnegie Dunfermline Trust Trophy for the most points in Section I went to Mr. A. J. Leven who once again succeeded in producing a large number of highly creditable plants.

The Fife County Trophy for the most points in Section II was won by Mr. Ron Alison. The Institute of Quarrying Quaich for the best non-European plant in Section I was won by a pan of *Trillium rivale* 'Pink form' exhibited by Mrs. Sheila Maule.

The 1st prize awards in Section I were spread over 23 Exhibitors and in Section II over 10 exhibitors.

Mr. Fred Hunt produced his usual impeccable exhibit in the 3 Pan Class in Section I with pans of *Corydalis transsylvanica* 'George Baker', *Narcissus watieri*, the pan having no less than 16 flowers, and a large pan of well-flowered *Tecophilea cyanocrocus*. In Class 2 for new, rare and difficult plants Dr. James Cobb produced an outstanding pan of *Corydalis shanginii*. In Class 4 for plants grown from seed Dr. Evelyn Stevens produced an outstanding exhibit of *Callianthemum anemonoides* and in Class 7 Mrs. Lyn Bezzant produced an out-standing pan of *Diapensia lapponica*, this class being for plants native to Scotland. This plant fully filled a 5" pan and was just on the point of coming to flower and was obviously going to produce a generous display of evenly spaced flowers. Class 8 for 3 pans of different genera also had a good entry from Mrs. Roma Fiddes who showed pans of *Narcissus watieri*, *Tulipa violacea* and also one of *Sisyrinchium douglassii*.

The Fritillarias were as usual well-represented at the Show and Mr. A. J. Leven won class 18 with an entry of *Fritillaria bucharica* and of *F. sewerzowii* and Mr. Harold Esslemont was first in Class 19 with a beautiful pan of *Fritillaria bucharica*. Mr. Fred Hunt showed a well-grown panful of *Fritillaria michaelowskyii* which he exhibited in Class 21, which was for bulbs grown from seed by the exhibitor. All the plants had flowers which were beautiful in form but showed quite clearly that there is quite a degree of species variation which is of course of considerable interest.

The Stirling Show has become well-known for the tremendous representation of the Primulaceae and this year was no exception. It is this genus which produces the greatest part of the riot of colour which is the

Hallmark of this Show. Mr. A. J. Leven had a good exhibit in the 3 pan class winning 1st prize for pans of *Primula allionii* 'Snowflake' *P.* 'Lismore Yellow' and *P. allionii* x 'White Linda Pope' seedling. The 2 pan Asiatic and hybrids class was won by Mr. Ian Black with *P. edgeworthii* 'Tinney's Blueblood' and *P. edgeworthii alba* and the 1 pan Asiatic *Primula* class was won by Mr. Fred Hunt with *P. aureata*.

The 2 pan *Primula* class was won by Dr. James Cobb with *P. marginata alba* and *P. marginata* 'Pritchard's var'.

It is encouraging to see so many entries in Section II. I think that the prize of £10.00 for the first time exhibitor in Section II with the most points is a useful means of stimulating new exhibitors and one which might well be emulated in other Shows. Quite a number of the plants in Section II would have acquitted themselves well in Section I, their owners obviously having great skill as cultivators.

We are grateful once more to the Regius Keeper of the Royal Botanic Garden in Edinburgh for allowing an exhibit of their plants to be mounted at our Show.

T. G. SPRUNT

### Newcastle - 5 April 1988

The show was well supported in having 65 exhibitors and an entry of 440 exhibits. A particularly pleasing point was the high level of support and quality for Section C, perhaps reflecting Mike Dale's, the show secretary, enthusiasm to encourage new participants for which we must all be grateful.

An excellent pan of *Saxifraga retusa* entered in Class 7 won for D. Lowe the Forrest Medal, repeating his success of 1987 when he won a Farrer Medal with a similar exhibit. Alpine plants were the subject of a display of paintings by Duncan, for which he was awarded an Honorary Gold Medal.

Plants like *Ranunculus asiaticus*, *Trillium nivale* and *Narcissus rupicola* earned F. Hunt of Invergowrie the R. B. Cooke Plate for the highest aggregate of first prize points in Section 1. He also received an AGS Medal for six rock plants in Class 25. An AGS Medal was also awarded to Dr E. Stevens for Class 1 (6 rock plants in 12" pans). The plants included were *Lithophragma parviflora*, *Rhododendron pumilum* and an enormous pan of *Primula* 'Beatrice Wooster' for which she earned a Certificate of Merit.

The Gordon Harrison Trophy for the highest number of First prize points in Section 2 was won by G. P. Mawson of Dronfield. Among his plants on display were fine examples of *Myosotis pulvinaris*, *Androsace vandellii* and *Rhododendron* 'Fittra', not much seen of late but nevertheless a

good, small, compact plant which covers itself in soft pink flowers. The competition in Section 2 was finely balanced between G. P. Mawson and W. Carr of Newcastle. The latter was awarded the SRGC Special Bronze Medal for gaining the highest number points in Section 2. *Gentiana coelestina* and *Soldanella alpina* were just two of his fine entries.

It is always a pleasure to see a newcomer to the competitive benches of shows make their mark, and G. Young of Stocksfield certainly did that this year. Not only did he win the trough class but also the Cyril Barnes Trophy for the most First prize points in Section 3 against very stiff competition. His plants, such as those in Class 90 (3 rock plants) *Androsace hirtella*, *Helleborus lividus* and *Primula* 'Johanna' or *Viola zoysii* from Class 99 were good enough to have done well in higher Sections of the show. This was also true of many of the plants in Section 3, for example the common but fine plant of *Pulsatilla vulgaris* as shown by Mrs. E. Ronald of Roker or the *Shortia soldanelloides illicifolia* of J. W. Cowper from Carlisle.

The classes of new or rare rock plants were well supported the top honour, the Eric Watson Trophy, going eventually to Dr. A. J. Richards for his North American primula, *Primula eximia*. It is always difficult to single out individual plants from such a show but Dr. Richards plants of *Jeffersonia dubia* with a group of about 30 open pale blue blooms contrasting with the dark brown leaf litter used for top dressing was a sight not often seen at shows. Mrs. S. E. Jephcott's plant of *Cassiope wardii* was a beautiful exhibit, the erect stems shrouded in white bells, it won Class 14.

A second Honorary Gold Medal was awarded at the show to the Horticultural Department of Durham Agricultural College at Houghall for an extensive display of seed growing and alpine plants. The display was a credit to the staff and students who had grown the plants.

RAY FAIRBAIRN

### **Discussion Week-end - Stirling - 3 September 1988**

Despite the poor weather during the months preceeding the Show, the high quality and large number of entries (150+) was most impressive.

Autumn gentians were well to the fore with three entries in the Three Pan Class. Mr. and Mrs. V. Chambers again won the Peel Trophy with their beautifully flowered *G. saxosa*, *G. bernardii* and *G. 'Drakes Strain'*.

Another gentian to catch the eye was Mr. A. Spenceley's *G. depressa* which, along with *Origanum dictamnus* and *Helichrysum sessile*, won him the East Lothian Trophy.

Perhaps the gentian required another week to bring it to the condition which saw it winning the Forrest Medal at Bearsden in 1987.

The Forrest Medal was won by Mrs. A. Spensley with her magnificent *Cyclamen graecum*. This was her third Forrest Medal ('82, '85, '88) – all with the same plant.

Since it was entered in Section Two, it brought her also the East Lothian Cup for the best Plant in that Section.

The One Pan Cyclamen Class was won by Mr. V. Aspland with a very well flowered *C. hederifolium album*.

Mr. and Mrs. I. Young won the Two Pan Class for conifers with *Pinus leucodermus* 'Compact Gem' and *Pinus mugo* 'Humpy' (the J. L. Mowat Trophy winner for best Conifer). This helped Mr. and Mrs. Young to win the Mary Bowe Trophy for most points in Section One.

The One Pan Class for Ericaceae/Vacciniaceae was won by Mr. B. Russ with a magnificently flowered 12 inch dome of Cassiope 'Muirhead'.

The Cushion Plant Class was strongly contested. From ten entries, Mr. A. Spenceley won with a beautiful cushion of *Dionysia curviflora*.

The Silver/Grey Foliage Classes were also very strong. Mr. H. McBride won the Single Pan with *Senecio leucophyllus* and the Two Pan with *Helichrysum* 'Country Park Silver' and *Leucogenes leontopodium*.

What gave him even greater satisfaction was winning the Scottish Native Class with a beautiful dome of *Sagina boydii*.

The One Pan Class for Hardy Ferns had ten entries. Mr. R. Robinson won with a most attractive *Cheilanthes tomentosa*.

Mrs. J. Wylie won the Class for Rare, New or Difficult Plants with a plant of *Tropaeolum azurum* which she had grown from Chilean seed (sown in Spring 1988). This plant was in both flower and seed.

The plant which probably attracted most attention, however, was an un-named campanula shown by Mrs. E. Armistead who was seeking help in naming it. The plant, which had fairly hairy foliage, was covered in beautiful pale blue upturned bells. The general consensus was that it was a form of *C. isophylla*.

The new competition for Holiday Photographs had entries as diverse as Ireland and Africa. It was won by Mr. and Mrs. R. Drummond with "Flora of the Valais and Engadin, Switzerland, 1988".

Further interest was generated in the Showroom by an exhibit of cyclamen by Mrs. R. Fiddes and an exhibit of Falkland Plants by Mr. P. Roper.

Margaret and Henry Taylor were awarded a Gold Medal for their magnificent Photographic Exhibitions 'North of Simla'. Mr. L. Greenwood was also awarded a Gold Medal for his exhibit of his beautifully executed paintings of Alpines.

The judges were: Mrs. M. Taylor, Mr. J. Crosland, Dr. J. Elliot and Mr. R. Kaye.

R. H. DRUMMOND

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# Plant Portraits

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## **Bergenia purpurascens**

Heather Salzen

*Bergenia* is separated from other genera of the Saxifrage family by its large thick leaves with stalks sheathed at the base and stout flowering stem arising from a stout creeping rootstock.

*Bergenia purpurascens* should not be confused with *B. cordifolia*, the commonly grown "Elephant's Ears", which is a coarse plant with large, dull slightly hairy cordate leaves and pink flowers. *B. purpurascens* is a handsome plant at all seasons of the year. Smaller in all its parts than *B. cordifolia*, it is distinguished by its glabrous, shiny, orbicular to elliptical leaves and nodding, deep carmine flowers which are produced in clusters on a stout reddish stalk up to 40cm high (Fig. 26 p.152). The leaves turn a rich red in winter and the flowering time is June to July.

This is a hardy and easily grown plant of some garden value as ground cover in any damp situation, in the open or semi-shade. The only essential cultural requirement is continual moisture. Soil type seems unimportant as long as it never dries out. Propagation is simple by detachment of a piece of the rootstock or from seed.

*Bergenia purpurascens* grows on rocks and open slopes throughout the eastern Himalaya from central Nepal to south-west China within the altitudes of 3600 to 4700m.

The Chinese consider it to be of medicinal value. A full-page photograph in the book "The Alpine Plants of China" (Beijing 1982 publ. New York) is accompanied by the information that "The whole plant is used as a medicine for stopping various kinds of haemorrhage, curing giddiness and general physical feebleness". A useful gardeners' restorative, perhaps.

## **Crocopsis fulgens**

Fred Hunt

It was during a visit to the garden of Mr Harold Esslemont at Aberdeen one afternoon in May 1985 when I first encountered *Crocopsis fulgens*.

In the course of enjoying a conducted viewing of his alpine house plants, I was somewhat excited when he kindly presented me with three bulbils of the species, which he had obligingly extracted from a pan on the bench.

He mentioned that the original bulbs had come his way via the Munn

expedition to the Andes in 1976. Although they had multiplied quite rapidly, they were reluctant to flower but were well worth a try, as the flower was reputed to be akin to a large red crocus.

The small bulbs were duly potted up in soilless compost and placed in my alpine house, liquid feeds being applied at fortnightly intervals throughout the growing period.

Season 1986 went by with nothing dramatic occurring other than normal leaf growth. Come autumn of that year, as with most bulbs, I repotted them in fresh compost. Some offsets had been produced, as seemed to be the case over the years in Mr. Esslemont's experience.

As growth commenced in late spring the following year, it wasn't long before two buds were evident, these reaching peak in midsummer.

The flower is sessile, emerging directly from soil level, the deep yellow tube, which forms the basal half, eventually flaring out to a brilliant scarlet trumpet, the entire flower being some 13cm long (Fig. 29 p.170).

The leaves are slender dark green straps which complement the vivid scarlet of the flowers.

A beauty of the bulb world, the natural habitat of this species is the Peruvian Andes at 3600m, where it was found (Munn 166) on a grassy bank at Sacsayhuaman. Coming from this altitude, it will hopefully prove hardy. As a pot plant, it can happily overwinter beneath the greenhouse bench where it will remain cool, but not too dry.

Although flowering in midsummer, when most shows have come and gone, one can but wonder at the impact a pan of these "scarlet wonders" would have should it ever find its way to the show bench.

## **Dactylorhiza elata**

Clive Griffiths

This medium to tall orchid (Fig. 31 p.171) is native to southern France, Spain and Algeria, growing in wet meadows and bogs, hence its name of Robust Marsh Orchid.

It usually has 6-10 erect broadly elliptical unspotted leaves and carries its flowers in loose cylindrical spikes (25cm long), normally violet-purple in colour.

It is an outstandingly large but graceful orchid which warrants a place in the garden where it can show off its imposing appearance. It has all the attributes of a good garden plant; it is easy to grow in any sunny but not too dry spot, is quite hardy, forms large clumps if left undisturbed but can be split up carefully from time to time. It sets copious seed but like all orchid seed it is difficult to germinate. The best bet is to look for self-sown seedlings round the parent plants.

It is well established in cultivation so there should be no risk that bought plants have been imported.

It has in the past been called *Orchis elata* and is still often confused with *Dactylorhiza foliosa* or *D. maderensis* as it used to be named. *D. foliosa* is a shorter broader plant with glossier leaves and rather smaller spikes.

## **Shortia uniflora**

J. D. Crosland

This is one of several species of the Diapensiaceae, a family which has only a limited representation in the rock garden or more especially in the peat garden to which it is better suited. *Shortia uniflora* is indigenous to the woodland regions of the Japanese mountains, particularly on the principal island of Honshu.

Although it is long-lived, fully hardy and has been in cultivation in British gardens for many years it has remained somewhat in isolation and rare, choosing only to prosper in conditions which exactly satisfy its needs. Typical of so many woodland plants it is of low stature, a subshrub which increases steadily over the years, its slender roots penetrating the humus-rich undergrowth. Its glossy evergreen upturned leaves are frequently tinged with pink and in spring it produces its flowers singly on 12-15cm stems which rise above the foliage (Fig 28 p.170).

Where it is happy in gardens it grows well, producing its exquisite blooms in late April and early May. These are wide open campanulate bells up to 4cm across at best and of a delicate pale pink colour. In order to appreciate it fully it is necessary to go down on one's hands and knees.

It is rare because it is difficult to establish and to propagate. The most

reliable means of increase is by seed but this is only rarely available. New plants can also be created by detaching small rooted sections from the parent but the success rate is not high. The essential conditions for this plant are constant shade, a cool lime-free soil rich in humus and peat, and good drainage which never, however, dries out at any time.

Another closely related and beautiful species also from Japan and needing the same conditions is *Schizocodon soldanelloides* which is now included in *Shortia*. As the name suggests the flowers look like a sodanella.

North America contributes one species, *Shortia galacifolia* indicating its similarity to *Galax aphylla* which is in the same family. The name *Shortia* commemorates the American botanist Dr Charles Short of Kentucky but the plant was identified many years earlier by the French botanist Andre Michaux.

### **Saxifraga oppositifolia**

David Atkinson

*Saxifraga oppositifolia* - the purple saxifrage - is a very well known and loved alpine and its attractive form and floriferous nature when well-grown make its claim for a place in every garden irresistible.

The plant forms congested mats of creeping stems covered in stiff ovate to obovate leaves in opposite pairs but so close together as to appear four-rowed. The sessile, dark green leaves are concave, bent back at the top, and have hairy margins. The flowers, which are borne singly on very short stems of 1-2cm., have five petals of a colour which - depending whom you read - varies from 'wine red to purple pink' or from 'pale purplish rose to a deep intense crimson', but is usually a 'rosy heather colour', the buds are formed in the autumn and start to open in early spring - usually March or April here in Aberdeenshire.

*Saxifraga oppositifolia* is in section Porphyrium of the Saxifrages along with *S. biflora* and *S. retusa* and is by far the most widely and easily cultivated member of its section. There is, by the way, an attractive hybrid between *S. oppositifolia* and *S. biflora* which has appeared on the show benches.

The species has an enormous circumpolar distribution in the northern hemisphere. It is to be found in America, Asia and Europe where it extends as far south as the Sierra Nevada. In Britain it is locally common on some hills and mountains of northern England, Wales and Scotland. As one might expect, with this widespread distribution goes a comparable variation in its natural forms. Seven subspecies are distinguished, as well as a number of varieties. In gardens a large number - too many? - of clones have been named and according to the Hardy Plant Society's Plant Finder

eleven different forms are available from British nurseries. The most widely available forms are subspecies *latina* (Fig. 30 p. 171) from the Apennines which has silvery foliage and is very early flowering; 'Ruth Draper' and 'Splendens'. Subspecies *asiatica* is described as having the largest flowers of any form and would be a welcome addition to the garden, but I am not sure of its availability. There is also a white flowered form, var 'Alba', which is less robust but with medium sized flowers; in the right situation it flowers very profusely and the flowers are a good clear white.

In the wild, *S. oppositifolia* grows in the most exposed places, on rock ledges and cliffs, in screes and even in patchy grassland open to the worst of wind, rain and snow and it must be regarded as one of the hardest plants we grow. In the garden, however, the plant requires some care. It needs a well-drained soil with plenty of humus which must be kept moist throughout the summer. It seems to grow equally well in both acid and alkaline soils, though where lime is present leaves with attractive silvery edges will be produced, the plant requires good light, but direct sunlight can cause scorching and even death. However, too deep shade will cause the plant to become very drawn and not to flower well. Thus it needs an open aspect protected from the midday sun by a rock or dwarf shrub.

It makes an attractive plant for pot culture and is happy in sinks and troughs - provided a good supply of moisture is provided during the growing season. The plant appreciates, and its appearance is enhanced by, the top dressing of the mats with gritty compost in spring.

Propagation is easy from cuttings of non-flowering shoots from spring to early summer which will root easily in a sandy compost. Rooted portions can also be removed from established mats.

## **Penstemon rupicola**

George Brown

From the accounts given by many plant-hunters who have visited the Cascade Range of mountains in North America, *Penstemon rupicola* is one of the best of the dwarf penstemons.

Unfortunately there is a great deal of confusion about the naming of penstemons in gardens so that the plant illustrated as *P. rupicola* has been variously labelled and sold as *P. menziesii*, *P. newberryi* or *P. roezlii*. As Ingwersen says in his Manual of Alpine Plants, "there is nothing certain in the world of penstemons".

I have always called the plant shown here (Fig. 25 p. 152) as *P. rupicola* because it is much more prostrate than these other species I have mentioned. The only other species to have the same type of thick grey-green leaf is *P. menziessi* but this should be a more upright plant.

Whatever its true name, the plant I am calling *P. rupicola* is a magnifi-

cent garden plant covering itself in rich carmine red flowers throughout the summer. It is tolerant of sun and shade and does not seem to mind what kind of soil provided it is reasonably well-drained.

It can readily be cut back if it becomes too invasive and it propagates easily from stem cuttings at most times of the year. It also sets copious seed which germinates profusely and quickly.

It is in fact the perfect beginner's alpine; it is not fussy and is also an excellent ground-cover. What more could you want?

One word of warning. Seed from Seed Exchanges is unlikely to give you the plant illustrated since there is no great agreement on nomenclature. Far better to rely on getting a cutting from a friend when you see it in bloom.

## **Primula alpicola**

Joel B. Smith

This beautiful primula found in South-Eastern Tibet growing on marshy ground, flowers in June. The loose umbels of flowers held on tall stems over toothed oblanceolate leaves give rise to the name - Tibetan cowslip. There are three distinct colour forms; *P. a. alba* (white) *P. a. luna* (yellow) and *P. a. violacea* (violet), all of which are worth cultivating for their attractive blooms and rich fragrance.

*P. alpicola violacea* (Fig. 27 p.169) forms a perennial in my garden in Hampshire, requiring no winter protection, as it is late into growth from its resting crown. It grows well in the front of a raised rhododendron bed in a mixture of moss peat and pine leaf litter. The bed itself is constructed with a polythene lining to conserve moisture. Some books say that this species requires a boggy soil in shade, but I find it grows well in this damp medium, which throughout the summer is fairly dry due to a sunny aspect, although the surrounding shrubs shade the roots.

My plants were raised from seed in a seed compost/perlite mix in the spring, then transferred to individual pots as small seedlings. I used a compost consisting of peat and terra-green. Terra-green is an unusual alpine product, with the appearance of gravel chippings, but it is water retentive like perlite and contains valuable mineral salts. Primulas seem to revel in this medium.

*P. alpicola violacea* is best planted in drifts so the colour is more noticeable or associated with other members of the Sikkimensis group like *P. florindae* or the bright oranges of the candelabra *P. bulleyana*.

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# Planning a trip to Kashmir

CHRISTINE M. WALKDEN

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THE record of my own organised trip to Kashmir appeared in the June issue of the Journal (Vol. XXI Part 1 No. 82 pp. 96-102). In this article I propose to outline the stages involved in planning your own trek along with details of sources of information.

Generally for any trip or trek I would advise allowing at least 12 months planning. Having had a brain wave and hit on the place of your dreams you then have to start to think about the season or time of the year which would be best to achieve your objectives. For me personally these were:

- (1) To establish how easy/difficult it is to organise and plan such a venture.
- (2) To gain experience of planning and leading a private party of fellow enthusiasts.
- (3) To reconnoissance the area for a time in the future.
- (4) To photograph subjects in flower.
- (5) To have a holiday.

It is important from the very beginning that you identify your objectives as these will influence your planning, equipment, timing, costs and budget considerably.

The best time of the year will be influenced by your objectives. The following sources provided the answer:

- (a) People who had visited Kashmir before.
- (b) Travel brochures.
- (c) Floras of Kashmir.
- (d) Articles in the SRGC Journal and AGS Bulletin.

Obviously how early or late this season is in the region to be visited will have an effect but generally July/August appeared to be the time.

The relevant tourist organisation will provide some help. From the Indian Tourist Office, 7 Cork St., London W1X 2AB (01 437 3677), came a list of tour operators in India. I wrote to all 46 to ask if they would be willing to act as agents for me having organised the itinerary myself, within a set budget of between £1,200 to £1,500 for a period of between 21-27 days. Most (38) replied in the negative saying that they only ran their own organised tours. However, from the remaining eight I then went into negotiation over the itinerary and the costing of the trek.

All members of my party were keen to have money spent on the trek

and not on superfluous items such as expensive hotels, tours and unnecessary equipment. Substantial savings can be made by using lower class hotels than those generally used by most tour operators. I saved £22.50 per night for each member by just saying no to the best hotels in Delhi and using other recommended lower class but adequate hotels.

Other savings can be made by being flexible in dates and times of departure and return, mode of transport once in India and everyone flying together. Going out of season is always much cheaper.

Some savings can be made by being flexible over the itinerary and discussing with people who know the area. Eventually a 24 day trip was organised.

Six months should be spent on getting fit. I swam each morning eventually achieving 100 lengths a day. Others walked while one member prepared by running to work and back home each day. Needless to say the fitter you are the more enjoyable you will find this type of adventure.

Three months should be allowed to obtain visas from the High Commission of India, India House, Aldwych WC2. You will require an application form and three passport size photographs.

Passports must have at least 12 months before they expire. Vaccinations were required for cholera, typhoid, hepatitis and tetanus (polio may be necessary), and a period of three months should be allowed. Kashmir is still an area of risk from malaria so tablets should be taken, generally starting the course seven days before departure and continuing for between 4-6 weeks depending on the chemical. Some G.P.s charge for treatment and normally you could expect to pay between £15-£30 for this service if the doctor requires payment. (Mine didn't charge)

The following are addresses which are useful for up-to-date information on health problems or even for vaccinations:

- British Airways Medical Service, 75 Regent St., London W1R 7HE. Tel. 01 439 9584.
- Thomas Cook Medical Centre, 45 Berkeley St., London W1A 1EB. Tel. 01 499 4000.
- PPP Medical Centre, 91 New Cavendish St., London W1M 7FQ. Tel. 01 637 8941.
- MASTA Bureau of Hygiene and Tropical Diseases, Keppel St., London. Tel. 01 631 4408.
- DHSS Leaflets Unit, P.O. Box 21, Stanmore, Middlesex, HA7 1AY.

Scottish Home and Health Department, St. Andrew's House, Edinburgh, EH1 3DE. Tel. 031 556 8501 ext. 2438.

For those travelling to India on a private trek it may be useful to know that a sterilized dressing and syringe pack is obtainable from the British Airways Medical Service (Price approx. £10.00). In these days of AIDS any tour leader in my opinion would be foolish to travel to India without one of these packs. If necessary you would be safe knowing that you could provide sterilized material to a doctor in a remote area.

All non-government addresses above charge for their services, but they are reliable and quick.

Your planning preparation should also give consideration to an adequate medical kit. The following are useful if not totally compulsory items for each member to have:

Band aids	Sterile dressings
Gauze pads	Adhesive tape
Cotton bandages	Antiseptic cream
Sunburn Cream	Lip-sun cream
Medication for Headaches	Course of antibiotics
Iodine	Scissors and tweezers

Cures for gastro problems such as Lomotil, Dioralite or Imodium are available from doctors. Some people suffer from throat infections so something for this problem may be useful. General health can be maintained by sensible washing habits and treatment of drinking water with iodine-based sterilizing tablets. These are available from good camping shops or via: Survival Aids Ltd., Morland, Penrith, Cumbria, CA10 3AZ. Tel. 09314 444.

An invaluable book is *Medicine for Mountaineering* edited by James Wilkerson, published by the Mountaineers, Washington, USA.

Insurance is a must; look out for a policy with at the very least £250,000 medical cover and a suitable emergency repatriation service. Always check the small print carefully especially if you wish to go climbing while you are away.

An article in *Drug and Therapeutics Bulletin* (Vol. 25, No. 12 15th June 1987) which is available to doctors via the Consumers' Association comes out very strongly in favour of treatment with Acetazolamide Prophylaxis sold as Diamox to prevent Acute Mountain Sickness (AMS) at high altitudes. The symptoms of AMS include nausea, headache, lethargy and anorexia which often affect even fit travellers. Sleep may be disturbed by dreams and aperiodic breathing. The condition normally stabilizes within three days of arriving at altitude but occasionally it can lead to life-threatening cerebral or pulmonary oedema. It is therefore a condition which shouldn't be taken lightly and I would advise that a visit to your GP for up-to-date information on this drug and its use may be beneficial.



Fig 33 *Ranunculus shaftioanus* (see p.200)

RBG Edinburgh

Fig 34 *Ranunculus kochii* (see p.199)

RBG Edinburgh





Fig 35 *Ranunculus argyreus* (see p.197)

RBG Edinburgh

Fig 36 *Ranunculus aragatsii* (see p.197)

RBG Edinburgh



If you have a medical problem always ensure that you have enough medication with you in safe strong containers (aluminium if possible) for the entire trek.

Maps of trekking routes are difficult to obtain but the following should be able to provide you with some advice.

– Stanfords Maps, 12-14 Long Acre, Covent Garden, London WC2P 9LP. Tel. 01 836 1321.

– Roger Lascelles, 47 York Road, Brentford, Middlesex, TW8 0QP. Tel. 01 847 0935.

– McCarta Ltd., 122 Kings Cross Road, London, WC1X 9DS. Tel. 01 278 8278.

Decent maps are difficult to obtain; some are available from shops in India such as the Kashmir Book Shop in the Bund in Srinagar. Books on the flora are also available there at a cheaper cost than in the UK.

The utilization of satellite imagery and aerial photography can also be most useful in planning treks and for Kashmir these are available, though quite costly, from Nigel Press Associates Ltd., Edenbridge, Kent, TN8 6HS. Tel. 0732 865023.

The following list of agencies, books, etc., was also consulted before finalizing the trek:

Expedition Advisory Centre, 1 Kensington Grove, London, SW7 2AR. Tel. 01 581 2057 produce a very useful set of information on India but not on Kashmir.

They also produce *The Expedition Planner's Handbook and Directory* every one to two years which is an invaluable book for anyone thinking of planning their own trek.

The Consumers' Association publish *Holiday Which* containing helpful articles and information. The article on India Sept. 1985 p. 165-172 makes useful background reading.

Any of the tour company brochures will give some information and are worth looking at for ideas.

Reference to the indexes of the SRGC Journals and AGS Bulletins will give leads to articles on the places to be visited; they will also lead to names of people who have visited the regions and these can prove most helpful. The journals of the RHS are worth consulting as are past issues of the *Gardeners Chronicle*.

'India, a travel Survival Kit', Lonely Planet Publications by Crowther, Prakash A Raj and Tony Wheeler.

'Trekking in the Indian Himalaya', by Gary Weare, Lonely Planet.

'Trekking in the Himalayas' by Stan Armington, Lonely Planet.

'Kashmir, Ladakh and Zenskar' by Margaret and Rolf Schettler, Lonely Planet Pub.

### **Floras**

'Kashmir - an ambition achieved'. Journal of SRGC Vol. XXI part 1 No. 82, June 88 page 96.

'Alpine Flora of Kashmir Himalaya' by Dhar, U and Kachrov, P. (1983), Scientific Publishers, Jodhpur.

'Unpublished lists of plants found in Kashmir' obtainable from people who have visited the region or sometimes tour companies will let you see copies.

Bibliographies in any book on Kashmir or any Flora etc., will lead to yet more happy hours of reading and study.

Expedition Reports always provide useful information and leads. For Kashmir the one produced by C.A. Chadwell in October 1984 was helpful - Report of the Kashmir Botanical Expedition 1983.

'The Traveller's Handbook' edited by Melissa Shales, Wexas Publications Ltd., is useful for general tour planning information.

### **Photographic equipment**

A polarizing filter may prove useful. You should also take with you plenty of films as they are not available on the trek. I always estimate on a 36 exposure film every two days and even sometimes one per day just in case.

As the tour leader I also asked each member of the party to provide me with the following information that would obviously be kept in confidence and would not be used unless necessary:

Full Name, Address, Tel. No., Passport No., Place of Issue, Date of Issue/Expiry, Date of Birth, list of any medication that members may be on, dose, any that they may be allergic to, blood group and Name, Address and Tel. No. of next of kin, relative or friend to be contacted in case of an accident.

A copy of the above was also held by another member of the party in a sealed envelope just in case I went down a crevasse. Some members may not provide the above and if this is the case their wishes must be respected but it is useful for obvious reasons and I would doubt the member's team spirit and membership if it wasn't provided.

Once I had selected the tour operator who would give me the best deal and was most helpful, I had to ensure that all camping equipment, tents, mattresses if necessary would be available. My agency in Srinagar would provide all the necessary equipment and would meet me in Pahalgam with the ponymen, cook, trek manager and staff.

Before we set off on the trek the agency's main manager met us all in Srinagar to brief us on day to day management and to introduce us to our guide for the trek. He was an English-speaking trek guide who was helpful and took responsibility for all ponymen and equipment.

This system of the trekking agency providing staff and a guide worked well, with him looking after his staff and equipment, while I looked after administrative and day to day matters of my party.

As the tour leader be aware that you will have to carry all passport lists, rooming lists as required by airport officials and hotels, as well as all the vouchers for transport and the air-tickets. An extremely wise investment is a lightweight jacket with as many pockets as possible. This makes travelling and dealing with matters much more relaxed and organised than having them in a rucksack or bag.

Problems on the actual trek were in fact few. However, the following points may be of interest for other travellers doing their own thing. On arrival at the hotels it is quite common to have to fill in numerous forms. This took about 1½ hrs on arrival, hot and tired after a day's travel. During booking in I would recommend that you give room keys to most of the party and get them out of the way, but retain one member who will be prepared to fill in all the boring forms which need to be completed in triplicate, with you.

Establish before you travel if double rooms mean a double bed or twin beds. This is only a small point but it could lead to problems if not thought about especially with mixed parties.

Before leaving for the trek ensure that you have all vouchers for travel and meals otherwise this can erode useful time away as Indian efficiency is not all it could be.

Check all airport times from the tickets with the itinerary, both international flights and especially internal flights. On our last day my information stated we caught the 3.00 p.m. flight from Srinagar to Delhi, when in fact at 9.45 a.m. I received the information that it was the 11.00 a.m. flight we had to get. Needless to say this caused me and the other members quite some fun and games.

We all managed to get the 11.00 a.m. flight but my blood pressure must have risen considerably. The problem arose by the fact that the agency retained the internal flight tickets in Srinagar while we went trekking and returned them at the airport at 11.00 a.m., so it is important before you depart to check details and take note of differences.

The only other problem which I had to deal with was that of tipping. Before I left I had established that £15 should be requested from each member of my party for this purpose. I thought all was well, but what I didn't know until I got out there was how many pony-men this had to be shared amongst. We had a total of 27 people to tip all in different amounts at different times. It may be wise to establish the total number of men that will be involved before you leave Srinagar so that your last night in the hotel before departing on the trek can be spent sorting out this detail. I feel it unfortunate that tipping is now almost considered compulsory in Kashmir and Nepal but you should be aware of it and cost it into your budget.

As far as what to take with you is concerned bear in mind that someone will have to carry it. Pack as lightly as possible. A typical Kashmir trek kit list would include, depending on personal requirements, the following items:

- |   |   |
|---|---|
| Passport with valid visa.                   | Thermal underwear.                            |
| Air ticket.                                 | Glucose tablets.                              |
| Travellers cheques in sterling.             | Maps, plant lists, etc.                       |
| A few \$ US notes.                          | Socks, long and short.                        |
| Personal medical requirements.              | Cotton shirts.                                |
| Cameras and lenses.                         | Water bottle and cup.                         |
| Film  | Wool shirt.                                   |
| Polarizing Filter.                          | Underwear.                                    |
| A good warm sleeping bag.                   | Gloves/wool mitts.                            |
| Books.                                      | Wool hat.                                     |
| Lightweight shoes.                          | Sun hat.                                      |
| Breeches.                                   | Suncream.                                     |
| Spare pair of trousers.                     | Lip cream high filter factor.                 |
| Jersey/Fibre pile jacket.                   | Snow goggles or strong sunglasses.            |
| Anorak or cagoule.                          | Towel.  |
| Down or hollow-fill jacket.                 | Diary/Pen/Paper.                              |
| Small day rucksack.                         | Waterproofs.                                  |
| Water sterilizing tablets.                  | Plastic/Cotton stuff bags.                    |
| Something to flavour above.                 | Toilet paper.                                 |
| Shorts (men only).                          | Safety pins.                                  |
| Soap, razor, toothpaste, etc.               | Suitcase/bag to leave at hotel while on trek. |
| Torch, plenty of batteries and spare bulbs. | Insect repellent.                             |
| Money belt.                                 | Sweets.                                       |
| Pen knife.                                  |   |
| Spare glasses/dentures.                     |   |

Ensure that anything which is breakable is packed in strong containers as your equipment will receive quite a bit of rough treatment.

While what I have written about relates mainly to my Kashmir experiences most of the stages and references would be utilized for any planned trip or trek. Remember that all of what I've written about takes time in the planning stages and organisation. It takes a lot of work to get it together, however it's great fun and quite surprising what you will learn when you do all this for yourself. What results is lots of worry, anticipation, establishment of lifelong friends and fellow travellers, and great thrills of pleasure while out there sharing all those very special moments which you and you alone make possible. Happy planning, organising and travelling to you all.

# THE ROYAL HORTICULTURAL SOCIETY'S ROCK GARDEN PLANT COMMITTEE

Recommendations made at Scottish Rock Garden Club Shows.

EDINBURGH, 9 April 1988

## AWARD TO PLANT

To *Fritillaria olivieri* as a flowering plant for the alpine house.  
Exhibited by Mr. A. Leven, 2 Leighton Court, Dunblane.

## AWARD TO EXHIBITOR

### Certificate of Cultural Commendation

To Mrs. J. Wyllie, 1 Wallace Road, Dunblane, for *Lewisia brachycalyx*.

PERTH, 23 April 1988

## AWARDS TO PLANTS

### First Class Certificate

To *Clematis marmoraria* (male form) as a flowering plant for the alpine house.

Exhibited by Mr F. Hunt, 34 Morris Place, Invergowrie, Dundee.

### Award of Merit

To *Cypripedium formosanum* as a flowering plant for the alpine house.

Exhibited by Mr F. Hunt.

To *Erigeron aureus* 'Canary Bird' as a flowering plant for the alpine house.

Exhibited by Mr F. Hunt.

To *Clematis* x *cartmanii* 'Joe' as a flowering plant for the alpine house and for the rock garden.

Exhibited by Mr and Mrs H. Taylor, 32 Morris Place, Invergowrie, Dundee.

### Certificate of Preliminary Commendation

To *Lewisia cotyledon* 'John's Special' as a flowering plant for the alpine house.

Exhibited by Mr F. Hunt.

## AWARDS TO EXHIBITORS

### Certificate of Cultural Commendation

To Mr F. Hunt for *Cypripedium formosanum*

To Mr H. Esslemont, 9 Forest Road, Aberdeen, for *Cassiope wardii*

To Dr. J. Cobb, 3 Station Road, Kingsbarns, Fife, for *Meconopsis punicea*

STIRLING, 3 September 1988

## AWARDS TO PLANTS

### Award of Merit

To *Raoulia x petrimia* 'Margaret Pringle' as a foliage plant for the frost-free alpine house.

Exhibited by Mr F. Hunt.

### Certificate of Preliminary Commendation

To *Tropaeolum azureum* as a flowering plant for the alpine house.

Exhibited by Mrs J. Wyllie.

To *Raoulia petriensis* as a foliage plant for the frost-free alpine house.

Exhibited by Mr F. Hunt.

## AWARDS TO EXHIBITORS

### Certificate of Cultural Commendation

To Mr A Spenceley, 42 The Lane, Mickleby, Cleveland, for *Gentiana depressa*.

To Mr F. Hunt for *Raoulia x petrimia* 'Margaret Pringle'.

To Mr D. Mowle, 16 Peacock Lane, Hest Bank, Lancaster, for *Gentiana ornata*.

To Mr H. McBride, 10 Waverley Avenue, Lisburn, Co. Antrim, for *Helichrysum* 'County Park Silver'.

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# The genus *Ranunculus* Part VI – Asian and African species

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ALASTAIR McKELVIE

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THERE ARE very few noteworthy garden plants among the *Ranunculus* species of Asia and Africa. This article is, therefore, largely concerned with listing those species which have been mentioned as garden plants in the literature, those which from their description in the wild are possible garden plants and those which are commonly found in the wild and which readers may wish to consider for the garden.

## Asia

Asia is an enormous area but the bulk of the species listed here are to be found in the Near East, in the Himalayas or around the Caucasus where there is obviously overlap with European species previously described.

### *Ranunculus albertii*

This first species mentioned is something of a mystery as the only reference to it I can find is by Josef Halda in the AGS Bulletin in 1976 where he described it as a neat compact plant with large flowers on short stems. He found it in the Tien Shan mountains in China at the edge of melting snowfields. Any further information on this possibly desirable plant would be welcome.



### *Ranunculus argyreus* Boiss

This species from Turkey (Fig. 35 p.190) is found in open scrub at around 2,000m. It is a perennial varying from 5-30cm, with deeply lobed leaves and yellow flowers which may be as much as 20mm across. It would not appear to be of any great garden merit and there is no reference to its cultivation.



***Ranunculus aragatsii*** This species, sometimes spelt *R. aragazzi* comes from Mount Aragats in Armenia and grows at a height of 4,000m. It is a neat little buttercup with markedly dissected leaves and bright yellow flowers but there is no record of it in cultivation. (Fig. 36 p.190)

***Ranunculus erriorhizus*** Boiss and Buhse

This plant is not at all well documented but is listed in

Ingwersen's 'Manual of Alpine Plants' (1978) as a rarity from the mountains of Iran which "may shortly be available in view of the collecting now going on in the area". It is described as growing in small tufts with deeply divided leaves and golden flowers on short stems. There appears to be no further record of it.

### **Ranunculus aucheri** Boiss.

A species from Kurdistan flowering at the edge of melting snows sounds interesting but from the few accounts of this plant it resembles nothing more than our common field buttercup, *R. arvensis* and is therefore not for us.

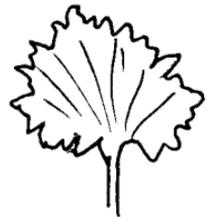


### **Ranunculus gelidus**

This is another species described by Josef Halda in the AGS Bulletin in 1976 to which I can find no reference. Like *R. albertii* it was described by Halda from the Tien Shan mountains. Dwarf with deeply divided rosette, it has large ornamental golden yellow flowers. Growing at a height of around 3,000m it should be quite hardy but there appears to be no record of it in cultivation.

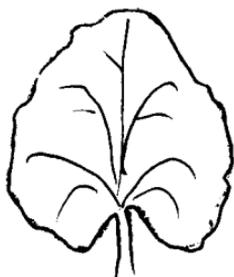
### **Ranunculus heterorrhizus**

Farrer in "The English Rock Garden" appears to be the only person to have used this name. He applied it to a plant from the high mountains of Phrygia in Asia Minor, describing it as having much of the charm of *R. flabellatus* but with stems only as high as 4cm and the leaves on long "foot-stalks" (petioles). It is not clear to what species he is referring.



### **Ranunculus hirtellus** Royle

This is yet another "neat little buttercup" about which there is not a lot of information. It is a plant of the high Karakoram mountains in Kashmir, where it grows in thick ungrazed turf. There is really nothing of any import written about it as a garden plant but seed was available in this year's Seed Exchange and I, and probably others, have seedlings growing on.



### **Ranunculus kochii** Ledeb

At last we come to a species about which something is known and which would seem to have the makings of a good garden plant. It grows around 3,000m in Turkey, northern Iraq and Iran on wet rocks, flowering as the snows melt. (Fig. 34 p. 189)

It has according to Ingwersen "low tufts of entire rounded leaves and, on short stems, very large, richly golden flowers are up to 2cm in diameter and it would seem to be an imposing relation of the celandine". This could be a good garden plant but, if it is gardeners are loathe to tell us about it.

### **Ranunculus lowii**

Thirty six species of buttercup have been described from the mountains from Sumatra to the Philippines and New Guinea but *R. lowii* seems to be the only one which is hardy and is grown occasionally. It was named after George Low who, in 1851, was the first person to climb the 4,000m Mt Kinabalu in Borneo. (see p.155) The buttercup grows between 2,000 and 3,000m. It has neat lobed leaves and flowers 2cm across on 10cm stalks. It is of no great beauty but can be grown readily with winter protection and has appeared at SRGC Shows in recent years.



### **Ranunculus nyssanus**

This is a synonym of *R. psilostachys* q.v.

### **Ranunculus obesus** Trautv.

S. D. Albury referred to this species in the Clark Memorial Lecture in 1967 and made it sound quite desirable. At 3,000m near Lake Van in eastern Turkey he found "on the lush wet slopes, fed by melting snows, drifts of *Primula auriculata* in their thousands interspersed with a fine large buttercup, *R. obesus*, looking far more like an adonis".

The Flora of Turkey is more prosaic and describes it as a little known, large coarse plant.

Information about cultivation would be most welcome; as this article goes to press I notice that Jack Drake is currently advertising this species, describing it as "having large showy yellow flowers over fern-like foliage and excellent for a moist corner".

### **Ranunculus pulchellus** Meyer.

This species of Turkey and eastern Afghanistan sounds mildly interesting as described by Christopher Grey-Wilson at 5,000m in Afghanistan. It is

a golden buttercup growing along with aristocrats such as *Primula macrophylla* and *Gentiana minutissima*. There are three varieties of this species in Bhutan and Sikkim with *R. p. sericeus* sounding desirable with white silky leaves. Unfortunately it seems to be 50cm tall. *R. pulchellus* does not seem to be in cultivation.

### **Ranunculus rubrocalyx** Kom

This is yet another species described by Josef Halda from Tien Shan. In alpine meadows at around 3,000m he listed three very beautiful buttercups, *R. polyanthemus* (already described for Europe), *R. rubrocalyx* and *R. rufosepalus*.

*R. rubrocalyx* was described as bright yellow with carmine calyces. I can find no trace of this species in cultivation but surely someone somewhere has grown it.



### **Ranunculus rufosepalus** Franch

Josef Halda described this one as having ornamentally cut leaves, brown, bristly calyx and golden flowers. Again it sounds desirable but there is no record of it that I can see in cultivation.

### **Ranunculus sericeus** Banks and Sol

This is a perennial species, 40-70cm tall (Fig. 37 p.207) which grows beside streams in Anatolia at 1,500m. It has a stout creeping rhizome and silvery trisected leaves. The flowers are bright yellow, approx. 2cm in diameter. I have found no published records of this plant in cultivation and it would not seem to be of any particular garden merit.



### **Ranunculus shaftoanus** A. Gray

Another species from Afghanistan, growing around 5,000m. It is said to have pretty flowers and bronzy green leaves (Fig. 33 p.189) but does not seem to be in cultivation.

### **Ranunculus songaricus** Schrenk

Yet another species from Tien Shan but this time described in the AGS Bulletin in 1983 by S. G. Haw. It grew in meadows at around 1,500m and was surrounded by masses of dandelions. He described it as "a rather fine buttercup" and left it at that. There is no apparent record of it in cultivation.

### **Ranunculus yatsugatakensis**

There are a number of Japanese buttercups but the only one which sounds remotely interesting is this one which is something of a rarity from 87,000m near the summit of Mt. Yatsugatakes.

## Africa

If the buttercups of Asia are numerous but unexciting as garden plants, the same can be said about the African species to an even greater extent. *Ranunculus* species can be found in the mountains of North Africa, East Africa and Basutoland but are usually fairly dowdy buttercups. Travel articles constantly refer to them in somewhat disparaging terms and usually there is no reference to them in cultivation.

### ***Ranunculus calandrinoides*** Oliver

Having more or less written off African ranunculi, it is therefore somewhat ironic that this first species in the list is one of the finest of all buttercups, with large white flowers, and is fairly easy in cultivation.

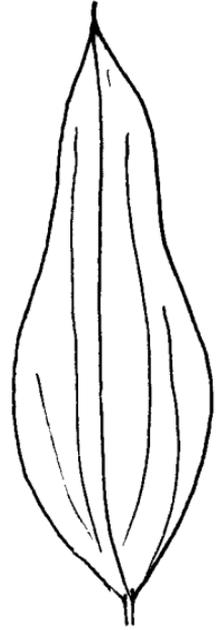
It is not a true alpine plant in its native haunts of Morocco, growing at around 1,800m on the volcanic plateau of Djebel Herbi where most of what we call Moroccan “alpines” come from, plants such as *Asphodelus acaulis* and *Carduncellus rhaponticoides*.

Its wide strap-shaped grey leaves appear above ground in the early autumn, followed in November by enormous white or flushed-pink flowers (Fig. 32 p.172) up to 5cm in diameter. The petals are finely-textured so that in the wild and in the garden they are often battered by wind and rain. The plants die back in late spring.

In cultivation it is quite hardy in the UK but because it flowers so early it needs the protection of a frame or alpine house. It should be kept dry after the leaves die down and then re-watered in early September. Leaves will appear in a week or two followed by the flowers in November, unless the month is unusually cold when the flowers will not appear until early spring. It continues to flower throughout most winters until about March-April. It really appreciates good feeding, as do many plants with long tap roots. It should be grown in long pots and divided every year and re-potted into fresh compost. It is very easy to split a plant into one or two pieces.

It should be grown in well-drained gritty soil and in full sun, when it will reward you with a succession of gorgeous flowers throughout the winter. Seed should be sown as soon as ripe but germination is often poor.

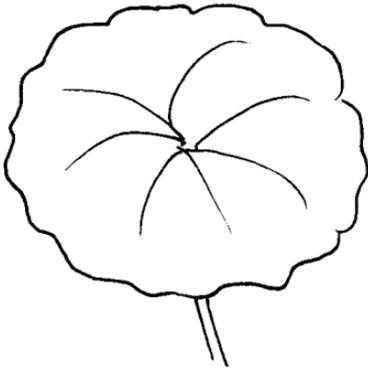
This species received an AM in 1939 when shown by Frederick Stern. Surprisingly it has not yet received a FCC.



### **Ranunculus cooperi** Oliver

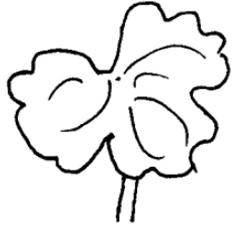
This species grows wild in Basutoland at a height of around 2,000m in wet shaded places.

It has fleshy peltate leaves which vary in size depending on how moist is its habitat. On stems up to 40cm tall it carries very large (2-3cm) yellow flowers. It grows in much the same type of area as *Euryops acreus* so that it should be quite hardy in cultivation in the UK. There appears, however, to be no record of it in cultivation. From its description it would seem worth trying out.



### **Ranunculus meyeri** Rupr.

This is another species from the same area of Basutoland as *R. cooperi*, but of creeping habit, ramifying through mats of vegetation and sending up myriads of star-shaped flowers. It sounds a possible garden plant but does not appear to have been in cultivation.



### **Ranunculus oreophytus**

Yet another of the many East African species which abound. David Mabberley in the AGS Bulletin 1971, noted that the genus is represented in East Africa by several weedy species but singled out *R. oreophytus* as one of the more attractive. It grows in wet ground, with rosettes of deeply cut leaves from which rise clusters of 2-3cm diameter flowers with "that golden lustre peculiar to the celandine and its allies". There appear to be no records of it in cultivation.



### **Ranunculus volkensii** Engl.

This is a neat little buttercup from around 3,500m on the slopes of Mt. Kilimanjaro in East Africa. It seems to be an attractive dwarf species growing in moist rich grassland along with anemones, kniphofias and swertias. Again it seems to be a possible garden plant but there is no record of it in cultivation.

Since this article went to press, further information has been found about some of the obscure species mentioned. A note on them will be included in the final section of this series (Part VII) dealing with America.

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# Book Reviews

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## **The Genus Pleione**

by Phillip Cribb and Ian Butterfield assisted by Tang Chenzi

Published by The Royal Botanic Gardens, Kew in association with Christopher Helm and Timber Press

94 pages : 20 Colour Plates plus Line Drawings £15.95

Pleiones have been receiving a bad press lately, with orchid fanciers tending to ignore them as insufficiently challenging and alpine gardeners looking on them as stove plants unworthy of a place on the Show Bench.

All this is changing rapidly with the discovery of new species and the breeding of new hybrids which have greatly increased the flowering season and the range of colours and forms available to the grower.

This is the first comprehensive book on the genus and such is its quality that it is bound to be the standard reference for many years to come. It covers the growing of pleiones and describes the range of species and hybrids available.

The colour plates by Christabel King, Rodella Purves and Margaret Stones are positively breath-taking and will enable all gardeners to identify their plants very easily.

For confirmed and successful pleione growers, for those who like them but struggle and those who have never tried them, this is what you need to become experts.

Buy a copy of the book and enjoy a masterpiece of erudition as well as an elbow book to keep beside you.

It is surely designed to become a classic.

N.T.

## **Hebes and Parahebes** by Douglas Chalk

Published by Christopher Helm, £17.95

I have always grown a few hebes and that splendid garden plant *Parahebe catarractae* but until I read this book I was unaware that people actually specialise in hebe and indeed that there exists a Hebe Society.

The book is well designed and contains chapters principally on growing and propagating, with a regrettably short chapter on New Zealand, the home of most of the species. It also contains an exceedingly well written descriptive list of the species, varieties and cultivars (including historical notes). There are no photographs but many line drawings and eight pages

containing coloured drawings of a selection of plants.

When faced with an area in which I have no particular expertise, I find it useful to select a few plants that I grow and compare them with the written description. In this instance I selected hebes 'Fairfieldii' *buchananii* 'Minor' and *armstrongii*. In each case the plant matched up well with the written description.

I would quarrel somewhat with the section on hardiness. The U.S. Department of Agriculture cold hardiness zones are used - but sketchily. No indication is given whether the temperatures quoted are absolute minimum, average over the winter months, or some other value. These zones are quoted at the end of many of the plant descriptions. On the map of the British Isles zones 7, 8, 9 are shown. I suspect that zone 7 is somewhat academic as far as hebe growers are concerned, consisting as it does of the Cairngorms and perhaps as far south as the Atholl hills.

The author is a professional horticulturist who has produced a workmanlike volume which should be of value particularly to those members with an interest in New Zealand plants.

I.J.D.

### **Saxifrages of Europe** by D. A. Webb and R. J. Gornall

Published by Christopher Helm

Price £30.00 pp.307 Colour plates 53.

This is a book for the professional botanist and also the keen educated gardener rather than the average SRGC member. Having said that, it seems set to become the standard work on the identification and description of saxifrage species in the wild. It concentrates on Europe but also gives short accounts of species in Africa, Madeira and North America as well as the more common Asian species.

Although it is botanically accurate, technical language is kept to a minimum. The keys for identifying species are splendid and should allow keen growers to name their plants without any great botanical knowledge.

Unlike recent books on saxifrage by Kohlein and by Horny et al., this book is not primarily a grower's guide but does suggest worthwhile species for the garden and gives brief cultural instructions.

The most accessible places to see species in the wild are described, which may disappoint some conservationists but it seems sensible to give some idea of where the various species can be seen. Generally speaking saxifrages are not under a great threat from collectors.

The book is elegantly produced with large clear type, good diagrams and an excellent index to species and synonyms. It can be recommended most highly for all gardeners who want a handbook on saxifrages.

A.M.

### **Alpines in Pots** by Kath Dryden

Published by the Alpine Garden Society 55pp.

Price £4.00 plus post and packing from AGS Publication Ltd.

This is a completely new version of the earlier book of the same title written by Roy Elliott in 1969 which had three re-prints.

As you would expect coming from such a distinguished author this book is full of helpful hints which obviously work for her. She writes "for some unknown reason I have been unable to raise seed in a loam-based compost" which makes most interesting reading when compared with the book reviewed below, written by John Good, who says that for germination "loam-based composts are easier to manage than those based on peat and are definitely best for species which are slow to germinate".

This well-produced book with seven colour plates is a must for gardeners who want to pick up tips from an expert on general cultivation as well as on particular plants but as a member of the SRGC I cannot let Kath Dryden off with her remark that "the AGS Seed Exchange is the best of its kind in the world".

N.M.

### **Handbook of Rock Gardening** edited by John Good

Published by the Alpine Garden Society 144pp.

Price £6.95 plus 80p post and packing from AGS Publications Ltd.

This is an almost total re-write of the 1963 edition. The 17 chapters by different writers are, with one exception, completely revised. They cover all the basic requirements of rock-gardening. The list of authors reads like a gardener's Who's Who.

It would be difficult to think of any other book which conveys the essence of rock-gardening in such a small space and so well and it is to be recommended as a present for anyone new to the hobby. As well as chapters on gardens and plants it has excellent ones on photography of plants, seeing alpines in the wild and on which books to read. One might perhaps quibble about the choice of Lawrence Hill's book on propagation of alpines as still the best for general guidance.

This book is attractively produced and has 18 excellent colour plates.

N.M.

### **Alpine Gardening** by Roy Elliott

Published by the Alpine Garden Society 320pp.

Price £12.50 plus £1.95 post and packing from AGS Publication Ltd.

This is a re-print of the book first published in 1963 by Vista Books which has long been out of print. I must agree whole-heartedly with the preface where it says "This book stands out as a milestone in alpine

gardening literature”.

You would expect Roy Elliott to produce an erudite work but not only is it full of useful information it is also an eminently readable book which you can go through from beginning to end and enjoy as a read. Although the index lists 600 plants it is not basically an encyclopedia of alpine plants; it is more of the style of Gertrude Jekyll.

It is an old-fashioned book from its range of plants to its style and to its somewhat dated black and white illustrations but it is nonetheless a must for the bookshelf taking one back to an age of leisure and elegance.

It is identical to the first edition even down to the dust-cover but it is on slightly thinner paper and is thus a slimmer book.

J.B.

The above three books reviewed are available from:

Mr. D. K. Haselgrove,  
Publications Manager,  
AGS Publications Ltd.,  
282 Hoe Street,  
Walthamstow,  
London E17 9QD.

**Wild Flowers of Majorca, Minorca and Ibiza** by Elspeth Beckett  
Published by A. A. Balkema, Rotterdam/Brookfield 1988.  
Pages 221, Price £28.50

This book is essentially a set of botanical ‘keys’ making it possible to identify accurately most, if not all, of the species to be found in the Balearic islands, including some cultivated plants. There is a detailed description of the botanical terms used in the text. It has eight plates of coloured drawings which are remarkably good at representing the essential features and are especially useful to check on ones accuracy in using the keys. Unfortunately no reference is made to these plates in the keys themselves.

It is not a book for the casual visitor. One cannot thumb through the pages for a quick identification and it gives no indication as to whether a species is common or rare nor to its distribution except on which island it is found. However, it would be extremely useful to the serious amateur or professional botanist who cannot carry or afford Bonner’s three volumes written in Catalan. Since it can be so useful to the serious botanist it would be helpful to have had the name of the author of the botanical name in the keys - there would be room there - and mention of some synonyms. For example *Dracunculus muscivorus* is usually called *Helicodicerus muscivorus* nowadays and *Muscari comosum* often classed as *Leopoldia comosa*. The book is clearly printed and well bound and worth the price for what it contains.

C.N.



Fig 37 *Ranunculus sericeus* (see p.200)

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# Obituary

## Bill Ivey

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Bill Ivey died suddenly but peacefully on Sunday 23 October 1988 in Perth Royal Infirmary. His death was made all the more poignant by the fact that he and his wife had less than six months previously, moved to their retirement home in Kirkmichael, Perthshire – a small house to give Bette more time for her alpine plants and Bill a large garden to indulge his love of all plants, whether rock, herbaceous, trees, shrubs or climbers. There he hoped to make the one dream garden that most of us only make once in a lifetime.

Bill was a man of many talents – a gifted artist whom the war had robbed of the opportunity to further that talent, although the last few years he had gone some way to rectifying this omission. This talent was seen to good effect many times in Rock Garden circles. He was an expert both in the mountaineering and hill-walking fields and his knowledge and love of Scottish mountains and hills was well known.

His love of youth was shown, earlier with the Scout movement in Glasgow and latterly with the Y.T.S. where many youngsters learned from Bill aspects of life and work they had never known. After early retirement from engineering with SCS, he accepted the challenge of a new language and a new country, taking parties over the mountains and islands of Greece, a country and a people he had come to know and love.

In SRGC circles, he will be remembered as Treasurer of the West of Scotland Group, before he decided to resurrect the Ayrshire group – as Publicity Manager on the Council of the SRGC – but mostly as the Convener of the Ayrshire group – a post he held for some 20 years until his departure for Perthshire in May of this year. Ayrshire Group owes much to his inspiration and leadership and the healthy membership and attendance is evidence of this.

Our sympathy goes out to Bette and Gilmour, of both of whom he was inordinately proud.

D.E.G.

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# Discussion Weekend

September, 1989

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**University of Stirling Conference Centre, Stirling**  
**Friday 8 September to Sunday 10 September 1989**

Stirling District, where the Highlands of Scotland meet the lowlands is known as The Big Country. Most rock gardeners live and garden in lowland areas but their hearts are in the mountains. The beautiful campus of the University of Stirling is surrounded by hills and mountains – Ochil Hills, Campsie Fells, The Trossachs, Ben Lomond, Ben Ledi and Ben Vorlich.

This years programme covers a wide range of subjects.

Lectures on three favourite genera, Saxifraga, Rhododendron and Primula, expeditions to the mountains of Western North America and The High Pyrenees to see their treasures and an expert's advice on cultivating these choice plants are the ingredients of this year's Discussion Weekend. A List of local hotels and tourist attractions will be sent on request (SAE please).

Stirling University is situated on the A9 between Stirling and Bridge of Allan. Accommodation is available in Andrew Stewart Hall until Monday morning, 11 September. There are a few double rooms available. Members **needing accommodation on the ground floor or Vegetarian meals** should request this at the time of booking. All lectures and the Autumn Show will be held in the Pathfoot building. There is a regular bus service from Stirling rail station to the University.

As usual there will be a club plant stall and a plant auction. Donations of plants for these will be much appreciated. We are also hoping to have a large entry for the Holiday Photographic Competition (details in Show Schedules) and for the Autumn Plant Show. If these are both well supported it will increase everyone's enjoyment of the weekend.

An informal programme will be arranged for those staying till Monday morning.

## Programme

Friday 8

8 pm **Choice Plants in Suburban Tayside**  
Mr Fred Hunt, Invergowrie

Saturday 9

10 am **SRGC Question Time – Panel of Experts**  
Please come prepared with your questions.

11 am **Walk in the University of Stirling's Magnificent Campus or Woods**, using Evelyn Stevens Guide and Map

2.30 pm *The William Buchanan Memorial Lecture*

**A new look at Saxifrages**

Mr Brian Arundel, Hemel Hempstead

4.15 pm *The Harold Esselmont Lecture*

**Plants of the Western American Mountains**

Mr Eric Hilton, Bristol

6.45 **Reception and Banquet at Stirling University**  
'How to hug' by Mr Alastair McKelvie, Aberdeen

Sunday 10

9.45 am **Dwarf Hybrid Rhododendrons**  
Mr Peter Cox, Glendoick

11.30 am **European and Asiatic Primulas**  
Mr Jim Jermyn, Edrom Nursery

2.30 pm **The High Pyrenees**  
Margaret and Henry Taylor, Invergowrie.

COST – If booked and paid for by 31 May 1989

### Residents

A. Friday evening meal-Monday breakfast ..... £72.00

B. Friday evening meal-Sunday afternoon tea ..... £62.00

C. Saturday morning coffee-Sunday afternoon tea ..... £46.00

The above prices include the cost of the Saturday Evening Banquet.

### Non-Residents

D. Saturday or Sunday morning coffee, lunch, afternoon tea and all lectures on that day ..... £16.50

E. Reception and Banquet at Stirling University ..... £12.00

Applications for bookings together with the appropriate remittance should be sent to the Registration Secretary, Mrs A. Leven, 2 Leighton Court, Dunblane, Perthshire, FK15 0ED. Telephone (0786) 824064.

Members wanting further information should write to Anne at the above address (SAE would be appreciated).

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## Letters to the Editor

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29 Hill Rise, Kirriemuir, Angus, DD4 4RJ.

Dear Sir,

I read with pleasure and – hopefully – profit, Mr. McKelvie's series of articles on the Ranunculus family. Perhaps my experience with *R. lyallii* may be of interest to readers.

I suppose most gardeners have their ambitions fired by the sight or description of one particular plant. For me this was *R. lyallii*. I had grown it with little success in two previous gardens, each a likelier prospect than the present.

Four or five years ago – I can't be quite sure when – I decided to try again. I bought a plant from Jack Drake and put it among primula in a bed that had previously grown a very good crop of leeks! Obviously not a typical rock garden site.

It has grown and flowered without a check. Last year, at a rough count, it produced 150 blooms. This year it has flowered a little less prolifically, which was not surprising, perhaps, for I had dug up a substantial piece of root for a friend.

When the plant first flowered three years ago I sowed seed and had a fair germination. I have not tried since, for this one plant covers an area some four feet by four feet and enough is enough.

My apparent success story must carry a qualification. At 130m with strong, gusty winds we cannot expect to have for more than a short period the full enjoyment of those huge flowers of purest white, set off by a boss of gold and spectacular 25cm broad leaves. But even when the wind has taken some of the gloss off the show these same leaves provide welcome shade for a small group of *Primula whiteii*.

Of course my *R. lyallii* is far too big for my small garden, but it has been great fun to watch this, not the easiest of plants, grow and flourish. It has clearly loved the root run in very rich ground and in this part of Angus, in recent years, there has never been any lack of the copious moisture that this spectacular New Zealander requires.

Yours sincerely,  
R.A. Daw.

13 Beechwood Drive, Oldham, OL2 5XR.

Dear Sir,

*Paeonia sterniana*: Fletcher, Journal Roy. Hort. Soc. 84, pp326-8 (1959).  
Seed: LS&E 1423 (Ludlow, Sherriff & Elliott)

I am a member of the Peony Species Network; concerned to preserve peonies and to exchange authentic seed. *P. sterniana* is now on the absolute brink of cultivation in the UK and finding seed from China or Tibet is unlikely. I have traced one source in Scotland but if anyone grows this plant and would be prepared to supply seed please let me know.

Yours sincerely,  
Raymond Cooper.

Durham College of Agriculture and Horticulture  
Houghall, Durham DH1 3SG.

Dear Sir,

Durham College of Agriculture and Horticulture is in the process of building a "National Collection" of *Meconopsis* for the NCCPG. We would be interested to hear from members who grow *Meconopsis* and would be willing to take part in an exchange of seed or plants.

The following list contains those species currently held in the collection either as plants, or recently acquired seed. A few plants of *M. simplicifolia*, *superba* and a dwarf form of *napaulensis* are available, as well as seed of *betonicifolia*, *betonicifolia* var *alba*, *grandis*, *cambrica* var *aurantiaca*, *paniculata*, *napaulensis* (dwarf form), and *robusta*.

Members can contact me at the above address.

Meconopsis aculeata	Meconopsis grandis	Meconopsis paniculata
Meconopsis aculeata (white form)	'Ivory'	Meconopsis horridula var prattii
Meconopsis x beamishii	Meconopsis grandis	Meconopsis punicea
Meconopsis betonicifolia	'Puritan'	Meconopsis
Meconopsis betonicifolia var alba	Meconopsis grandis L S and H 21069	quintuplinervia
Meconopsis cambrica var aurantiaca	Meconopsis grandis PSW 6002	Meconopsis x regia
Meconopsis 'Crewdson Hybrids'	Meconopsis horridula	Meconopsis robusta
Meconopsis dhwojii	Meconopsis horridula var rudis BL 12157	Meconopsis x sarsonsii
Meconopsis grandis	Meconopsis integrifolia	Meconopsis simplicifolia
Meconopsis grandis GS 600	Meconopsis latifolia	Meconopsis x sheldonii
	Meconopsis x kingsbarns hybrid	Meconopsis x sheldonii 'Ormswell'
	Meconopsis napaulensis (Dwarf form)	Meconopsis sheldonii 'Slieve Donard'
		Meconopsis superba
		Meconopsis villosa

Yours sincerely,

J.M. Hirst (Senior Lecturer in Horticulture)

## ANNUAL GENERAL MEETING

**The Annual General Meeting  
will be held at the  
Battleby Conference Centre  
Redgorton, Perth.  
on  
Saturday 21 October 1989**

Nominations are required for Executive Office-Bearers and for four members of Council to serve for three years.

Nominations in writing and seconded by another club member or members should be lodged with the Secretary not later than 15 May 1989, the nominator having ascertained that the nominee is willing to serve if elected.

All Executive Office-Bearers retire annually but are eligible for re-election.

The following having served for three years as Ordinary Members are not eligible for re-election to Council for one year: Dr. I. P. Bainbridge, Dr. R. M. Edge, Mr. M. Constable and Mr. J. Sutherland.

Secretary,  
Dr. Evelyn Stevens,  
"The Linns", Sheriffmuir,  
Dunblane,  
Perthshire FK15 0LP.

# Twice-Yearly Competition at Glasgow Garden Festival

7th MAY 1988

This highly successful competition was staged at the same time as the Glasgow Spring Show. The title "Mountain Flowers of the World which enjoy growing in the U.K." attracted 85 fine entries from 25 members from England, Holland and Scotland. The entries illustrated a wide variety of plants which certainly do grow well in the U.K.

**The Prize-winners were:** Mr Francis Ferns for a group of three colour photos taken in the Alps and to Dr Duncan Lowe for paintings of *Ramonda myconi* and *Primula daonensis*, a pen-and-ink drawing of *Primula whitei* and a scraperboard of *Saxifraga burseriana*. For this last entry he was also awarded the Garden Festival trophy for the best work on show.

**Highly Commended Awards** were made to Dr Lionel Bacon, Mrs Heather Salzen and Mrs Gillison Todd for their most attractive paintings and to Miss E. Barnes, Mr J. Hooper, Dr D. Stead and Mr and Mrs Taylor for excellent photographs.

The judges were Mrs Violet Neish, Mr James Morrison and Dr Michael Almond.

# Twice-Yearly Competition at Edinburgh

OCTOBER 1988

Colour photographs:

First – Dr Lionel Bacon – *Colchicum bivonae*

Paintings:

First – Mrs Heather Salzen – *Tulipa orphanidea*

Black and White Drawings:

First – Mrs Heather Salzen – *Fritillaria meleagris*

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## The American Rock Garden Society



Membership in the American Rock Garden Society is available to rock garden enthusiasts everywhere. United Kingdom members may pay the annual \$15 dues in equivalent sterling cheque, since we maintain an account in England just for that purpose. ARGS publishes quarterly Bulletins and a Seed Exchange List.

**For further information, contact:  
BUFFY PARKER, 15 Fairmead Road, Darien, CT 06820 USA**

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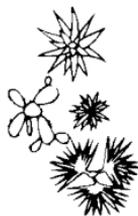
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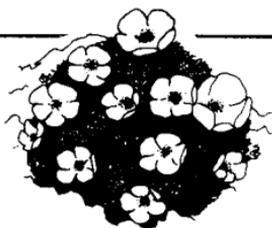
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