THE ROCK GARDEN

THE JOURNAL OF THE SCOTTISH ROCK GARDEN CLUB

Volume XXVI Part 3 Number 104

Subscriptions for 1999-2000

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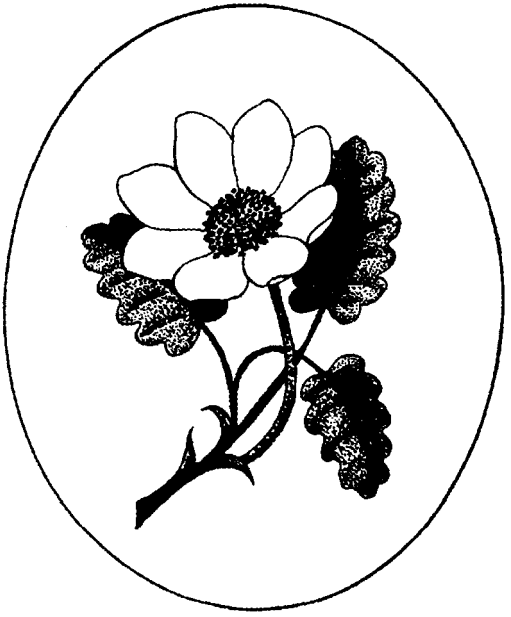

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Front Cover : *Meconopsis sherriffii* (p.256)
Photo: Ian Young

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The Editor welcomes articles on any aspects of alpine and rock garden plants and their cultivation. Articles should follow the format of previous issues with colour transparencies and line drawings if appropriate. Articles, if submitted in manuscript, should be double spaced but it is hoped that authors will submit material on disk, either on Microsoft Word or some compatible software.

Please contact the editor before submitting material in order to check suitability for publication and also to see whether a computer disk will be possible.

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MILLENNIUM BOOK

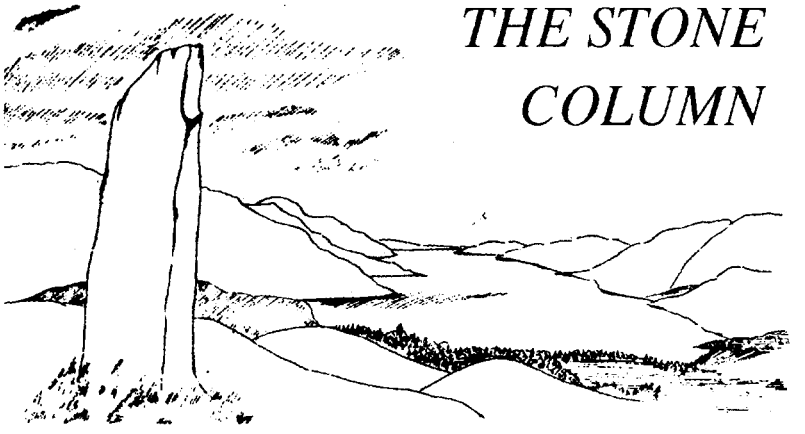
To celebrate the Millennium, The Scottish Rock Garden Club is publishing a book which will be a record of 100 years of Scottish rock gardening in the 20th century. The book of approximately 300 pages and 200 colour plates entitled:

SCOTTISH ROCK GARDENING IN THE 20TH CENTURY
by Forbes W. Robertson and Alastair McKelvie

will be published in January 2000 and a softback version will be sent free to all members.

Additional copies of the softback version will be available for sale at around £8 and a hardback version will be on sale at around £15. Sales will be handled by the SRGC Publications Manager.

The book will replace the normal issue of 'The Rock Garden' but the Yearbook will be published as usual. In addition a short 'Review of 1999' will be sent to all members containing matters of pertinent Club business which would normally appear in 'The Rock Garden'.



THE STONE COLUMN

PUNCTUATED EQUILIBRIUM

I should have known better than to tempt fate by using "Steady as she goes" as a heading in the previous Stone Column. Once this had been sent to the Editor last October and, with the garden closing down for the winter, we acceded to our elder daughter and son-in-law's suggestion that we that we visit them in Northern Ireland to see their new house. While over there we extended our stay by spending a few days in the south east of the Republic, in the hope that this area would live up to its reputation of being one of the drier, as well as milder, parts of Ireland. On our return to Fort Augustus we discovered that in the meantime the decision had been made to close the Abbey at the end of the year, the few remaining monks dispersing to other Communities. This will inevitably lead to radical changes in the lives of many local people.

I am not sufficiently conversant with evolutionary biology to express an opinion on the phyletic gradualism versus punctuated equilibrium controversy; i.e. does the 'Tree of Life' grow and branch at a steady rate, or does it suddenly produce bursts of new shoots? While both sides of the argument can provide examples from the fossil record to support their theories, in the alpine world the end of the Ice Age certainly led to expeditious radiation as plants migrated along mountain ranges, or moved up from the lowlands, to take advantage of newly exposed habitat. The presence of many natural

hybrids can be an indication of current rapid speciation as, for example, amongst the primulas of the European Alps, the penstemons of our favourite hunting grounds, or the tulips of Central Asia. The alpine flora of New Zealand also shows a high incidence of natural hybridism. This is considered by many workers to be an indication of its comparatively recent origin; the main mountain ranges are only some two million years old. While as gardeners we tend to think of hybrids as merging the characters of species, it is important to realise that, in nature, hybridism can be an indication of the reverse — a species in the act of splitting. The process may start with a cline, a continuous geographical range of variation as in the Ornatae gentians of the Sino-Himalaya or gaultherias along the Andes. This can evolve into a stepped cline, with hybrid zones between comparatively uniform populations. Finally, if these hybrids are selected against, say by reduced fertility, complete separation will result and new species are born.

Back home, the garden here at Askival has seen both periods of slow, steady evolution, punctuated by bursts of rapid change, so the pattern is simply repeating itself. Ground clearing started away back in 1969, with the first plantings the following year. The next major change took place in 1983 with the acquisition of the 2000 m^2 upper garden. We had scarcely had time to start absorbing this when the Abbey school where I taught physics was threatened with closure in 1985. Out of this trauma was born Poll's wholesale nursery; so when the school finally sank in 1993 our lifeboat was already seaworthy. Now, with the closure of the Abbey itself , what next?

LINKS WITH THE PAST

Looking back to the past and reflecting on the changes one has experienced is often said to be a sign of growing old. Should one be thought necessary, gardening is an extremely effective antidote for such nostalgic tendencies. As gardeners, we tend to look forward to the next season, rather than backwards but, at the same time, maintaining links with the past can be a considerable asset. There can be little doubt that the continued health of any club based on a special interest, like the SRGC, depends on each succeeding generation being nurtured and encouraged by the established members. We can all benefit from the experience of others and, without doubt, one of the best ways of disseminating such information is via the written word, for as the motto on my computer

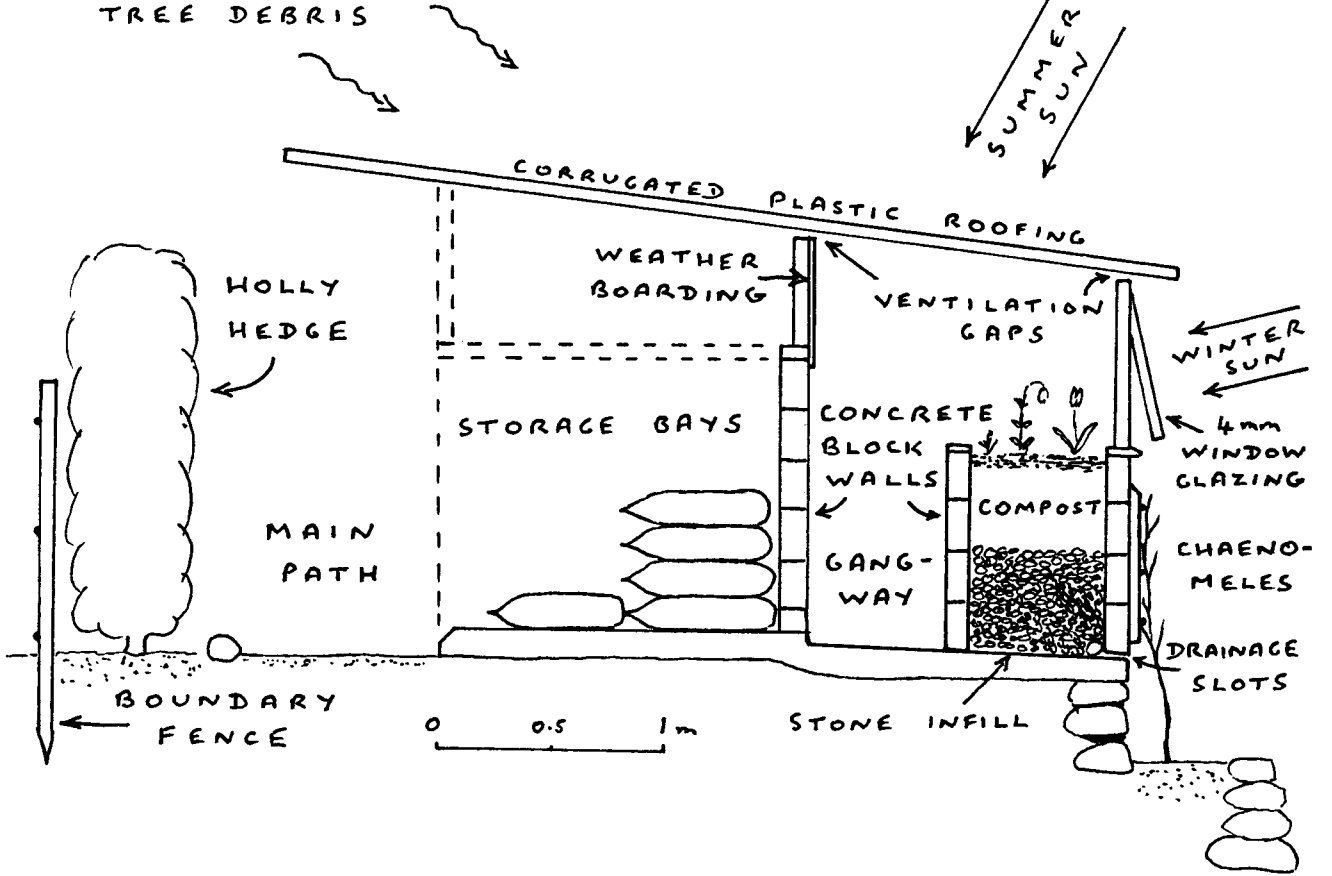
says: 'Vox audita perit, littera scripta manet'. This is still true even in these days of E-mail and the Internet; words have to be written before they can be transmitted. An old friend, Mollie Harbord, understood this only too well, and right from the early days at Askival she encouraged me to start writing. Sadly Mollie died last autumn (see Obituary on p.198), but her presence is still here in the garden in the form of her granite mushroom, now residing on the corner of the trough area along from the Stone Column. Whenever I walk across the lower garden towards it I can still hear her saying: "You must write it down". An inevitable part of the human condition is that as one ages so these personal links will be severed one after another and so it is that the other major influence on my writing is also no longer with us. It was the late Don Stead who first suggested a regular column in the SRGC Journal on the life and times of the garden at Askival. When trying to convince me that I should undertake such a task, perhaps Don's most cogent argument was that all really valuable garden writings are based firmly on first hand experiences. The American folksinger Woodie Guthrie put it rather well when he said: "All you can write is what you see." While the techniques and constructions here at Askival may not be directly applicable elsewhere, the reasoning behind them is possibly of value to other gardeners. If the following story has a moral, it is that one should always be prepared to adapt any garden feature to one's own particular requirements.

SECOND AND THIRD THOUGHTS ON BULBHOUSES

Just as our winter-covered screes had had a very long gestation, so some sort of bulbhouse remained at the planning stage for many years. Such a long delay does not necessarily increase eventual efficacy, as theoretical planning is no substitute for practical management. However, it did allow for consultations with other gardeners and for second and third thoughts as to what we really needed. When the original compost store was built early in 1989, along the old track on the north boundary of the garden beyond the potting shed, a gap of around eight metres was deliberately left between the far end of this store and the larches bed. Allowing for access behind the store, and down the ramp to the grass by the Stone Column, an empty space of about 6 m x 3 m was thus made available for a possible bulbhouse. Facing south across the trough area, this is one of the few parts of the garden to get any winter sun.

It is also a very prominent position and so we felt that an aluminium greenhouse would be a real eyesore, out of keeping with our other structures of wood and concrete blocks. Our first actual plan was for an unequal span wooden glasshouse against a free standing, purpose built, block wall. I even went as far as looking at Glassford Sprunt's houses, one designed and built by himself, to see how they were put together. However, there were two telling reasons for second thoughts. Firstly we needed somewhere to store peat deliveries, which come in batches of 100 sacks minimum and, secondly, we realised looking at the roof of the compost store that the whole area, including the site for the house, is bombarded with falling sticks and branches from the lime trees outside our fence. We should be for ever replacing panes of glass. Second thoughts were for a simple six metre extension of the compost store, maintaining the width and roofline of the original building, and incorporating a double bay three metres long for the peat sacks. As the old track widens by almost 1.5 m here, thanks to a curve in the retaining wall above the trough area, there would be room for a bulb frame in front of any extension, against its south-facing wall

It was while sketching out a possible layout for Shorty, our joiner, and wondering how to secure the lights, especially in the up position, that it suddenly occurred to me there would be precious few winter days when we could actually enjoy looking at, or tending, the plants. A much more practical and elegant solution would be to carry the corrugated plastic roof of any compost store extension out over this extra area and enclose it as a sort of lean-to conservatory protecting the gardeners as well as the bulbs. Only one major decision remained, whether to place the raised bed, the actual growing area, against the wall of the store with the aisle in front by the windows; or the reverse, an island bed with the aisle between it and the wall. The former should give better frost protection, while the latter with the bed right below the front glazing would provide higher light levels on the bulbs. Since we live so far north, the sun is at a very low angle in February/March, so most of the incident light would come through the front windows. Thus we opted for the second arrangement. Shorty had only one criticism of my revised design: he thought that the framing around the proposed front glazing was too flimsy to withstand the probable weight of wet snow on the roof. The astragals were thickened, sacrificing a little light for security. For the same reason we elected to use 4 mm house glass,


TREE DEBRIS
SUMMER SUN
CORRUGATED PLASTIC ROOFING
WEATHER BOARDING
VENTILATION GAPS
WINTER SUN
HOLLY HEDGE
STORAGE BAYS
CONCRETE BLOCK WALLS
4mm WINDOW GLAZING
COMPOST
MAIN PATH
GANG-WAY
CHAENO-MELES
DRAINAGE SLOTS
BOUNDARY FENCE
0 0.5 1m
STONE INFILL

with its extra edgeways strength, rather than the usual 2 mm horticultural grade.

A concrete base was first laid for the compost store extension and then extended out across the bulbhouse site, sloping very slightly towards the trough area below. To squeeze every inch of width Shorty rebuilt the top of my drystone retaining wall with less batter using mortar, and took the reinforced concrete raft right to its outer edge. The store extension itself took the same form as the original: concrete block bays in contact with the loam, grit, leafmould etc., with a timber superstructure. The bulbhouse 'bench' or growing area consists of yet another concrete block box, four courses, or about 0.9 m high and 0.6 m wide inside, leaving a 0.6 m aisle between it and the wall of the extension. Slots at the bottom of the outer blockwork provide drainage. Window framing about 0.8 m high was securely fastened around the three outer sides of the bench using galvanised tiebars. Twenty years ago, on 16 September 1978, a storm with hurricane force (90+ mph) winds, the first of many, thoroughly tested our original framelights; none came off. Fred Case found it difficult to accept that these plastic covered lights would withstand three figure gusts, but after all, fabric-covered aircraft like the Wellington could go much faster. Since those early days, we have always taken what may appear to some as excessive caution.

All the joints in the roofs of both the old compost store, and this new extension, are reinforced with metal ties. We cannot imagine why anyone would buy an expensive aluminium frame and neglect to bolt it down. Shorty subcontracted the window frames to a joiner's shop in Spean Bridge, which had the necessary machines; but he made both the narrow outer half-glazed doors himself, and the simple wire netting covered inner ones, intended to keep cats out when the main doors are open to allow a through draught. Additional ventilation is provided by leaving small gaps at the tops of both windows and back wall , immediately under the roof; and by having three of the seven windows fully opening.

We are not proposing to use pots, but to turn Shorty's box into a bulb bed. However, to fill the whole one metre depth with compost would be an unnecessary waste of both time and materials. It was decided therefore to fill in half the depth with stones, a conclusion which has led to the house lying largely unused for a year since its completion in March 1998. A wheelbarrow will not fit down the gangway, so the stones must be tipped from buckets. The obvious

thing to do was to wait until I dug over the next section of Mt. Sherman, and put the stones taken out straight into buckets. We had hoped that this would be part of the programme for 1998, but the ABCD jobs, the final high shading, and the second winter-covered scree, all described last time, determined otherwise. However, with these tasks out of the way, the second terrace of Mt. Sherman advances up the priority list and hopefully it will be under way before you read this. Meantime, as the front of the house is somewhat stark, we have planted a couple of cultivars of chaenomeles here, to be trained on wires, and moved a plant of *Jasminum humile* down from the Haze bed. This came as *J. parkeri*, but was clearly not that species as it had grown to over one metre, overshadowing its neighbours. However, we have found our form to be considerably hardier than the true *J. parkeri*, fully deciduous in a hard winter and flowering freely. The far, open side of the compost store will eventually be screened, as is the original, by a holly hedge. This was chosen on convenience and price: we simply gathered up bird-sown seedlings from around the garden. These move well at 10-20 cm high; and will grow satisfactorily in the enclosed position between the store and the lime trees behind. We have always been patient gardeners; relying largely on seed-raising we could scarcely be otherwise. After waiting many years for a bulbhouse, a postponement for a single season is of little significance within the context of the whole garden story, except perhaps from the point of view of our storm-battered crocuses.

CALOCHORTI IN A COLD, WET CLIMATE

In addition to rescuing some of our choicer crocuses from the extremes of the Highland climate, we hope the bulbhouse will enable us to extend the range of species grown in a number of other genera such as *Iris* and *Tulipa* from the Old World, and *Calochortus* from the New. This should result from our ability therein to control the watering regime to be more in step with their growing cycles, but only if we get it right. We plan to withhold water until November and then only dampen the bed. Full scale watering will be left until spring. By foregoing surrogate late autumn storms we hope to discourage precocious winter foliage which could well be damaged by our hard frosts. We are not intending to grow any winter-flowering *Narcissus*; these would require a soil warming cable here. The climate we hope to simulate is that of the drier mountains of

Eastern Anatolia and Central Asia, where most of the moisture is from spring snowmelt. As this is a leap in the dark for us, comments would of course be most welcome.

Currently most of our calochorti are grown in pots in our frames alongside the general collection, and so have to tolerate the normal 'alpine' cycle of lights over them in winter and full exposure to all rain during the summer. In spite of the facts that many species are not really ideal for exhibition and they tend to be rather tall and floppy, the genus *Calochortus* is quite fashionable; perhaps because seed is readily available. When scanning seedlists we have always looked for those species from the highest altitudes as, over most of their western range, rainfall increases with elevation, especially in summer. For those seriously interested in the genus, by far the best, and most accessible, reference is Dr Sylvia Martinelli's series of two articles on 'Kaleidoscopic Calochortus' in the AGS Bulletins for March and June 1995, (Nos. 259 and 260). It is a fairly large and quite variable genus and she helps make sense of the various sections and subsections. Distribution maps are included, but no key. When it comes to cultivation, however, we have to say that our experiences differ somewhat from those stated in her articles, which is hardly surprising considering the variation in garden climate and species grown. Many of those species said to be 'easy' are from relatively low altitudes in California, ones which will fit quite well into the Mediterranean growth cycle so ably described by Ian and Maggie Young in The Rock Garden for June 1996 (No.98). On the other hand, ours are mostly montane to sub-alpine plants, which show little winter growth and flower late, from June right into August. Neither, as we hope the following notes demonstrate, have we found them slow from seed and reluctant to start blooming. With most of the species we have chosen this has definitely not been the case; in fact some have proved capable of flowering remarkably quickly from seed. It should be reiterated at this point that we use no artificial heat to keep them continuously in growth, nor do we fertilise excessively as this could lead to lush, disease-prone growth.

SECTION EUCALOCHORTUS

Following the same taxonomic order as much of the literature, we come first to subsection Pulchelli. the 'Fairy Lanterns'. These are the low altitude, early-flowering species mentioned above. *C. albus* is often recommended and, as a first dabble, we have young

seedlings coming on. Its dry woodland habitat is not that different from that of several erythroniums which grow well here, and also *Fritillaria recurva*. Seedlings of the last, sown in February 1995, are just opening their first scarlet bells as I write in April 1999, after tolerating last years wet summer fully exposed.

Of the little 'Cats Ears' in subsection Eleganti we have rather more experiences to record: *CC. apiculatus, elegans, lobbii* (= *subalpinus*) and *lyallii* have all bloomed here from our own collections, and set viable seed in turn. They are all mountain plants and keep their foliage through the summer. However, unlike snowdrops, they should not be transplanted in the green, as their stems are very loosely attached to the bulbs. Two collections of the variable *C. tolmiei* bloomed for the first time in 1997; one from Ramona Osburn was sown in February 1995, and the other from Ron Ratco in January 1996 Only just beating the latter for rapidity of bloom, a Jim and Jenny Archibald collection of *C. uniflorus* flowered in June 1997 from seed sown but 15 months earlier, in March 1996; and this in spite of being dormant throughout the long Highland winter. *C. uniflorus* is a member of subsection Nudi, the type species of which, *C. nudus*, has also grown very well here. The latter is often found in mountain bogs in the wild, and obviously should not be dried off in summer. On the minus side, however, we have found that the individual bulbs of these small species can be short-lived. Perhaps there is a parallel with some lilies such as *LL. concolor* and *formosanum pricei*.

Finally in this section, we come to subsection Nitidi, of which, now that *C. lyallii* has been moved into the Eleganti, we have grown only two. *C. umpquaensis*, a recent segregate from *C. howellii* and not mentioned by Dr Martinelli, is a white-flowered serpentine endemic from Southern Oregon. Seed from Boyd Kline, sown in January 1994, was yet another to flower for the first time in the summer of 1997. *C. eurycarpus* on the other hand has a very wide distribution in the wild; plants from montane forest habitats have proved both long-lived and free-flowering here.

SECTION MARIPOSA

The first subsection to be considered herein, the Nuttalliani, contains one of the best known species, at least by reputation, the spectacular, even gaudy, *C. kennedyi* with its large orange or yellow flowers. This is definitely a dry-ground species; but these are not all

semi-desert plants, pace Dr. Martinelli. We once found a population of the very widespread type species, *C. nuttallii*, growing in damp woodland in the Uinta Mountains of Utah, where it is the State Flower. The closely related *C. invenustus* is a plant of dry montane forests at over 2500 m, but so far we have not managed to raise it to flowering size, yet one more casualty of the -25°C Winter. *C. gunnisonii* on the other hand is tougher and more reliable; we get flowers most years. A very widespread species, we have seen a meadow at over 3000 m in Colorado dotted with its undamaged blooms, in spite of a thorough dusting by a late July snowstorm. *C. gunnisonii* is in its own subsection, as is the large pink-flowered *C. macrocarpus*. The latter should be fully hardy, we have seen it in bloom in Northern Montana. One for the bulbhouse perhaps. *C. leichtlinii* is another which I should hardly describe as a steppe or semi-desert plant; our stock came from the high forests of the N. Sierra Nevada, as seed collected by John Andrews. Sown in March 1995 they started to flower just over three years later, in June1998. This, however, is snail's pace to the slender pink flowered *C. palmeri*, which took but 17 months to bloom. A box of Ron Ratco's seed sown in January 1997 and over-wintered in a cold frame, produced dozens of flowers in June 1998, much to our surprise.

Some species of calochortus produce stem bulbils, and a few are said to produce offsets, but we have never noticed this in the garden, nor have we ever found large clumps during our wanderings in the mountains of the American West. Seed has been our preferred method of introduction and we hope these notes will encourage others to experiment. Is there not an old saying which states that one should never consider a plant difficult until one has killed it three times in various situations? As we have demonstrated, seed-raising need not be a long term project; but even where it is, can still be well worth the wait.

Tulipa sprengeri is an excellent garden plant, but it took us seven years to raise the large patch which now illuminates the upper garden with a patch of glowing brick-red each May.

BRIEF WALKS ON THE MILD SIDE

If there isn't a convenient mountain range nearby, with an alpine flora worth investigating, what else does one do on holiday but visit a garden or two? We have already mentioned above our short stay in Ireland last November. Although scarcely the best time for a visit,

the onset of winter can lay bare the bones of a garden, leading to a real sense of place. Our ferry from Stranraer sailed in mid-afternoon. To avoid a pre-dawn start and a possible missed boat from traffic delays, we drove down the day before and stayed overnight nearby. This gave us the opportunity to visit the Botanic Garden at Logan next morning. As this garden complements those at Edinburgh, Dawyck and Benmore, it does not aim to grow the same range of species. Thus it is nice to see a mild West Coast garden not completely dominated by rhododendrons. As much of the planting is evergreen, there was little autumn colour of foliage; but *Dianella tasmanica* bore its dramatic spikes of dark blue fruits below the copper peeling bark of *Polylepis australis*. This is said to hold the woody flowering plant altitude record, growing at 5000 m in the Andes, a claim disputed by *Rhododendron nivale* which has been found at 5800 m in the Western Himalaya. Also within the walled garden are reconstructions of the original prototype peat walls, and a natural rock garden gully. We tried peat block terraces in the early days, but soon discarded them in favour of dwarf stone walls, which grow less hairmoss. The gully demonstrates the difference between a garden feature of rock, and gardening with rocks. Water circulates from a well-disguised concrete pond at the base to flow back down the natural channel, but little planting is possible on the solid rock.

Logan is famous for its tree-ferns, *Dicksonia antarctica*, which, while dramatic enough in the formal setting within the walls, we thought looked more at home as an understory in the woodland, but then I always did prefer naturalistic planting.

The first garden we visited in the south of Ireland, the John F. Kennedy Arboretum in Co. Wexford, is also Government run, by the Irish Heritage Service, Dúchas. Established in the late 1960s on 300 acres of farmland, some of the original shelter-belts, mostly of spruce, were left in situ. The bulk of the plantings are in groups of three in rough-mown grass, arranged botanically, i.e. all the maples together in one area and so on. The main paths are tarmac, but there is great potential for wet feet if one wishes to compare species closely. The rich soil has resulted in rapid tree-growth, and some of the non-taprooted species have had a tendency to become top heavy, leading to problems of wind-throw. This is not really a Botanic Garden, it describes itself as a 'Living tree museum' and some of the plantings are obviously not of wild origin but are garden hybrids, for example in the *Sorbus* collection. That said, the basic layout really is

very appealing, especially the long vista and the area around the artificial lake, formed by damming a stream running through the park. At the time of our late visit the cotoneasters were particularly fine, as were the fruits of many colours on the massed *Pernettya mucronata* cultivars.

At the JFK the trees and shrub collections have been very well spaced with an eye to the long term. Unfortunately the same cannot be said of our next Irish garden, Mount Congreve in Co. Waterford. We had high hopes of this rhododendron garden, described as 'one of the wonders of Ireland'. Peter Cox writing in the early 1970s, was very enthusiastic. We came away, however, with a predominant feeling of sadness. Money is said to be the best fertiliser, but one should always remember that it is possible to overfeed. The basic philosophy at Mt. Congreve seemed to be that if one *Rhododendron haematodes* is attractive, three are an improvement, and a mass planting of thirty or more is even better. This planting style, which is really bedding out writ very large, we were told originated at Exbury. Totalling some 110 acres the bulk of the garden comprises a thinned beech/oak woodland on a steep north slope down to the River Suir. A great deal of effort has been expended on hard landscaping. Using stone from a deep quarry within the garden, a network of paths was constructed, each with a neatly mortared low wall on its downhill side. These are linked up and down the slope by long flights of carefully built mortared stone steps, many of which are disappearing under the inexorable advance of massed rhododendrons. When these are in bloom the effect is said by our guidebook to be 'stunning' and doubtless this is no exaggeration. Walking around out of season, however, it was adjectives like 'overpowering' and even 'claustrophobic' which came into our minds. One main path, the river walk, is even lined with hundreds of mophead hydrangeas, for its total length of one kilometre. Adding to the beautifully executed stonework are a series of 2-2.5 m high stone walls built as baffles along the slope. These have proved to be a serious mistake as they prevent the free flow of air downslope. There can be such a thing as too much shelter; the garden has problems with mildew, in spite of a regular spraying programme.

Apart from rhododendrons, Mt. Congreve is famous for its magnolia collection, many raised from wild seed, which, it is said, people travel from afar to see in bloom. Scientifically, if not aesthetically the value of this collection is less than it might be for

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Fig. 62 *Fritillaria tuntasia* on Kithnos showing bloom on petals (p.196)
Michael Almond

Fig. 63 *Fritillara tuntasia* with almost flat leaves on Serifos (p.196)
Lynn Almond

there are very few labels, and we were told that no records were kept. We cannot understand this as there are currently 35 staff, 9 in the woodland alone, and the general maintenance is of the highest standard. Outwith the woodland we preferred the open areas around the big house where big groups of Japanese maples and hamamelis displayed the remains of their autumn colour below several fine *Liquidamber styraciflua.*

After the excesses of Mt. Congreve it was indeed a great pleasure to visit a garden on a more human scale, Gash Gardens and Nursery in Co. Laois. Like Willy Buchanan before him, Noel Keenan is a farmer turned gardener, a plantsman who doesn't garden entirely by the book. Now subletting much of the farm and its steading, Noel has turned 4 acres of cow pasture into a garden full of singular ideas and good plants. This is a young garden, and many of the trees and shrubs have yet to mature; but this is of little import as there are also extensive herbaceous plantings. Although Co. Laois is in the middle of Ireland, and the only one for which none of the adjoining counties touches the sea, these included many plants which are not hardy with us, such as *Diascia, Watsonia, Tulbaghia* and *Libertia.* Imaginative use has been made of water features, the two metre high cascade in the rock garden can be viewed from behind through a moon window curtained by the falling water; no lion mask or bubble fountain this.

A running ditch crossed by wooden bridges bisects the garden, before continuing down one side, eventually to reach the River Nore. Below the garden proper a long tree-lined walk parallels the ditch to the river and then along the bank for 100 m or so. Here vigorous shrubs, including rose species, have been planted amid the natural riverbank vegetation and left largely to fend for themselves. Water from the ditch is also diverted into several bog gardens and even flows under a small shelter at one point. Like us Noel does not believe in cutting down and clearing his herbaceous plantings in the autumn, but leaves the top growth in situ until spring. This not only encourages birdlife, but also protects the crowns of plants from frost.

Another of Ireland's rivers, the Vartry, is perhaps the dominant feature of the last garden we visited in the Republic, Mount Usher in Co. Wicklow, south of Dublin. It flows right through the centre of the 20 acre woodland garden, crossed by four bridges. Only two miles from the sea, this is definitely another mild garden noted for its comprehensive collection of mature eucalypts and also for a famous

bed of *Tecophilaea cyanocrocus* out in the open. All the usual genera are well represented including *Rhododendron, Eucryphia, Myrtus* and *Callistemon*; but the garden is by no means over-planted and one gets a restful feeling of space, especially by the river. Here a pair of swamp cypresses, *Taxodium distichum,* were still in full autumn colour, as was a very large *Liquidamber styraciflua.* The Sweet Gum was a feature of most of the gardens we visited; perhaps we should try one at home. Many of the tender evergreen shrubs were quite unknown to us and it was very fortunate that we were escorted around by John Anderson, the Head Gardener. John obviously really cares about the many fine plants in his charge and would love to have the resources to reconstruct the old rock garden in front of the big house, currently a contoured lawn traversed by an old mill leat. It will be a very long time indeed before we forget the magnificent *Mahonia lomariifolia* in full bloom nearby.

Passing back through the North, we only had time for the briefest of visits to the contrasting gardens of two SRGC members not too far from our daughter's house in Bangor. Harold MacBride's small town garden was just as neat as we remembered from our previous visit 14 years ago; the aviary has gone, and there is an even greater preponderance of the Southern Hemisphere plants for which Harold is noted. He expressed dissatisfaction with an aging tufa and gravel bed, but we enjoyed its intricate intermingling of its healthy carpet of saxifrages, gentians and dianthus.

Gary Dunlop would be the first to admit that tidiness is not a prime feature of his 3½ acre hilltop garden, set on a dolerite sill outside Newtownards. Somewhat unruly it may be, but it is home to an immense collection of plants which we should love to see when they are more than serried ranks of labels. This garden has much going for it; natural rock, and an open situation with excellent air drainage. By Irish standards this is hardly the mild side but, as we have found at Askival, a cold garden can be an advantage. One should always play to one's strengths.

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PLANT HUNTING IN THE DOLOMITES

A further guide to the Dolomites, still based on Cortina d'Ampezzo but wandering further afield

by Michael J. B. Almond

PART 3 THE SOUTH-EASTERN DOLOMITES

(South of a line from the Falzarego Pass drawn eastwards through Cortina and down the centre of the Ansiei valley as far as Auronzo di Cadore and east of a line from the Falzarego Pass southwards down the Agordo valley: you will again need quite a few 1:25,000 maps to cover this area, but the *Tabacco* 1:50,000 map sheets nos 1 and 4 cover most of it)

If you prefer to be based in one place to explore this area, then Cortina is again probably the best base to use. This part starts with areas that are conveniently close to Cortina but gradually ranges further afield. We start just up the hill west of Cortina, on the road to the Falzarego Pass.

As you reach the top of the Forcella Col de Bos, with Le Tofane rearing up above you immediately to the east (see Part 2 of this guide, *The Rock Garden* January 1999, page 108), if you turn to look back down at the way you have come up from the main road, and you lift up your eyes to look southwards across the valley to the other side of the main road, at about the same height as you are you will see a distinctive group of oddly shaped rocks: these are the Five Towers — the Cinque Torri (Fig.54). You can walk up to them from the main road or else take the chair lift. On the hillside around the top of the chair lift itself you can find *Anemone baldensis, Gentiana verna, Globularia cordifolia, Pulsatilla alpina* (white), *Soldanella alpina, S. minima* and *Trollius europaeus.* On the walls of the Towers themselves nestle more choice morsels: *Campanula morettiana* and *Physoplexis comosa* (though neither in flower at the

beginning of July), together with *Gentiana terglouensis* and *Potentilla nitida*.

Almost due south of the Cinque Torri, on the other side of Nuvolao (2574 m), lies the Giau pass (2236 m). The road up to the pass is marked as "difficult" on some maps but has been improved and widened in recent years and, although still long, twisting and steep, should pose no problems to anybody who has driven so far into the Dolomites already. North of the Giau pass, a path leads across the alpine meadow to a group of large boulders on the lower south-eastern flanks of Nuvolao. Here you can see *Coeloglossum viride, Daphne striata, Dryas octopetala, Gentiana acaulis, G. punctata, Globularia cordifolia* (Fig.56). *Gymnadenia odoratissima, Leucorchis alba, Nigritella rubra, Pinguicula alpina, Polygala alpina, Potentilla nitida, Primula farinosa, P. halleri, Pulsatilla apiifolia, Rhododendron hirsutum, Rhodothamnus chamaecistus* (a relation of the rhododendron which grows on limestone, scrambling over boulders and rough scree, with delicate pink flowers that are often over by the time the other alpine plants are in flower), *Saxifraga caesia, Trollius europaeus, Veronica bellidioides* and *Viola biflora*.

UP ON TO THE FORCELLA

South-east of the Giau pass there is a very pleasant walk across the screes of the Val Cernera, enjoying extensive views to the north, to Le Tofane and Cristallo (beyond Cortina), and crossing both limestone and acid rocks, to the Forcella Giau (2360 m). As you make the final ascent to the Forcella you are walking up acid scree; but the scree is dotted with boulders of limestone, broken off from the great cliffs of Monte Formin towering above. *Geum reptans* scrambles over the scree, which is also dotted with *Ranunculus glacialis* (Fig.58). Once over the top of the Forcella, you are back in limestone country and enjoying views of Pelmo (3168 m) to the south. Every other rock is festooned with *Rhodothamnus chamaecistus*. It would be possible to extend this walk round the Croda da Lago and down into the Ampezzo valley, provided little time was "wasted" photographing the flowers. As we came along over the screes of the Val Cernera we noted the following flowers: *Anemone baldensis, Doronicum grandiflorum, Gentiana acaulis, G. terglouensis, G. verna, Geum reptans, Leontopodium alpinum,*

Leucorchis albida, Linaria alpina, Nigritella nigra, Papaver rhaeticum, Primula auricula, P. minima, Pulsatilla apiifolia, P. vernalis (in seed), *Ranunculus glacialis, R keupferi* (the variant of *R. pyrenaeus* found in the Dolomites), *Rhodothamnus chamaecistus, Saxifraga caesia, S. crustata, S. oppositifolia, Soldanella alpina, S. minima, S. pusilla, Thlaspi rotundifolium* and *Trollius europaeus.* In places above the path *Soldanella alpina* (Fig.57) and *S. minima* (Fig.59) were flowering in massive profusion, carpetting the steep scree; and the carpets of the two species overlapped, so that they were all mixed up together. In several such places we found intermediate forms which must have been natural hybrids between the two. The *S. pusilla* was separate, on the bands of acidic rock, and did not appear to hybridize with the other two species.

North of the Giau Pass, in the woods beside the road down towards Cortina, can be found lily of the valley, Solomon's seal, *Anemone trifoliata, Atragene alpina, Corallorhiza trifida, Epipactis* sp., *Horminum pyrenaicum, Lilium martagon, Moneses uniflora, Paris quadrifolia* and *Rosa pendulina.* On the cliffs above the woods, *Physoplexis comosa* grows in relative profusion, together with *Aster alpinus* and *Paederota bonarota.*

SORAPISS

On the other (east) side of the Ampezzo valley rises the massive bulk of Sorapiss (3205 m). In the great cirque formed by the northerly facing cresent of the main ridge of Sorapiss, lies the Lago di Sorapiss (1923 m). This is approached from the Passo Tre Croci (the Pass of the Three Crosses) (1805 m) which lies immediately above Cortina to the east. The path to a large extent follows the contours from the pass southeastwards and southwards round into the cirque of Sorapiss, and there is little unnecessary climbing. Although much of the way lies through woods, the fact that the ground falls away steeply (not to say vertically for much of the way) below the path means that the views across the valley, to the lake of Misurina and the Drei Zinnen beyond, are very fine. Along the way you can see *Achillea moschata, Aconitum vulpare, Anemone baldensis, A. trifolia, Aquilegia atrata, A. einseliana, Atragene alpina, Campanula barbata, C. caespitosa* (Fig.55), *C. cochlearifolia, C. scheuchzeri, Coeloglossum viride, Convallaria majalis, Dactylorhiza fuchsii, Dryas octopetala, Epipactis* sp., *Gentiana utriculosa, Gymnadenia conopsea, G. odoratissima,*

Gypsophila repens, Horminum pyrenaicum, Lilium martagon (according to the *Flora*, the leaves of this species form whorls up the stem, but certainly not all of those growing in the woods beside the path to Sorapiss had whorled leaves, although they were undoubtedly *L. martagon), Listera ovata, Luzula nivea, Maianthemum bifolium, Moneses uniflora, Orthilia secunda, Oxyria digyna, Paederota bonarota, Paris quadrifolia, Physoplexis comosa, Phyteuma nigrum, P. orbiculare, Polygonatum verticillatum, Polystichum lonchitis, Potentilla nitida, Primula auricula, P. tyrolensis* (these two primulas could only be seen near the path where it passes under the sheer limestone cliffs they like to grow on, although there are no doubt others which are more or less inaccessible from the path; we only saw the *P. tyrolensis* on the cliffs near that stretch of the path where the assistance of handrails and metal ladders is needed to negotiate some short stretches of what would otherwise be rock climbing), *Prunella grandiflora, Pyrola minor, Ranunculus aconitifolius, Rhododendron ferrugineum, R. hirsutum, Rhodothamnus chamaecistus, Rosa pendulina, Saxifraga caesia, S. rotundifolia, S. squarrosa, Silene acaulis, S. alpestris, Solidago virgaurea, Tofieldia calyculata, Trollius europaeus, Veratrum album* and *Veronica urticifolia.*

THE LAGO DI SORAPISS

Whatever the weather the Lago di Sorapiss is the most beautiful deep turquoise blue (in fact it is probably even more striking when the sky is overcast and the colour is more unexpected); the contrast of this colour of the water with that of the red flowers of the alpenrose growing on rocks overhanging the edge has to be seen to be believed. Around the shores of the lake, on the rocks and in the turfy screes can be found *Anemone baldensis, Gentiana acaulis, G. verna* (among rocks between the refuge and the lake), *Pinguicula alpina, Rhodothamnus chamaecistus* (still in flower on the east side of the lake where it gets least sun), *Saxifraga crustata, Silene acaulis, Soldanella minima* (by late snow patches) and *S. alpina* (further up on to the screes east of the lake).

THE ANSIEI VALLEY

South of Sorapiss and east of the Tre Croci pass, the Ansiei valley stretches down to the Lago di Auronzo, covered for the most part in thick woodland. Mention has already been made in part two

of this guide of some of the tributary valleys coming down from the Sexten Dolomites to the north. The southern side of the valley here is flanked by the Marmarole group, of which Sorapiss is the westernmost outpost. The valleys coming down from the northern flanks of the Marmarole are long and rise relatively gradually. They generally do not have public roads up them and would take a long time to explore. The longest public road up any of them is that up the Val de Rin, west of Auronzo, and even this is barred at just over 1100m. In the woods around the end of the road can be found *Cypripedium calceolus*, *Epipactis* sp. and *Platanthera* sp..

In the main Ansiei valley itself the woods contain quite a number of interesting species, mainly on the banks of torrents and the edge of clearings, where the light level is higher than in the middle of the wood. In particular, the banks of some of the torrents are lined with slipper orchids (*Cypripedium calceolus*) in considerable numbers. Between the Tre Croci pass and Auronzo we have also found lily of the valley, *Aquilegia atrata, Cephalanthera rubra, Coeloglossum viride, Gymnadenia conopsea, G. odoratissima, Lilium bulbiferum, L. martagon, Listera ovata, Ophrys insectifera, Orthilia secunda, Paris quadrifolia, Phyteuma nigrum, Platanthera* sp. and *Pyrola rotundifolia. Ophrys insectifera* is unusual among the bee orchids in that it is found only in mountainous areas and not lower down on the Mediterranean litoral, like its confrères. It is reputed to be very widespread (although that does not make it common) but it is very difficult to spot. It has a very small dark blue and brown flower on the end of a slender and relatively tall stem and is usually overlooked among the grass. The one example we have seen was spotted only because I was reclining in the grass to photograph some other flower, with tripod and close-up lens, when I became aware of the orchid about a foot to one side of it; from standing height especially when walking along, it was virtually invisible.

THE PIAVE GORGE

Below Auronzo the river Ansiei joins the Piave which turns to flow south. The limestone mountains immediately to the east of the Piave are described variously by the Italians as the "Dolomites on the left bank of the Piave" and the "Carnic Prealps". Just before its confluence with the Ansiei, the Piave cuts a deep and spectacular gorge below Monte Tudaio. The main road up to the Kreuzberg pass, which used to run along the gorge, is now diverted through a

tunnel. It is still possible to walk along the old road but the main accessible botanical interest lies in the woods at the southern end of the gorge, behind Cima Gogna. Here can be found deadly nightshade, *Cephalanthera rubra, Cyclamen purpurascens, Epipactis* sp., *Leucorchis albida, Lilium bulbiferum, Monotropa hypopitys, Neottia nidus-avis, Orthilia secunda, Platanthera chlorantha* and *Rubus montanus*, the last very attractive in fruit. The woods had a good population of *Cyclamen purpurascens* although, because of the thick tree canopy and the torrential rain, it was difficult to see and even more difficult to photograph them.

To the south of Monte Tudaio a road branches off eastward and climbs up out of the Piave valley to the Passo della Mauria (1298m). Alongside the road can be seen *Cephalanthera ?damasonium, C. rubra, Gymnadenia conopsea, Hepatica nobilis* and *Lilium bulbiferum.* But we came here mainly because Rassetti, in his *Fiore delle Alpi*, says that the slipper orchid is relatively common in this area, and we wanted to see if this was still so. We decided to explore the path up to the Rifugio Giaf (1400 m) and on beyond towards the Forcella Scodavacca (2043 m). In the woods below the Bridge of Giaf (1050 m) we found *Cephalanthera rubra, Cyclamen purpurascens, Cypripedium calceolus, Epipactis* sp., *Listera ovata, Paris quadrifolia* and *Platanthera chlorantha.*

THE RIFUGIO GIAF

Above the Bridge of Giaf there are two possible routes to the Rifugio Giaf, one a motorable (though barred) track and the other the direct path which toils up through the woods alongside the torrent. The path is more rewarding than the track in proportion to the greater effort needed to climb it. As we made our way up to the refuge we were rewarded with some fine specimens of *Cypripedium calceolus* and also *Aquilegia atrata, Atragene alpina, Coeloglossum viride, Cyclamen purpurascens, Dianthus monspessulanus, Dryas octopetala, Geum rivale, Neottia nidus-avis, Platanthera* sp., *Rhodothamnus chamaecistus* and *Trollius europaeus.* Above the refuge, the path climbs even more steeply, still through woods, up towards the Forcella Scodavacca, a high col beneath the sheer, saw-toothed ridge of Monte Cridola. In the woods near the path we saw what was probably the best clump of slipper orchids we have ever seen, with thirteen blooms all in peak condition. It is perhaps worth mentioning at this juncture that these

beautiful plants enjoy legal protection in Italy every bit as strong as they do in the UK and, if you might be tempted to think that the Italians would not enforce such laws, then, if it is true at all, it is certainly not true in this part of Italy (the Germanic influence, with the tendency to rigid adherence to all regulations, is strong in this area; even speed limits tend to be obeyed). In addition to the slipper orchids, during our scramble up from the Rifugio Giaf towards the Forcella Scodavacca we saw the same plants as we had seen below the refuge with the addition of *Anemone trifoliata, Paederota lutea, Pyrola* sp. and *Veratrum album.*

UP TO THE FORCELLA CIBIANA

Lower down the Piave valley the woods continue to give shelter to flowers such as *Asarum europaeum, Cyclamen purpurascens, Hepatica nobilis, Listera ovata* and *Paris quadrifolia* (all seen near the shores of the Lago di Centro Cadore by the camp site opposite Vallasella). If you turn back westwards at Pieve di Cadore, however, taking the road that leads up the Boite valley back to Cortina, and then turn south again through Cibiana di Cadore, you will arrive at the Forcella Cibiana (1530 m). The walk up the old military road north of the pass to the top of Monte Rite (2183 m) is well worth the effort, both because of the interesting flora to be seen and also because of the fine views on the way up across the top of the pass to the jagged peaks of the Sassolungo di Cibiana and the panoramic views from the top of Monte Rite, encompassing the Valle di Zoldo to the south west and the Valle d'Ampezzo to the north east and extending as far as Cortina (30 km north) and beyond.

By the car park at the pass we saw *Dactylorhiza* sp., *Gentiana utriculosa?, Gymnadenia, Lilium bulbiferum, L. martagon* and *Listera ovata.* As we walked up the track to the top of Monte Rite we passed *Aconitum vulparia, Anemone trifoliata, Aquilegia atrata, Aster alpinus, Atragene alpina, Campanula carnica, ?Dactylorhiza alpestris, Daphne striata, Dianthus glacialis, Galiopsis speciosa, Gentiana acaulis, G. verna, Geum montanum, G. rivale, Globularia repens, Gymnadenea conopsea, Leucorchis albida, Lilium bulbiferum, L. martagon, Neottia nidus-avis, Paederota bonarota, Paradisea liliastrum* carpetting the woods above the track, *Primula auricula* festooning the cliffs at the ends of the rock-cut tunnel through which the track passes just over half way up to the summit, *P. farinosa, Pulsatilla alpina, Ranunculus*

aconitifolius, Rhododendron ferrugineum, Rosa pendulina suckering all along the side of the track as it climbs through the woods above the pass, *Saponaria ocymoides, Saxifraga crustata, Silene acaulis, Traunsteinera globosa* in some profusion along the top of the ridge below the summit of Monte Rite, *Trollius europaeus* and *Viola biflora* scrambling in a bright yellow mass along the bottom of a boulder beside the track.

If you are making for San Martino di Castrozza (dealt with in the next part of this guide), you can continue over the Passo Duràn (1598 m) into the Agordo valley and on over the Passo di Cereda (1369 m) into the Castrozza valley. The Passo Duràn is approached through fields ablaze with *Lilium bulbiferum* and forms a fitting link to the next part of this guide.

(In Parts 1 and 2 of this series on the Dolomites, all the photographs were attributed to Michael Almond when, in fact, some of them were taken by Lynn Almond. Part 3 rectifies this situation and attributes the colour plates to Lynn as appropriate. Ed.)

LOOKING FOR FRITILLARIA TUNTASIA

by Michael. J. B. Almond

Do you enjoy standing blindly in thick cloud, high up on a bare, rocky mountainside while a bitterly cold, howling gale drives rain and hail horizontally into your face? Do you enjoy being the only guest in your hotel and diner in your restaurant and do you dislike meeting other tourists? Do you enjoy huddling in your hotel room as the rain lashes against the window and trickles under the door from the lake on the balcony? Do you know enough Greek to complain that the heating has not come on? Do you enjoy that "away from it all" feeling engendered by not knowing whether there will be any transport to anywhere else within the next week? Do you like fritillaries? If so, go and look at *Fritillaria tuntasia* on the small Greek islands of Serifos and Kithnos. There is lots of it to be found in flower around the end of March and it can be found nowhere else. But take plenty of warm and waterproof clothing.

THE ISLAND OF SERIFOS

We arrived on Serifos soon after midday on 21 March 1998 full of the joys of spring, after an all-day journey from Errol to London, a night flight to Athens and four and a half hours on the ferry from Piraeus. The weather during our week on Serifos comprised a few bitterly cold days of brilliant sunshine and blue skies and a larger number of days of the kind of weather described at the beginning of the first paragraph. While we were there the northern Aegean experienced what the commentators on the Greek television news considered to be the worst storm for twenty five years. Much of Athens was without power for five days and there was serious flooding in places; the island ferries stopped running; many of the roads of mainland Greece were blocked by snow.

As we were on an island with an area of only 73 km^2, at least we did not have to travel far. We had obtained what information we could on where *Fritillaria tuntasia* was to be found by consulting the Alpine Garden Society's Panel of Experts (through the good offices of Jack Brownless). Although most of the locations were too

vague to be of any practical use to us, luckily one location given for Serifos proved precise enough for us to locate a colony on our first day of looking. Having found this colony, we were able to study the conditions and aspect in which the plants were growing and form some opinions about the kind of places in which to search further. This proved very useful in the days ahead, and we were able to locate further colonies in widely scattered areas of the island (Figs. 61 and 63). In all we discovered five locations for *Fritillaria tuntasia* on Serifos, and I have no doubt we should have been able to find more had we not been so handicapped by the appalling weather. However, I do not believe that the species is likely to be so widespread on Serifos as we found it to be on Kithnos, as Serifos is more varied in its physical features and there is a larger proportion of the island which is likely to be unsuitable for its growth.

ACROSS TO KITHNOS

After eight days on Serifos we made the one and a half hour journey to Kithnos on the first ferry we had seen for four or five days. Kithnos is slightly larger in area than Serifos (99 km²) and only three hours from Piraeus by ferry. Whereas Serifos is roughly as long as it is broad, about 10 km across and rising to almost 500 m above the sea, Kithnos is almost 20 km long, no more than about 6 km wide for the most part and rising to less than 300 m. By the time we started to explore Kithnos on 30 March, the temperature was rising and the weather settling into pleasant spring sunshine. Although the island is very rocky and much of it sparsely covered with vegetation, we found *Fritillaria tuntasia* to be widespread (Figs.60 and 62). We discovered 25 separate locations for the species and would probably have discovered more if we had penetrated to the southern tip of the island; we only got about two-thirds of the way down, but the landscape — as we had seen from the ferry — remains similar in character to what we had already seen further north.

GEOLOGY AND THE FRIT

Fritillaria tuntasia is not attested from any of the other Cycladean islands adjacent to Serifos and Kithnos, all of which have different geological characteristics, as does also the Attic peninsula (the nearest point on the Greek mainland). The two islands are composed mainly of mica schist, although there are isolated marble outcrops. On Serifos, *F. tuntasia* only appears to grow on a particular kind of grey schist (when you have been searching for a

few days it becomes possible to identify the right kind of rock from a considerable distance). On Kithnos we found it once on limestone but everywhere else on schist (but not necessarily of the same uniform grey colour as on Serifos). The species was always found on slopes with a northerly aspect, and usually the highest concentrations were facing north-east. It was frequently growing in association with *Anemone pavonina* and *Hermodactylus tuberosa* (this usually already in seed). We found it at all heights above sea level, from sea level right up to near the tops of the hills on Serifos. In our experience *F. tuntasia* flowers always have a sweet scent. We found one example with a yellow flower; otherwise the colour varied from "black" to a deep blood red — obviously when viewed with the sun shining through the petals the blood-red colour lightens in tone.

COMPARISON WITH *F. OBLIQUA*

Fritillaria obliqua, which is very similar to *F. tuntasia* is attested only on the Greek mainland in an area being rapidly overrun by the northern suburbs of Athens. Sønderhausen considered *F. tuntasia* "conspecific with *F obliqua* as no clear-cut differences exist. The style in *F. obliqua* is said to be trifid to 2-3 mm and only divided for 1-1.25 mm in *F. tuntasia*, i.e. almost entire. *F. tuntasia* is reputedly more robust, taller, with more flowers and leaves" (Tan, K & Sønderhousen, O: A Fritillaria Anthology: Part II; *The Rock Garden* vol xxiii (2), no 91, Jan 1993; p171). Although we have not seen *F. obliqua*, our knowledge of *F. tuntasia* would tend to support Sønderhausen's view. In addition to the fact that we found it growing once on limestone on Kithnos, we also discovered it to be (as might be expected) very variable in size. Certainly some of the plants (growing in damper and more fertile conditions) were very robust, up to about 40 cm tall with up seven flowers on one flowering spike. Other flowers, and whole colonies, however, were far more of the size described for *F. obliqua*: often less than 20cm tall and with only one, or occasionally two, flowers per spike. These were plants growing in less favourable conditions, such as would compare with the limestone scrub north of Athens where *F. obliqua* is (or was) found. We tried hard to decide whether the flowers we saw had styles that were "trifid to 2-3 mm" or "only divided for 1-1.25 mm" but found this rather beyond our capabilities; as far as we could see, the flowers were as variable in this aspect as in size and number of flowers. The shape, size and attitude of the leaves (in some cases extremely elegantly whorled) was also very variable.

MOLLY HARBORD

Mary I. C. Harbord, Mollie to all her friends, died in November 1998 in her 90th year. She was educated at Dollar Academy and was a bright child and also athletic. Those who have a picture of her meticulously weeding a trough with tweezers may have difficulty seeing her whirling down the hockey field, light of battle and goal-scoring in her eye. Dugdale's Secretarial College followed and a sheep farm in Australia and then marriage to Dr Richard Harbord. Her daughter Heather was born in 1939

Moving about during the war she took full advantage of time left from war work and family to study water colour painting, pottery, silverwork and the clarsach, in all of which she became highly skilled, but plants were her true love. She trained with Lawrie's of Dundee and worked with the Misses Logan Home at Edrom. She showed her tufa troughs and primulas at various Highland Shows as well being a staunch exhibitor at SRGC Shows over a long time, an activity which she thoroughly enjoyed.

After Heather had grown up, Molly moved to Diurinish and then Lochcarron. Much painting was done there but her favourite garden was in Pitlochry next to General Murray-Lyon's garden. Here, primulas, meconopsis and rarities of all sorts flourished in perfect conditions. Visits and seed collecting in the Dolomites added spice to life and it was a happy and stimulating time. But with the General's death and the sale of his garden, she moved to St Andrews. There the climate was too different and the alpines moped so she moved back to a cottage in Lochcarron.

Though turned 80, she set to and turned a damp rock face and little more into a delightful garden of meconopsis, gentians, azaleas and unexpected treasures. Sheltering trees and a pond filled the garden with birds which she fed, contriving wonderful defences against her much loved cats. Full of new garden plans on her birthday despite increasing physical problems which she always vigorously disregarded, she suddenly became very weak and slipped away a week later.

A long time member of the SRGC, AGS, the Iris Society and a Friend of the St Andrews and Edinburgh Botanic Gardens, she will be remembered for her enthusiasm, knowledge and willingness to help others.

Gillian Falconer

FLOWERS OF THE BASPA VALLEY

In the footsteps of Ludlow and Sherriff

by Margaret and Henry Taylor

The gods were on our side in July 1998 when we hit the Baspa Nullah in a freak dry spell during the monsoon season.

Why Baspa? Several years ago we were given an intriguing reference to rare plants found by Ludlow and Sherriff in 1939 in this part of Kinnaur, NW India. Although we hunted out details of other L&S Expeditions, we could unearth no diary for 1939. Fletcher's excellent "A Quest of Flowers" also omits this expedition.

Fortunately a friend at the Royal Botanic Garden Edinburgh obtained a print-out of the British Museum's L&S herbarium specimens for that year. From the dates of these along with the longitude and latitude for each we were able to plot their path on a map and plan our route.

We had helpful advice from our friends Alastair McKelvie and Chris Chadwell who a few years ago separately tried to visit this area close to the Tibetan Border, but diffficulty with the weather and lack of local help frustrated them as this valley had not yet been developed for tourism. We wrote to Prem, our friend who runs Zingaro Travel in Manali, to enquire if he would organise a trek in this region. "No problem. Send four photos of each member of your group with passport and visa details and I will get permits to enter this border zone. Tell me the time of your arrival in Delhi and I will arrange hotels, train, four-wheel drive Gipsy transport and all trekking details." A recce by Zingaro found the first pass on our proposed route too precipitous for ponies so porters were brought all the way from Manali to carry our tents and food.

Luck was certainly with us. Wangtu Bridge across the ferocious Sutlej river had been washed away the previous August and its replacement was only completed less than four weeks before our arrival. On went our Gypsies creeping along narrow cliff ledges passing a typical road sign - "Deadly Killer on the Road if your

Vehicle has Overload". We eventually reached camp in an apple orchard at 2700 m just above Sangla village in the Baspa Nullah.

HARAN PASS (3900 m)

After bed tea at 6am and a leisurely breakfast we started up the pass. Just above the ancient village of Kamru, a friendly elderly lady scolded our guide Dilip for making us sweat uphill in the sun. "Far too warm now. You should have been climbing when it was nice and cool at 5am".

In olden times the mule track over the Haran Pass was the main access to Sangla before a new road was blasted up the Baspa gorge. The mountain is very precipitious and unstable so the disused track has fallen away in places causing problems. Even finding a ledge for a tent entailed hard work with an ice axe.

This south-facing slope appeared to be a rain-shadow area with dry zone plants like *Morina coulteriana* and *Ephedra gerardiana*. In clearings among *Pinus wallichiana* were meadows of red *Potentilla atrosanguinea*, yellow *P. argyrophylla* and cerise *P. nepalensis*, also a kaleidoscope of colours in *Geranium wallichianum* ranging from blue to lilac and rose pink to white with spectacular veining. A lethargic member of our group enjoyed the spectacle from a seat on a log and, amusingly, pine resin glued his trousers to his bottom so now he stuck to everything he sat on. In shady spots, *Arisaema flavum* was quite attractive and the taller green spathes of *A. jacquemontii* also grew around here. Within and just above the treeline the silver rosettes on red runners of *Androsace sarmentosa* showered down from rock ledges and turfy banks, unfortunately past flowering.

On our second day of climbing we saw a little yellowish orchid, *Malaxis acuminata*, *Delphinium roylei* and *D. laeve*, the golden *Doronicum roylei* and a spectacular woolly candle of *Arnebia benthamii*. This last mentioned plant is apparently used to dye food red. But these were not the high alpines we were chasing. Before dusk two of us climbed the precipitous track to the pass, finding no exceptional flowers, but from our vantage point we could see across the Baspa valley to enticing snow-capped mountains and green slopes of the Rupin and Nalgan Passes. So we decided to abandon our perch on the Haran to allow ourselves more time on greener pastures; an excellent change of plan as it turned out.

Fig. 64 *Cremanthodium reniforme* on the Nalgan Pass (p.202)
M. and H. Taylor

Fig. 65 *Corydalis meifolia* var. *violacea* on the Rupin Pass (p.202)
M. and H. Taylor

Fig. 66 *Pedicularis rhinanthoides* on th Nalgan Pass (p.206)
M. and H. Taylor

Fig. 67 *Primula stuartii* on the Nalgan Pass (p.205) M. and H. Taylor

Fig. 68 *Potentilla microphylla* on the Rupin Pass (p.205)
M. and H. Taylor

Fig. 69 *Leontopodium monocephalum* on the Garuba Nullah (p.204)
M. and H. Taylor

Fig. 70 *Codonopsis rotundifolia* on the Rupin Pass (p.201)
M. and H. Taylor

Descending by a slightly different route, we came across good big bushes of pink-flowered *Incarvillea arguta* growing on a dry cliff and, in a damper shady area a few lingering flowers on *Iris kemaonensis*.

HOOCHILL

Next morning we left Sangla and started up the Rupin track. This was more like it. A steep valley through spruce forest climbing up by the Rukti river. We noticed cones on the ground with the scales eaten off. Dilip explained that the culprit was a hoochill, a strange night-flying bird with no feathers, just hairs like the stubby beard of one of our group.

Lunch break was enlivened by photographing the twining yellow-green *Codonopsis rotundifolia* (Fig.70) growing against stone walls surrounding pink fields of buckwheat, *Fagopyrum esculentum*. Dilip's suggestion of camping here was met with "No, no, not yet, we want to get higher." Our three days on the steep Haran Pass plus a daily dose of Diamox helped in acclimatising us to higher altitudes.

On we trudged in the hot sun, making frequent stops to photograph superb blue *Cyananthus lobatus* along with a very attractive dwarf pink geranium. The turf consisted of acres of *Androsace muscoidea* with unripe seed and was dotted with tiny blue stars of *Gentiana marginata*.

Towards late afternoon we met a group of friendly Hindu pilgrims who were walking down towards Sangla. They intended to collect a local god and take him back on a rath (palanquin) up over the Rupin Pass to visit their home village on the far side. Himalayan gods enjoy an outing and local ones fortunately have not required any human sacrifices since 1951. What first attracted us to the pilgrims was their heads. The brims of their pill-box hats were stuffed with purple flowers of *Primula elliptica* and the top pockets of their Sunday-best jackets held lettuce-like *Saussurea obvallata*. Great excitement. "May we photograph you?" Over a feast of dried apricots, addresses were exhanged and instructions of where to find the flowers were noted.

Eventually, having climbed for eight hours, we reached our 3700 m campsite in a meadow at the divide of the Rupin and Nalgan passes. This was a lovely spot with plenty of flat turf for tents and several crystal-clear springs for water. Our 'garden' was planted with blue and also white *Cyananthus lobatus* among gorgeous

clumps of large showy *Cremanthodium arnicoides* (Fig.64), whose flowers lift to follow the sun round.

RANGALTI CAMP

We spent three nights at Rangalti giving our porters a long rest. On previous Himalayan treks we had used pack mules and now felt guilty about men carrying our camping gear and aluminium chests of food. But our porters assured us that they were having an easy time because they did not have to shift camp every day. Our five Nepalese porters were each paid 125 rupees (£2) per day to carry a load of 60-80 kg. We were told that porters start work aged 18 and are finished by their mid 30s with back or knee troubles.

RUPIN PASS (4625 m)

Next morning, while our porters rested, we set off on a strenuous 10½ hour day. Hot sun made progress slow at this altitude. The track wound uphill through cow pastures passing cliffs with *Campanula pallida* and good *Arenaria* festucoides. In damp flushes *Primula denticulata* was still in flower along with abundant *P. involucrata*. Clear blue *Meconopsis aculeata* peeped out from among boulders. As we gasped doggedly upwards, each inwardly humming our personal plodding tune, we found hundreds of *Primula minutissima* in all shades of pink. Also, plentiful tufts of a very good form of *Potentilla microphylla* were dotted around.

Dilip had heard of the Swiss edelweiss and asked what it looked like so we pointed out several *Leontopodium himalayanum*. But we all reckoned *Cremanthodium reniforme* (Fig.64) was more attractive growing along the edge of a stream. This small plant has a red woolly hat of a calyx on its butter-yellow head. Nearby were a few plants of the larger *Cremanthodium ellisii*.

Nearing large snowfields we came on our pilgrim's sacred *Saussurea obvallata* along with the tiny *Aconitum violaceum* and *Primula macrophylla* var. *moorcroftiana*. There were also scattered plants of the dwarf celery-like *Pleurospermum candollei* with its shiny white bracts. The corrie at the end of the valley was filled with snow. Resting on a rock one of our group found a wonderful pink *Corydalis* sp. The large heads of pink maroon-eyed flowers were held above soft grey-green feathery foliage. Herbarium specimens and slides have been identified by our expert Swedish friends as *Corydalis meifolia* var. *violacea* (Fig.65). Over the next few days

we were to find this plant many times at altitudes from 4600-5000 m among rocks,or on stony scree, just emerging from snow in the first week of August. While climbing these snowfields we speculated on our Hindu pilgrims bringing their god over this pass. If the god fell would bad luck follow?

The summit of the Rupin was shrouded in mist with the ground on the southern side falling away steeply towards Garwhal. Exploration around the summit revealed more of the pink corydalis and a cluster of pale almond-pink fluffy *Saussurea simpsoniana* which looked ready to squeak and walk off. We also found mats of the desirable *Potentilla biflora* and large silver cushions of stemless pink *Androsace muscoidea* on the scree, whereas *Primula elliptica*, purple with a yellow eye, favoured damp rock ledges. A very rewarding day but a long weary hike back to camp. The nights here were very clear with the stars glowing yellow. We intended to photograph them but slept too soundly.

REST DAY (only seven hours of exploration)

With the aid of binoculars we could see on the far side of the river from our camp a group of flowering *Rhododendron campanulatum*. A real piece of luck as this rhododendron usually flowers much earlier in the year but probably a late snow bank had retarded this patch. To reach it we had to cross a rickety gaddi (shepherd) bridge over the Rukti. This bridge is rebuilt annually with *Betula utilis*. Then we had to cross a wide snow bridge over the Nalgan river. The rhododendron bushes were two centimetres tall and as much across, with flower colours varying from pearly white to deep pink with buff spotting in the throat of the bell. Nearby dwarf *Rhododendron anthopogon* ssp. *hypenanthum* had its usual fragile cream blooms. In riverside shingle there were great drifts of pink *Epilobium latifolium* with flowers four centimetres across. flowers.Slightly more stable areas had *Potentilla cuneata*, a few patches of *Androsace studiosorum* and lovely *Meconopsis aculeata* with flowers all the way down the stem.

We walked back uphill to camp for a hot lunch served from steel tureens on a steel tray. Then after a bit of encouragement the six plant hunters split into separate groups to cover more ground. One reprobate spent the whole afternoon drinking tea and admiring the view, another only climbed as far as a cave to look for bears (or sleep?). More energetic folk recrossed the gaddi bridge then worked

upstream under the cliffs. In shallow caves we argued over the rare nivalid *Primula obtusifolia*, some plants as big as cabbages, with broad silvery farinose leaves and pink to purple flowers. *Cortusa brotheri* shared these caves, while on cliff ledges there was dwarf purple-pink *Rhododendron lepidotum*, *Potentilla eriocarpa* and *Lloydia serotina*. The bright blue 45 cm tall *Polemonium himalayanum* and slightly shorter yellow *Anemone obtusiloba* preferred richer soil beside a recent landslide.

The setting sun cast a beautiful rosy glow over the pinnacles of Raldang. Then, as we warmed ourselves around a lovely cow dung fire, carefully built in the shape of a hollow cone, plans were made to move on next day to the highest campsite we could find in the Nalgan valley.

GARWA CAMP (4400 m)

We toiled up the steep grassy hillside anticipating new plants but also a little worried about the large number of herb gatherers known to be ahead. These people have a licence to dig specific medicinal plants, but in so doing can churn up large areas of attractive flowers. It was interesting to learn that 1500 kg of *Dactylorhiza hatagirea* tubers are taken to Amritsar market each year. These roots are used in medicine and as an antiseptic. Could dactylorhiza orchid roots be a useful organic export from our Scottish moors?

After passing mats of blue-berried *Gaultheria trichophylla*, tasting of wintergreen ointment, we came upon the herb gatherers' untidy encampment. Most of them were out collecting, but a few were resting in camp. We showed them photos of *Lilium nanum* which they claimed to have seen on the "backside" of the Nalgan but they were rather vague and unconvincing. Perhaps while resting in camp a little too much cannabis may have confused them.

Camp at Garwa was pitched well above the herb gatherers although occasionally some straggled past heavily bowed down by sacks of roots. With an afternoon to spare we decided to explore a side valley, the Garuba Nullah. We asked a gaddi about the route ahead and he replied that he had never gone far. Later we realised why he was so unenterprising when a very stiff climb found us in an amphitheatre of vertical rock. The only new flower was an exciting creamy yellow *Leontopodium monocephalum* (Fig.69) two centimetre tall with tiny silver leaf rosettes.

NALGAN PASS (5030 m)

This day was fabulous. After a cold night we woke to brilliant sunshine. We set off towards the summit with our faces so well greased that some looked like white-faced clowns. Nearing the top were large areas of *Primula reptans* and *P. elliptica* with more *Cremanthodium reniforme*. A final climb up a steep snow cornice brought us to the crumbly granite summit, a real pass, a narrow saddle. This top was perfection for flowers with, after two paces, a stupendous drop beyond to lush herbage and forest hundreds of metres below. On the cliffs east of the summit were *Saxifraga pulvinaria, S. saginoides* and *S. jacquemontii*, while the turfy fertile ridge on the west was full of interest, with masses of deep blue *Gentiana tubiflora, Potentilla biflora, P. microphylla* (Fig.68) and the pink corydalis. In the scree just down the "backside" there were large spreading cushions of cream *Leontopodium monocephalum*, pink-tinged fluffy cylinders of *Saussurea simpsoniana*, woolly white balls of *S. gossypiphora* and wonderful deep pink *Arenaria glanduligera*.

Just beside the prayer flags on the pass there were memory stones decorated with offerings of pink corydalis and *Saussurea obvallata* but also a few stems of a new one to us, *Primula stuartii* (Fig.67). Where had these come from? "Down the backside a long way" said a passing shepherd. This prompted agitation for a descent. While we lunched 300 m down in the mist, Dilip scouted around and quickly found the primula. "How did you know where to look?" He answered "The plant is tall so I looked in the long grass." The monsoon blows up from the south, so this side of the mountain collects most of the mist and rain. We found our best 40 cm *Primula stuartii* close beside a waterfall. This nivalid primula has long narrow leaves silver on the underside and heads of large cream flowers with a rich yellow eye.

Another new find here was a strange 15 cm tall cigar-shaped *Saussurea graminifolia* which looked like a scarecrow with purple daisies on its head. "I've found a lloydia" called one of our group. "Does it have an orange centre and maroon stripes inside the bell?" "Yes", brought a mad scramble downhill to a damp turfy area where the plants were growing. This *Lloydia longiscapa* is more robust and much superior to the cliff-dwelling *Lloydia serotina*. But a cliff on our western side held a plentiful supply of one of the world's star

alpines, *Paraquilegia anemonoides*, unfortunately with its flowers just gone over.

Herb gatherers had worked around here. Plants of *Primula stuartii* lay discarded among the leaves of *Jurinea dolomiaea*, whose roots had been dug and bagged.

Our happy group headed back towards camp, passing a gaddi camp with strips of meat drying on the ground beside it. The owner, bubbling on his hookah, explained, "Sometime sheep or goat is eating hemlock they find high up, then he died. Then the chopper and dried like that meat." Apparently whatever had killed that animal, the meat was still edible (the flies were certainly enjoying it).

THE "BACKSIDE"

At breakfast next morning I (Henry) planned to head over the top of the pass and a long way down the far side in an effort to find *Lilium nanum*. None of the others was enthusiastic but said it was unsafe for me to go alone. "Ask if one of our Indian guides will accompany you." When I reported that Dilip and Lama would escort me, two more of our group decided to come, while the other three elected to explore more extensively on the nearside.

The "backside" party had a hard day of constant mist and drizzle in difficult terrain. Having descended for a couple of hours, we returned by climbing up the mountainside farther to the east. After scrambling up an endlessly evil boulder field, which damaged an ankle and an elbow, we ascended a steep scree with mats of a creeping shiny-leaved *Aster stracheyi* with short-stemmed blue flowers. Then on dry turfy ridges we were thrilled to find lots of *Gentiana stipitata* ssp. *tizuensis* varying from beautiful Cambridge-blue to blue-purple, most attractive despite the flowers being closed due to the mist. Higher on rocky ledges there was a gold *Saxifraga aristulata* with red centres to the flowers. As we returned towards the pass, we tramped over damp boggy land sprinkled with small waxy leaves of *Oxygraphis polypetala* which, as the name suggests, has many-petalled golden flowers.

EUREKA

Our nearside group, including Margaret, was even more successful exploring the head of the Nalgan valley just below the pass. The turf was studded with several species of *Pedicularis* including *PP. bicornuta, cheilanthifolia, rhinanthoides* (Fig.66),

megalantha and *siphonantha,* all growing in close proximity. These are very showy and interesting, despite being partially parasitic on other plants. It would be nice to learn how to grow them.

Several moraine ridges were explored, finding *Cassiope fastigiata, Rhododendron anthopogon* ssp. *hypenanthum* and a group of *Aster diplostephioides*. While two of us crawled around studying the leaves of small gentians, the third (our Rupin tea drinker) sat to watch circling vultures and shouted " Isn't this what we are looking for?" She had come up trumps. Her stone seat was amidst hundreds of *Lilium nanum* seedpods, unfortunately barely swelling as the flowers (wine-purple according to L&S) had only recently gone over. The 15 cm long stems and dark-striped seedpods were mimicking the stems and buds of nearby *Swertia cuneata*. The site was on the north-east side of a steep well-drained moraine.

Later, when our whole group studied them,we noticed that the single lilies were widely scattered with no sign of clumping. There were also separately spaced dried stems of the previous year, with no current growth beside them. We concluded that *Lilium nanum* in this wild population was mainly monocarpic, dying after flowering and only being perpetuated by seed. Considering the large flocks of sheep and goats around, it seemed very chancy whether many seedpods would reach maturity.

Although the flowers were gone, we think our plants were *Lilium nanum* and not *L. oxypetalum insigne* which has only once been seen in the wild by L&S in 1939 in the Baspa region. But the *L. oxypetalum insigne* which is quite well known in cultivation is probably derived from mixed seed collected 150 km south-east in Garhwal by Frank Smythe in 1937. This seed was raised and sorted out by the Rentons of Branklyn Garden in Perth and the lily was subsequently spread around by them and named by Robert Sealy (1956/57).

By the time our nearside group had got over their excitement and climbed onwards, the mist was down and *Gentiana tubiflora* had closed its flowers again. Luckily primulas don't mind the mist and good forms of *Primula elliptica* and *P. reptans* were photographed.

A huge flock of goat mowing-machines munched their way across the slope. Their preferred delicacy was the "holy" *Saussurea obvallata*. With a quick poke of the nose, the balloon cup of bracts was opened and the purple daisies inside swallowed. It was awful to see a superb plant of our pink corydalis also disappearing inside a

goat. In this area many plants of *Trollius acaulis* had flowered which must have been quite a sight a few weeks ago. Later, a few were found still in bloom beside a late snow hollow.

Further exploration revealed some pale and some deep blue *Delphinium cashmerianum*, cushions of *Androsace delavayi* and *Gentiana stipitata* ssp. *tizuensis* where we noticed that darker-flowered plants tended to have a red edge to their little rounded leaves, with the whole plant only five centimetres tall. Like *Gentiana tubiflora*, the trumpets were tantalisingly closed. What a day. We could not wait to tell the others about the lily.

Reluctantly next day we said farewell to our camp pitched on its bed of seeding *Androsace muscoidea*. The two-day trek down to Sangla was botanically uneventful (though we witnessed a bullfight), only rich yellow *Pedicularis hoffmeisteri* was added to our plant list.

At our final campsite our porters and guides played gubbidy, a boisterous game of tag played by two teams. After dark, following a farewell meal including beer, we joined in dancing to Indian drumming and singing. A lasting memory of the Himalaya is the energetic dance of our head porter Rangubadur in his red wellies.

JALORI PASS (3223 m)

Following our trek, we had a two-day Gipsy journey over the mountains to Manali. When we reached the summit of the Jalori Pass in monsoon rain and mist, we got out of our vehicles to walk down the road for a kilometre. A friend had told us that *Primula nana* (*edgeworthii*) grew here by the roadside. Water was pouring over the primulas which looked very happy. We could not see any seedpods though seedlings were coming up all around like mustard and cress. While taking photographs of green leaves in the rain, our Gipsies drew up with our men gazing in astonishment. Margaret said "You must think us very stupid." The answer came back, "No, we are stupid for not knowing our plants." Our Baspa expedition was made extra special by the warm companionship of our fellow plant hunters and our Indian friends.

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SUCCEEDING WITH RARE AND DIFFICULT PLANTS

THE CLARK MEMORIAL LECTURE 1998

by Brian Burrow

If you have a rare plant or a new plant make sure you propagate it. There is nothing worse than having one rare plant and you are hovering over it all the time. Once you have propagated it give some of the plants away to friends so that you can always go back to them if you lose yours. So propagate and give away.

With new plants experiment to get used to what they actually want in your situation. It differs from garden to garden.

I've grown alpines now in six different gardens with different conditions and you have to get used to each garden that you have. My garden in Cheshire (Fig.74) from 1981-1988 is just an example. This garden was in the middle of Cheshire which was actually very cold. The night temperatures in winter got down as low as -15°C in general times and sometimes to -20. That was one of the difficult things. Another was that it was very foggy and damp from about Sept. through to Nov. I had very serious problems with botrytis in the autumn. The good things about this garden were that the soil was very free draining, it was a nice sandy acid loam and plants such as Asiatic primulas used to grow very well outside. I would advise growing as many plants outside as possible.

CULTIVATION

Just a few general points on cultivation. The alpine house is really for the gardener rather than for the plants. If you have an alpine house you need maximum ventilation because you really want the air temperature as close to the outside temperature as possible in the summer. In the summer you need some shading and Coolglass on the outside of the greenhouse is probably one of the best . It is easy to put on and easy to take off. You can adjust the thickness of the coating. As far as raised frames are concerned these want to be uncovered in the summer and covered over in the winter but open to

some extent at the side. You want air movement going round the alpine house and frames most of the time.

As far as growing the plants in pots is concerned one of the methods is to grow them in clay pots plunged in substrate of either sand or sand/peat mixture. The idea is to keep the plunge wet and to keep the compost in the pots nice and moist and to keep the plants cool as far as the roots are concerned. Plenty of water in the summer time, not so much water in the winter. You can just water the plunge in the winter and only occasionally water the compost around the plant in the pot. You need to plunge the pots up to the rim almost. Personally I prefer to have small plastic pots and put the plants in clay pots as they get to a bigger size. So I grow all my plants in plastic pots up to about 4-5 inch diameter and then transfer them into clay pots afterwards. One of the big problems with plastic pots is that in a hot dry area the temperature in the pots can get high especially if they are quite moist. I find that some of the roots may be killed round the inside of the pot. So you do need to shade your greenhouse reasonably well and keep the temperature below 40°C. If possible keep your alpine house to within about 5-10°C maximum above the outside temperature. If you have these higher temperatures you get a lot more trouble with pests and diseases.

I put small pots in gravel trays standing on an inch of grit; the idea is to flood the grit intermittently but allow it to dry out between each watering. If you don't you will get it covered in moss, liverwort, algae and all sorts of things. So allow the grit to get dry and then flood it so that you have the water about 4-5 mm above the base of the pot. This will allow the water to be taken up in to the pots and as the water is taken up it should really then drop to about the base of the pot. The plants then take water out of the grit for about the next 7-10 days. Even in the summer you should only need to water in this situation about every 7-10 days.

As far as growing outside is concerned, a raised bed is ideal in that you usually get very good drainage. For any plants that don't like soil around the necks or under the leaves it is better to put 5-7 cm gravel on top of the soil. In the raised beds you can either have the ordinary soil or if it is heavy you can actually make a scree mixture. You do want to have as much air moving around as possible if you cover them in the winter. If you cover them and restrict the airflow you get a lot more problems with botrytis etc so I leave the sides open (except the side into the prevailing wind).

RAISING FROM SEED

One of my greatest interests as far as alpines are concerned is growing them from seed and seeing what you get. My method is normally to use John Innes seed compost mixed with 6-8 mm gravel 50/50 and sow the seeds on the top, then cover them with 6-8 mm of grit. I mix gravel with the compost because a lot of the John Innes sets like concrete if you don't and you can't get the seedling roots apart. With plenty of grit in it the compost falls away from the roots and you can separate them out very easily.Sow the seeds fairly thinly if you know they are going to germinate well; you can sow them a bit thicker if they are not going to. I cover with gravel because far-red light which is essential for some seed germination can bounce off the gravel and get down to the seeds quite easily. If you are going to grow some of the monocots which need dark you need about two centimetres or more. Even tiny saxifrages or primulas will germinate through 6-8 mm of grit without any problem. The seeds are sown then placed outside. If you only have a few seeds you can usually sow them in three-inch pots. Standing outside in all weather they want to get plenty of moisture. A lot of alpines of course have cold requirements before they will germinate.

I write code numbers on the side of the pot before filling, write that number on the empty packet and then transfer the name and number to a Journal or a book. Pencil on the side of the pot will usually last about 6-8 years The longest I have ever had to wait for something to germinate is actually seven years and that was *Campanula zoysii*.

I usually prick the seedlings out as soon as possible unless they are very small such as saxifrages or if there are only a few plants in the pot. If there are quite a lot of seedlings close together get them separated out as soon as possible because the roots will tend to get very tangled. This is especially true of the campanulas which have a huge root system compared with the size of the top so it is important to get them moved quite quickly. You prick them out individually into pots or trays (about 40 per tray). I normally use a mixture of JI1 or 2 plus gravel in the pricking out trays.

PROPAGATION BY CUTTINGS

If you can't divide the plants the other way is to take cuttings. I root the cuttings normally in pure sand. This is a sharp fine sand

which is very well drained and underneath the sand which is about two centimetres deep I have JI compost and gravel 50/50 again. You need fine sand for a lot of the tiny cuttings because if it is coarser sand the cuttings just fall out and the coarse sand does not stay moist enough. Some people use pumice and other things for the smaller cuttings. It does not really matter but the important thing is that the cuttings should be held in the compost and they should have water and air at all times.

I have divided the plants up into four groups.

1.Difficult but not necessarily rare

Grow things in the garden if possible; that's the important thing but if you want to show them of course you need to grow them in pots. *Eritrichium nanum* is short-lived in nature (often biennial). I found I could grow this reasonably well outside in the scree under a winter cover when it stays nicely in character and also it will flower quite well. The big problem of course is that it gets botrytis, usually in October, November or spring. There is a very good systemic fungicide called Tumbleblight which is useful. In a scree it normally lasts about 2-3 years. *Eritrichium* is easy to propagate; it roots in about two-seven weeks if you take cuttings in the summer. Cuttings taken in the autumn tend to rot off with botrytis unless you spray them with fungicide.

Most of the European androsaces are easy to grow when they are small but they tend to become more difficult as they get older. I find that to keep the older plants going you have to keep repotting or give a liquid feed. When they are starved they start to get die-back in the rosettes. *Androsace helvetica* is one of the most difficult to get to a large size. The important thing, of course, is that it is worth growing a lot from seed to get one that actually suits your conditions. Remember that everybody's conditions are different so it's important to get one that suits you. Many of these European androsaces produce better plants if you grow them from seed than if you take cuttings, although they will root from cuttings. Himalayan androsaces need to be kept going especially *Androsace delavayi*. They get die-back on rosettes very quickly in summer if you don't actually keep them growing. Repot before being completely pot bound or they may they lose rosettes and spoil the cushion for showing. They still flower quite well when they get big.

Dionysias are reputedly difficult to grow in Scotland but it should be possible to grow them in the east with its low rainfall as they like reasonably dry conditions. *Dionysia freitagii, microphylla* and *viscidula* are the most difficult to propagate but they are becoming more available now. Dionysia cuttings root in 4-12 weeks when in active growth. The biggest problem with them is keeping the botrytis and other fungal disease at bay in moist areas or keeping red spider mite away in drier areas in the south. People keep them too dry; I have mine standing on wet gravel all summer and keep them quite moist in the winter and they seem to be happy. They do need very free-draining compost though.

Of the European and Russian primulas, *Primula renifolia* from the Caucasus is classed as difficult although the biggest problem is actually propagating it. It does not set seed in cultivation and every time a plant is divided it is very difficult to establish the divisions (a success rate of 1 in 8). With primulas you need to get home-produced seed before they can be said to be established in cultivation.

Campanula zoysii is one of the more difficult campanulas. It is best grown outside in a scree with at least seven centimetres of pure gravel on the surface and a good compost below that; it runs happily in the gravel layer. It loves gravel and hates ordinary compost. This is also true of *C. piperi* which will make at least 30 cm in 18 months. Even in a pot they still do better with a deep layer of gravel on top. All the campanulas are very easy to propagate from cuttings and will root in about 6-8 weeks. *C. zoysii* is particularly easy so it is surprising it is not grown everywhere. Seed normally germinates after the second or third winter. *C. morettiana* always germinates after the second winter; it will grow outside, surviving but not thriving so it is better in a pot in the alpine house. It roots quickly, even from flowering shoots with the flower buds removed.

The Gentiana acaulis Group consists of about 10 related species. The most difficult is *G. alpina* which is characterised by very short stubby leaves almost as wide as long; it does well in a scree. If you grow species of this Group from seed you will find ones which suit your garden. When I ran a nursery I used to grow several hundred of each type and just pick out the ones which flowered well in my situations. This is what to do with all the various types. You can take cuttings of all the various types but they tend to take a long time to get going and don't do as well as from seed. *G. pyrenaica* is,

however, easy from cuttings and does well outside in a raised scree as long as it never dries out. In the wild it is a bog plant but doesn't need these conditions in cultivation but just to be kept nicely moist. Cuttings will root in 8-10 weeks if you take them in May-June. I once had it seeding around in the alpine house and one of the seedlings was pale lilac. Normally it does not set much seed in cultivation so that it is easier from cuttings.

The Himalayan saxifrages should be quite easy particularly in the western areas of Scotland. I find they need to be kept going all the time. If you slow them down you tend to lose rosettes and you then have problems. They are easy to propagate from the small rosettes. *Saxifraga hypostoma* is one of the most difficult and has become rare in cultivation again. *S. poluniana* and *S. georgeii* are quite a bit easier. They set seed and there are lots of good new hybrids around now. *S. serpyllifolia chrysantha* is a neglected species from the North American Rockies. It should be more widely grown so order seed if you have a chance of any. It is reasonably straightforward from seed but can be propagated by cuttings. It makes a lovely little rosette cushion even in the alpine house. It is a wonderful thing, often with bright red on the outside of the petals.

The Juno irises are quite happy outside if you have a nice well-drained soil, particularly the bigger ones. *II. vicaria, magnifica, aucheri, graeberana* and *cycloglossa* all do well in a well-drained garden. In the greenhouse in pots they tend to suffer much more from rots such as botrytis. The smaller ones, however, tend to get a bit dwarfed out in the garden unless you have a well-drained trough. They do need to be kept well aerated and not water-logged at any time. You must never detach the fleshy roots below the small bulb but most are reasonably straightforward.

Ranunculus glacialis is always thought of as one of the classic difficult plants. It varies tremendously in the wild with even some red forms. I find this plant is reasonably straightforward in a pot in the alpine house on the wet gravel trays. It will survive in the garden but it is very slow. Buttercup seed should always be collected when they are green and half to three quarter size before they are ripe and don't dry them off at all. Sow them immediately and they will germinate rapidly after the first winter. If you leave the seeds until they are mature they will germinate slowly and erratically over several years. This is also true of some of the daphnes and violas. Much easier than *R. glacialis* is *R. sequieri* which makes quite a sizeable plant

although it is not fast. You see it at shows from time to time but again it is important to select a good form with a good-sized flower; some are rather squinny.

Dicentra peregrina pusilla does very well outside if you don't cover it in the winter. It is much better outside than in. In Cheshire I found that plants left uncovered in the scree had twice as many flowers as ones which I had covered. It sets seed in cultivation but again you should take them straight off the plant and don't dry them out. They will germinate well the following spring. There is a red form around now as well.

Jankaea heldreichii is one of my bogey plants. I can grow it but can't flower it. What I think I am doing wrong is keeping it too wet. Duncan Lowe succeeds very well with this plant, growing it almost like a cactus in very sparse compost only just slightly moist in a clay pot, unshaded in a greenhouse which gets sun from sunrise until about 2pm. He only starts to water it when it begins to wilt. Duncan once gave me a plant and I put it under the greenhouse bench for a customer and forgot all about it. Three days later I went in and saw it brown and shrivelled. I was frantic because he was coming about two days later. I immersed it in a gravel tray of water and two days later it was a lovely green plant again, so it will stand these sorts of conditions.

Linum aretioides is another of my bogey plants. I kill it fairly regularly. I can grow it until it is time to repot it when I always kill it. Even if I don't disturb any soil at all it still dies. I would be interested to hear the reason why I kill this lovely plant.

Calceolaria darwinii (syn. *uniflora*) is easy from seed but you need to hand pollinate the flowers. All you do is dab your finger on to the anther and pop it on to the stigma which transfers the pollen. You get about 200 seeds per capsule which germinate like mustard and cress after the first winter. So, again I can't see why this is a rare plant in cultivation. I have a very nice form which I am trying to multiply up. Cuttings root readily in about 12 weeks but they don't make quite such good plants.

2. Rare but not necessarily difficult

Douglasii idahoensis is surprisingly still a rare plant. It doesn't set much seed in cultivation but it can be propagated from cuttings which must be taken just at the right time.I took cuttings of this about 12 weeks ago when it was in full growth and they are just

starting to root now. For a lot of these plants you just have to catch them when they are in the full flush of growth. There are not many clones of this around. Quite a few came in as seed originally .

Primula allionii 'Blush' (Fig.73) is a form which you don't see very often nowadays. It was produced in 1966 by Ken Wooster and it is still extremely rare. It is one of the nicest forms of *allionii* but it is very slow growing. So this type of plant needs propagating. Unfortunately many people who have such plants won't propagate them because they want them for showing.

I mention *Campanula zoysii* 'Lismore Ice' (Fig.75) in to remind me that when growing plants from seed a lot of people keep the big seedlings and throw the rest away. This is the wrong thing to do. You should prick out a few of the various sizes, particularly keeping all the small and odd ones because these are the ones which will vary from the normal. I had about 85 seedlings and this one was a little weedy thing with yellow tips to the leaves. I wondered at the time if it was going to be a white one so I looked after it and that was the result. It is actually easier to grow and flower than the normal type but it does need propagating as it tries to flower itself to death.

Saxifraga pubescens iratiana grows above 2800 m in the Pyrenees. I introduced quite a lot of this in 1980 but it seems to have mostly disappeared since. It is a beautiful saxifrage with lovely red lines in the petals. Each flower is about one cm across. I found it very successful in a raised bed outside covered in winter. You have to be careful with cuttings; if you take them too late they tend to rot. They do set seed in cultivation but the good forms need to be propagated from soft cuttings taken in about May-June. It is a lovely little saxifrage.

Shrubby violas are relatively straighforward but if you want to grow them outside the ideal spot is actually in tufa or between cracks in the rockery. The main thing for propagation is to get the cuttings early in the season because they need to produce the dormant buds before the winter or they will die. The other problem is that the old stems in the autumn die back to the resting bud and they tend to get botrytis so they need to be cut off or treated with fungicide. There are *cazorlensis, delphinantha* and *kosaninii* although this last species may have disappeared now. They are hardy outside in a lot of areas of Britain but parts of Scotland may be a bit too cold for them.

Fig. 71 *Saxifraga rigoi* (p.221) Brian Burrow

Fig. 72 *Primula sharmae* (p.221) Brian Burrow

Fig. 73 *Primula allionii* 'Blush' (p.216) Brian Burrow

Fig. 74 My garden in Cheshire in winter (p.209) Brian Burrow

Fig. 75 *Campanula zoysii* 'Lismore Ice' (p.216) Brian Burrow

Fig. 76 *Linum campanulatum* 'Verdon' (p.217) Brian Burrow

Fig. 77 *Viola alpina* (p.217) Brian Burrow

Fig. 78 *Primula jeffreyana* (p.218) Brian Burrow

Viola alpina (Fig.77) from Bulgaria is a lovely easy species but again it seems to have disappeared from cultivation. If you go to Bulgaria this is a thing to look out for. It is very straightforward from seed and it also roots from cuttings in about 6-7 weeks. Most violas are easy from cuttings which many people don't realise.

A lot of the New Zealand buttercups (eg *Ranunculus crithmifolius*) have deep roots so either give them a nice deep pot and liquid feed or keep moving them on again. I find that they tend to grind to a halt if you don't keep them moving along. This species is fine in the alpine house or outdoors covered in winter.

The forget-me-nots from New Zealand need to be kept growing. You can grow them from cuttings which root in about 10 weeks. Several species set seed in cultivation, shedding their seed all over other pots in the greenhouse so you get seedlings coming up in all sorts of different places. A number of new species have been introduced into cultivation with different coloured flowers.

Another of my favourite plants is *Linum campanulatum* 'Verdon' (Fig.76) which came to me from Mike and Polly Stone many years ago. It is very dwarf, only about 5-10 cm high with large yellow flowers and blue-green leaves. Last year my plant had about 80 flowers on it. Most linum flowers last for one day then go over but others replace them. Most can be propagated by cuttings throughout the summer. In fact this species can be propagated by cuttings at almost any time of the year so I don't know why it has become so rare again.

Most European and American orchids actually do quite well outside if you have a nice light soil and also have the fungus present which they need. When you buy orchids of course you tend to bring in the fungus with them. Semi-shade or not too hot and sunny suits many of them along with a very well-drained compost. Try them in different parts of the garden if you can to find somewhere that suits them. I had *Calypso bulbosa* growing outside in the garden in Cheshire for 5-6 years before it flowered itself to death. The main trouble with a lot of these orchids is actually getting hold of them. Some of the common ones such as the dactylorhizas can almost become serious weeds around the garden if you have the fungus and a reasonably light soil.

Another nice plant is *Ornithogalum nanum* which flowers at ground level. The flowers are about three centimetres across. Geoff Mawson showed a plant of this at the Sudbury Show in 1997 in a

seven inch pot. It was a dome of white flowers about 15 cm high. It is such an easy plant but it does not seem to have got around much. We need nurserymen to start propagating it again. It produces side bulbs quite easily and you can grow it from seed to flowering in about 2½ years.

Iris gatesii is one of the big oncocyclus irises. When I first started growing plants and before I was too interested in alpines I was given some of these irises and, not knowing any better, I put them in the garden. It was a nice sandy soil and they thrived and flowered every year. This is actually the biggest iris flower of all, 15 cm long and 10 cm wide. You can get hold of these and they are hardy down to about -10°C. So if you have a nice sandy soil it's worth trying them outside. But try to propagate some and hold them in a frame or glasshouse. I lost mine when I moved house not having propagated any extra plants.

3. New introductions

Just a few new introductions. *Androsace bryomorpha* was collected by Joseph Halda. This is only just in cultivation but I don't know how long it will last. The main problem is taking the cuttings which are so tiny or getting home-produced seed. A little bit of seed has been set but none of it has germinated yet so we'll have to wait and see. *Androsace bisulca aurata*, which I do not find very hardy, was introduced by the ACE Expedition. I don't know how many people grow this still but it died in the winter-time with me after starting into growth at the wrong time. It is a wonderful intoduction if you can get it going but I am a bit sceptical about its hardiness unless it can be kept dormant in the winter.

Primula jeffreyana (Fig.78) is a primula in the Farinosae Section which should make a very nice garden plant. It was collected by Mr and Mrs Miehe in SE Tibet in September 1997. It flowered for the first time in July 1998. It came from about 4000 m high in the dry cold areas of Tibet. I did not realise this when I got it. I germinated seed and put plants into typical wet primula conditions and also out into the garden. It has thrived in both and looks as if it may make a very good garden plant. It is now setting seed in cultivation so I hope it will get around quite quickly. It is about 15 cm high with 5-13 good-sized lilac, pink or white flowers.

I find it difficult to get home-produced seed of the soldanelloid primulas and they are difficult to keep going for long mainly because

they go back to a resting crown in the winter time and the old leaves rot as they die back so a fungicide is useful. It is important to keep them dry on the surface during the winter. *Primula bracteata* is going to make a very nice plant. It has now produced seed in cultivation and is actually getting going. It is from the ACE expedition.

A lovely saxifrage which has recently been introduced is *Saxifraga dinnikii* from Russia. The flowers are about 2-3 cm across with lovely crenate edges. The flowers are single on about 1½ cm stems. It seems to be straightforward in cultivation. I took five cuttings off a plant and they have now rooted. It hasn't set seed yet but I do not know if people have hand-pollinated it.

The New Zealand celmisias are very good for the garden or the greenhouse but some suffer drastically if they get wet around the neck. The roots and tops don't usually rot but you tend to get them dying at ground level. *Celmisia spedenii* is one of the new ones which you can now buy from quite a few nurserymen. Lots of seed has been introduced into the country. It is one of the nicest of the silver celmisias which is hardy both inside and outside in England. I used to find in Cheshire that some celmisias suffered when they got down to about -15°C.

Several of the ourisias have been introduced from South America. *Ourisia polyantha* is a nice red-flowered species. Ourisias are relatively straightforward but the flowers tend to die back after they have finished flowering and rots will then go back to the crown. So cut the flowers off as they die and that is a big help. They will root from cuttings in about 6-8 weeks. Another one to mention is *Ourisia microphylla alba*.

Viola albanica has been introduced from Greece. It has nice blue leaves and upward-pointing pink flowers. This can be propagated by cuttings. Most violas are relatively straightforward from cuttings. Viola fire their seeds so that you have to collect them before they get to the point of firing. Just as the capsules go upright they are going to explode and fire so catch them just before they reach the vertical.

A wonderful new alyssum which has just been introduced by Robert Rolfe is *Alyssum oxycarpum*. It does well in my raised bed outside. It flowers for about 5-6 months. It is only about 15 cm high. It has lovely grey foliage and yellow flowers and is dead easy to grow, getting to almost a metre across. It roots from cuttings in about 12-15 weeks.

Since I am in Scotland I must mention the Isle of Skye form of *Trollius europaeus* A lot of the plants are very dwarf in the wild and remain so back in cultivation. I was given this plant by a Scottish member about 20 years ago and I have kept it going ever since. At the Newcastle Show in 1998 it caused quite a lot of comment. They also remain dwarf when grown from seed. This is only 15-20 cm tall compared with the normal form at about 60 cm high and it has very large flowers. In many places in the north of Scotland these dwarf forms may be seen.

Some of the new saxifrage hybrids are very good. If you are keen on showing they will make an excellent eight inch pan in about 3½ years. 'Judith Shackleton' (*burserana* x *poluniana*) is one of the best. This covers itself in large almost stemless white flowers and can be grown in a pan or outside in scree conditions. Quite a lot of the *georgeii* hybrids will also do the same thing. Most are easy to propagate as well and you can now buy many of them at about £2 each.

A lot of seed of New Zealand plants is coming in at the moment (such as *Leucogenes grandiceps* and the raoulias). A lot of them are actually hybrids. Most of these new crosses are very good plants both for the greenhouse and outside, standing up to the weather very well. They are easy to propagate from cuttings so we should see a lot of these about shortly.

4. Rest in peace
(*Plants which I believe are lost to cultivation but hopefully are not*)

The last group of plants. I will be interested to know if anyone has still got any of these plants growing. They are not all rare plants. *Saxifraga rigoi* (Fig.71) from Spain is one of the summer dormant saxifrages which are actually quite interesting. When it flowers the rosettes have just gone to a lovely bright red giving a nice contrast between the foliage and the flowers. You can propagate it quite easily from cuttings in the winter time when it is nice and green and growing. It also comes well from seed. It is only about 15 cm high. It would be a shame if this were to disappear out of cultivation.

Gentiana scarlatina from Ecuador was around a few years ago. It can be propagated by cuttings. The best time I got it to flower was when I chopped one of my big plants to bits and all the cuttings

actually flowered in the cutting tray. The remains of the plant did not flower at all.

A plant that Robert Rolfe collected from South America was the lovely red and yellow form of *Calandrinia rupestris*. It was reasonably straightforward to grow and set seed but it seems to have disappeared for some reason, largely because people neglected to propagate it.

The white form of *Primula deuteronana* is still around but I wonder if anyone still has the lovely dark purple one which was collected by George Smith. We grew the purple and the white side by side and there was no great difference in how difficult they were to grow. The white one has persisted but the purple one has disappeared. *P. deuteronana* can be split or propagated by leaf cuttings.

Primula sharmae (Fig.72) in the Farinosae Section is a nice easy little plant from the Himalayas which was getting around about 10 years ago but again seems to have disappeared fairly rapidly. In the Farinosae Section a lot of species set seed on their own while with many other primulas you need pins and thrums to get seed. The Farinosae primulas usually germinate after the second winter.

Androsace croftii is in the Geraniifolia Section. Again this was in cultivation quite a lot but everybody seemed to neglect it at the same time and it disappeared. Is it still around?

At one time there were lots of different forms of *Campanula morettiana* around. At least 4-5 white forms were grown but I think there are only 1-2 forms around now. Individual plants are not long-lived and so you need to keep propagating them all the time. They root quickly from summer cuttings.

Saxifraga melanocentra needs recollecting from the Himalayas. It is in a Section of its own. It has wonderful white flowers with a black ovary. It has set seed in cultivation but unfortunately none germinated. It is another of these short-lived plants but if we can get seed to germinate we should be able to get it back into cultivation.

Another of my favourite saxifrages which has also gone out of cultivation is *Saxifraga punctulata*, a high alpine from the Himalayas. It can be propagated by cuttings taken in the summer time. It has the nicest saxifrage flowers you could ever come across, waxy white or yellow, covered in spots. Again it has disappeared.

So to finish I would again say to people who have rare or difficult plants. "Make sure you propagate them as soon as possible".

DAPHNE PETRAEA 'GRANDIFLORA'

by Glassford Sprunt

The daphnes belong to the Family Thymelaceae. The natural habitat *of Daphne petraea* 'Grandiflora' is in the mountains around Lake Garda in North Italy. As their name suggests they are rock lovers and are to be found growing in the clefts in the rocks. They grow from a central rootstock and produce radiating branches from this. Normally the maximum height is about 20 cm. and the diameter can become quite considerable. The leaves are small and narrow and of a dullish but glossy green. The flowers are a rich pink and have an almost crystalline appearance. They also have a very strong scent.

Daphne petraea 'Grandiflora' is arguably one of the nicest of the whole genus and when it appears on the benches at our Shows undoubtedly attracts a great deal of attention. Few of the specimens on show are of any great size. The one shown in the attached picture (Fig. p.84) is about 35 cm in diameter and won the Forrest Medal at the Glasgow Show in 1998.

Many of the plants available at this time are on grafted rootstocks, although there is no particular problem in rooting cuttings and growing them on, on their own roots. When in flower the plant is smothered in flowers to the extent that very little of the foliage remains visible. When the flowers went over, for interest, I counted the number of blooms on this plant and it was about 3,500.

To bring a plant to this state for exhibition requires careful attention to certain details in the run-up period. Starting at about two months before the expected time of presentation, routine turning of the plant is carried out. Initially this is to the extent of ¼ of a turn about twice a week. This frequency is increased as the projected show time approaches. Failure to do this results in the side of the plant facing the sun coming into flower considerably sooner than the side away from the sun. This ensures even flowering.

Probably the most important factor of all in even flowering is attention to watering. So often this is neglected in the winter. The flower buds start to form towards the end of the summer and for these to develop properly the plant must be kept adequately moist at the roots. Failure to do this results in the abortion of the flower buds and patchy flowering. During the growing season they really do require quite a considerable amount of water. I usually lace this water with a tomato fertiliser and feed weekly, weakly. Any watering required in between times is with plain water.

PURPLE POPPIES

by David. W. H. Rankin

The landscapes around Aviemore, in the Scottish Highlands, and Zhongdian, in China's Yunnan Province, share many important characteristics. Around extensive flat areas the mountains rise a thousand metres and more. The lower slopes are forested, although the larger part has long since had the best timber stripped. Through the woods and up to higher levels ericaceous shrubs dominate; in Scotland *Vaccinium* species and heathers (*Calluna* and *Erica*), in Yunnan mainly rhododendrons, some as large shrubs or even trees, others playing the same ankle-trapping role as the Scottish heather.

In either place, it is a good day's walk from the plain to the tops and back. Towards the peaks there are screes and crags, and gaining a summit may involve moderate scrambling. At the end of the day one's legs will protest that they have earned their keep. But for the lungs it is a different story. The trip from the Spey valley in Scotland will start at about 200 m, whereas Zhongdian lies at 3200 m, and the peaks are well over 4000 m. The unavoidable stretches of loose scree are quite literally breathtaking, and it is a long, painful struggle to reach the more stable rock which often surrounds the highest points.

The high screes and crags are also metaphorically breathtaking. They are host to some stunning flowers. On our first visit to Xianren Dong (Immortal Cave) Snow Mountain, in July 1995, we had to fight our way through a tangle of rhododendrons, first head high, then waist high — too high to step over, too low to duck under, particularly while carrying a rucksack. Eventually, at about 4000 m, we reached the bottom of a huge limestone scree. Crossing to reach the side of a rocky outcrop, to gain a firmer upward route, we found crevices filled with *Paraquilegia anemonoides*, a classic plant of lime-rich soil while other, apparently identical, crevices hosted *Rhododendron primuliflorum*. Several *Primula* species grew in parts of the scree where a little surface soil had accumulated. One had tiny leaves and a ludicrously long flower stem, surmounted by flowers, each of which was much larger than the whole leaf rosette. Nearby, a *Cremanthodium* with a single, nodding, rather pale yellow flower on a dark red stem, rising straight above two or three

prostrate, dark green leaves, provided a most unusual colour combination. But the most dramatic plants were the *Meconopsis*, of which three species grew together.

MECONOPSIS HORRIDULA VAR. RUDIS

Meconopsis horridula is a variable species, occurring through much of the Himalaya and Western China, with robust plants a metre tall in some areas, and tiny (5 cm high) forms at very high altitudes. The form which was growing here was *Meconopsis horridula* var. *rudis* Prain (widely thought to be a distinct species, which would be called *M. rudis* (Prain) Prain), characterised by purplish spots on the leaves around the bases of the spines (Fig.79). It usually has rather dusky blue flowers and a greyish bloom to the foliage, but here there was at least a hint of red in all of the flowers, which ranged from a purplish blue to a pale mauve. We have grown this variety from wild-collected seed, and it has grown well enough for the first generation. But *Meconopsis horridula* is monocarpic, and it seems to be harder to maintain var. *rudis* through several generations than the form often known as *M. prattii*.

This we have usually found at rather lower elevations and often in richer soil, even in partly shaded woodland, whereas var. *rudis* seems to prefer to stay on the limestone screes. This second form was first known as *M. sinuata* var. *prattii* Prain However, Prain, who was clearly a man who liked to change his mind, then decided that it belonged in *M. rudis*, before giving it the new name of *M. prattii* (Prain) Prain. George Taylor then dropped it into *M. horridula* (Fig.80), on the grounds that there is no clear distinction from other forms of that species. The one name it lacked was perhaps the one it most deserved – *Meconopsis horridula* var. *prattii*. In my limited travels I have never found a mixed population of *prattii* and *rudis* forms, although I am told that they do exist. Checking such a population for intermediates would provide important data which would help to decide whether separation, at least at varietal level, may be valid. On the other hand, I have seen plants which I could not with confidence place into either camp, which suggests that Taylor may have been right when he said that segregation within *Meconopsis horridula* cannot be justified.

MECONOPSIS LANCIFOLIA

The second *Meconopsis* on the scree was *M. lancifolia* (Franch.) Prain ex Prain (Fig.81), here with just a few rich purple flowers with yellow stamens, darkening with age, on each plant. Although pale-flowered specimens of this species are known, the colour normally is of an intensity which is not found in *M. horridula* and plants can be strikingly attractive. They are also much less spiny than their cousins, and would be more than welcome in the garden, but, alas, they are demanding customers. One or two have appeared at shows, and cultivated seed has been listed in the seed exchanges, which augurs well for its establishment, but I doubt whether it will ever be widespread.

MECONOPSIS PSEUDOVENUSTA

The third species was new to us. It grew beside large stones or tucked into crevices at the bases of rocks which bordered the scree. From the base of each plant rose a cluster of pedicels about 20 cm high, each bearing one slightly hanging flower of a deep purple with prominent bright yellow stamens. The foliage was fleshy, each leaf more or less lobed, not at all hairy or spiny. In some plants both flower and leaf stems were dark green while, on others, they were a striking deep beetrooty maroon-red, this colour extending into the leaf mid-ribs. It was a plant with class, quite the equal of the most sought-after hellebores, and sharing many of their characteristics; a plant which demanded attention — and well repaid it (Fig.82).

Subsequent work identified it as *Meconopsis pseudovenusta* G. Tayl. It was separated from *M. venusta* by Taylor on the grounds that it had four to ten petals, whereas *M. venusta* always had four, and on the shape of the seed capsule. The first of these seems to be an insubstantial basis for establishing a new species. As Taylor never saw living plants of either species and had access to very limited herbarium material, a careful study in the field might well lead to the two being reunited as *M. venusta*.

Surprisingly, we have heard no other reports of this species in recent years, although many botanical groups have visited the Zhongdian area. Is it very local, perhaps not growing on some of the more frequented mountains in the vicinity? Or is it late appearing, and thus missed by most groups, who come in May or June rather than in the wet season when these plants flower? We searched the

same scree in May 1997 and found no trace of plants — neither new growth, nor dried seedheads from the preceding year.

We did gather a few green capsules, characteristically much longer and narrower than those of related species, except for the even more extreme *M. venusta*, in the hope that seeds would mature and prove to be viable, but none germinated. I am not aware that the species has ever been in cultivation. We then plodded slowly up, eventually triumphantly reaching the craggy summit, with superb views in all directions. A mass of Tibetan prayer flags showed that the local people are frequent visitors to this remote spot, but our Chinese guide assured us that we were the first Westerners to reach the top since George Forrest, more than 70 years previously.

Returning to the scree, we discovered one reason for the scarcity of *Meconopsis pseudovenusta*. While we had been away, our two Chinese companions had hacked out a large carrier bag-full of *Lagotis integra*, the roots of which are used by Tibetans for some medicinal purpose. The bag also contained several whole plants of the *Meconopsis*, which had surprisingly robust root systems. We have not been able to ascertain what use these plants would be put to. But it brought home to us the complexity of conservation issues. Should we be pleased that traditional use of herbal medicines remains or concerned for the survival of rare and beautiful plants? Both are important. We should aim both to ensure that the plant survives in its natural environment, and to bring it into cultivation, there to learn how to sustain it for all to enjoy. Its habitat is not under threat at present, but there may be another parallel with the Scottish mountains. The area is opening up and tourists are coming in increasing numbers. How long will it be before there are ski lifts and funicular railways on Xianren Dong? What price then just one more species of purple poppy?

REFERENCE

Taylor, George. 'An account of the genus Meconopsis', Waterstone 1934.

TWO LEWISIAS AND A LILY

by Denis Hardy

It's ten years since I wrote about *Cardiocrinum giganteum* var. *yunnanense* (The Rock Garden, June 1989, p.267) though it seems like yesterday. That account recorded the first flowering, in July 1987, of the giant lily in our garden up the hill overlooking the Beauly Firth near Inverness. I noted that the flower spike could be seen through Jim Sutherland's bird-watching telescope from his nursery at Ardfearn, some seven miles away as measured by milestones along the old A9 road on the south side of the Firth.

At that time I had been growing a variety of lewisias for several years, not only the usual suspects such as *L. cotyledon* hybrids and *L. tweedyi* but also *LL. brachycalyx, columbiana* and *longipetala*. An unusual specimen had appeared in my collection, a neat little evergreen plant of similar habit to *L. cotyledon* hybrids, with a purplish flower that came true from seed (Fig.83).

Material sent to Brian Mathew in July 1970 elicited the following reply. "It seems to me from the leaf characters and the bracts that it is most likely to be a *L. longipetala* x *L. cotyledon* hybrid. The fact that it is fertile and the seedlings come true is not impossible although unusual. It could be my imagination but the dried remains of your plant do seem to have a fragrance indicative of a *longipetala* cross." In his book 'The Genus Lewisia' published in 1989, Brian Mathew mentions that it was Mrs Kath Dryden who pointed out that all hybrids having *L. longipetala* as one of the parents have a strong musky or spicy fragrance, not just the flowers but the leaves and caudex also.

The flower colour and the geographical origin of the genus *Lewisia* suggested to me the name 'Little Plum', after a fictional young 'Redskin' brave featured at the time in the Beano comic. The plant found its way on to the market via John Lawson at Inshriach and I was amused to find the seed listed in the SRGC Seed List in recent years.

Whatever the provenance of *Lewisia* 'Little Plum' there is no doubt about the pedigree of *Lewisia tweedyi*, the queen of lewisias and one of the gems of the flora of Washington State, USA (I quote

Brian Mathew in the 'The Genus Lewisia'). So when Elizabeth and I visited the Pacific North West in 1993 we went armed with an introduction to Betty and Ned Lowry in the hope of seeing *L. tweedyi* in the wild.

Plants and people did us proud and in July of that year we admired some fine specimens of *Lewisia tweedyi* in the Wenatchee range in the company of the Lowrys and Steve Doonan of Grand Ridge Nursery. As we sat in the pine duff (the fallen leaves) under the Ponderosas nibbling Kendal Mint Cake in true expedition style, Steve remarked that surely I'd been joking about the long distance visibility of the cardiocrinum at home. I assured him it was true, reflecting that I was in the cascades of North America talking about a Himalayan plant growing on a Scottish hill.

Lewisia tweedyi (drawing by Joyce Johnson)

FISHING FOR GOLD —BOXING AND PLANTING

or HOW TO LOSE TWO WEEKS OF YOUR LIFE

by A. J. Leven

In 1997 the Royal Horticultural Society held the first Scotland's National Gardening Show in Strathclyde Park, near Motherwell and Glasgow. The title of the event says everything about the aims of the show. It was the first RHS show in Scotland, part of its programme of moving its events from London and South East England and reaching out to gardeners in all parts of the country. Considering that the show was promoted as 'Scotland's, 'National' and 'Gardening' and that the Scottish Rock Garden Club is Scotland's largest horticultural society, the SRGC Council felt that it was essential that we be represented at this prestigious event. We asked for space before we really knew what kind of display we could mount. As the then SRGC Publicity Manager, it fell to me to devise a plan which we would implement.

Towards the end of 1996 a form arrived in Dunblane in the morning post. I was asked how much space we needed and "Would I send a plan of our display?" This fairly concentrated the mind and no mistake. What size? 6 metres square sounded reasonable but 36 sqoqre metres really is quite a large area. Progressive too - as we found out that many exhibitors asked for their space in yards and feet. Metres are the modern British units so we would be modern. Would we want a raised area or a floor level site? A site against the marquee wall or in the centre of the tent? I asked for a flat site in the middle of the tent.

I sat down at the computer, called up CorelDraw and started drawing a plan. Years of visiting the Chelsea Flower Show with other members of the Joint Rock Garden Plant Committee convinced me that a simple design would be best. It is very easy to criticise other people's displays but more difficult to get it right oneself. We wanted to show the general public as wide a range of rock garden plants as possible. The show was being held at the end of May-beginning of June, just after the SRGC show season finishes. The display could be based on alpines in troughs. I decided to ask as

many members as I could if they would plant up a trough of alpine plants. In the end we had over 50 troughs from about 35 members. Troughs always look best when grouped together, so we would put the troughs at the corners and sides of our square area, where small plants can best be appreciated.

ALPINE PLANTS IN A PATIO GARDEN

We would need a central section higher than floor level which would be planted with trilliums, meconopsis and hostas. Since the whole display would be 6 m square the centre could be 2 m square. This sounded simple and its symmetry would make placing the troughs easier. Slabs would edge the display and give it a 'patio feel'. Gravel would cover the rest of the ground area. We named the display 'Alpine Plants in a Patio Garden'. We would show Scottish gardeners just how easily they can grow rock garden plants in small modern suburban gardens. The era of large gardens is passing and many new gardeners have quite small plots. Walk round any new housing development and you will find a similarity in garden lay-out; a small paved area accessed from the kitchen door leading to small lawn with some shrubs and maybe a flower bed. Proximity to the house may give some shelter but these places can also be quite hot, dry and sunny. Wind often funnels between houses which can limit plant choice. Alpines in troughs can grow well in most conditions. They have the advantage of being portable so that at different times of year depending on weather conditions and the growth stage of the plants in the troughs they can be interchanged. Our aim would be to show how rock garden plants can be used in these drab paved areas to make them interesting parts of the garden.

POLYSTYRENE FISH BOXES

All our troughs were made from polystyrene fish boxes. The big long ones were Ian Young's responsibility. As Ian bides in Aberdeen he is well aquaint wi' fish boxes. Several years ago he had planted up some 'fish box troughs'. I had admired them and they gave me the idea for the display. My other source of inspiration was a display mounted by the Ayr group at an Ayr flower show. I would make the smaller troughs from boxes gathered from Tesco. Haddock, plaice, sole, kipper or Norwegian salmon — I got their boxes. After the polystyrene boxes are washed, they are roughened and shaped then painted with masonry paint. Once planted and gathered together they

easily pass for the real thing. Our technique has improved as we made more boxes. For the 1998 display we even made a raised wall out of polystyrene boxes. Covering them with sand when the paint is wet makes them even more realistic. No-one who sees them planted up believes they are FISH BOXES. We have shown them off in so many places that I fear that the Scottish Rock Garden Club will soon become synonymous with fish box recycling.

OUR MEMBERS PLANT UP

I distributed the troughs at the spring shows. I suggested to members that they might like to plant up a trough on the theme of Scottish, New Zealand, American, Himalayan, orchid, fern, foliage, shade, summer flowering - whatever they wanted. We even had one planted with carniverous plants growing in moss. Those who planted up a trough were allowed to keep it after the show was over. Members who would never have dreamed of exhibiting plants at a SRGC show, planted troughs. Most placed rock or a piece of weathered wood in the trough to act as a foil for the plants. The top dressing varied from trough to trough. Towards the end of May I had to start gathering the troughs together in Dunblane. My sons Andrew and Alasdair acted as porters and drivers while my wife Anne and daughter Johanna watered and cared for the plants. When it was very sunny, the troughs were moved into the shade. Our front garden was soon filled with troughs of rock plants. Our neighbours came to admire them. In truth I think they thought I had finally cracked. My sister wondered if everyone in the SRGC was as 'enthusiastic' (she used another word) as I. She did, however, contribute a trough to the display.

EVELYN COMES UP TRUMPS

In the weeks before the troughs started arriving I visited Evelyn Stevens up at Sheriffmuir to see the plants which she said we could borrow. What a range of wonderful primulas, tiarellas, meconopsis, geums, polemoniums and potentillas she grows. I was allowed to choose almost anything I thought might be suitable. It was like Christmas but I got to make my own choices. My simple idea of trilliums and hostas was becoming eclipsed by a much grander scheme based on Evelyn's treasures. I did contribute some hostas of my own but the centre belonged to Evelyn.

IN COMES GLASSFORD

While I was gathering troughs and looking at plants, the SRGC's master carpenter, retired orthopaedic surgeon and past President, Glassford Sprunt was constructing the centrepiece. "How high do you want this box?" asked Glassford. "High enough to look good", was my reply. The box had a raised floor which we raised even higher in 1998. A box 2 m square needs a lot of compost to fill it, no matter what depth it is. Once the box was made in sections we brought it to Dunblane and my sons painted it blue - Iris blue in the Cuprinol Garden Shades range. This was a bold step as most people I asked thought brown was more of a garden colour. I thought blue would give the display an extra dimension. It gives a feeling of sky and water. Glassford also made four 'lecterns', one for each corner, on which we placed folders containing information about the troughs - title of the trough, plant names, owner etc. These lecterns were also painted Iris blue.

We needed a small tree or large bush for the very centre. My mother had died a few months before and my sister and I were in the process of selling her house in Falkland. I remembered a fine Pieris 'Forest Flame' which she had planted many years before. I drove through to Fife to dig it up. Unfortunately it had grown into a hedge and consequently had a bald side. Judicious pruning would be needed, not to mention a big pot. For the last year it has lived in a big green plastic B&Q bucket. My mum would have been proud of her part in the show.

COMPLICATED LOGISTICS

The next step was the most laborious. Everything had to be taken from Dunblane to Strathclyde Park, a round trip of about 130 km. I hired a big white transit-type van. Several journeys were needed. The show was to open on the Friday and run for three days. By the Monday the marquees were erected. For the organisers this must have been some kind of nightmare because much of the equipment had been used at the Chelsea Flower Show the previous week, so dismantle Chelsea, put the material on a lorry and drive it Glasgow. Once it had been used in Scotland it was immediately taken to Birmingham for the BBC Gardener's World Show and then to Hampton Court. Once I realised how complicated were the logistics, I began to feel guilty about hassling Susan Oliver and Johanne Morrison of the RHS. I needed early access for some materials and

Fig. 79 *Meconopsis horridula* var. *rudis* (p.224) David Rankin

Fig. 80 *Meconopsis horridula (M. prattii)* (p.224) David Rankin

Fig. 81 *Meconopsis lancifolia* on scree (p.225) David Rankin

Fig. 82 *Meconopsis pseudovenusta* on scree (p.225) David Rankin

Fig. 83 *Lewisia* 'Little Plum' (p.227) Denis Hardy

Fig. 84 *Daphne petraea* 'Grandiflora' (p.222) Glassford Sprunt

Fig. 85 *Jankaea heldreichii* (p.245) Hedi and Jim Hancox

Fig. 86 *Picea abies* 'Kocanda' (p.244) Jaroslav Kasbal

where were the passes for those members who would man the stand? I finally got the passes on the Tuesday evening and we were setting up next morning. On the Monday, Graham Butler and I drove through with 40 slabs from Greenyards Garden Centre, Stirling, 70 boulders from Barbush Quarry in Dunblane, 24 concrete blocks, bags of gravel and lengths of wood. Our site looked huge when we saw it marked out in the empty marquee. Once the materials were unloaded it resembled a building site.

OUR MEMBERS ARRIVE

Our team of members arrived on the Wednesday morning. Some of us started laying out the slabs on top of 2x2 inch batons along the edges while others assembled the central blue box. The RHS had supplied composted bark and I had asked for 25 bags – not nearly enough. While on the subject of shortages, we soon found out that a bag of gravel doesn't go very far either. Luckily I had bought the gravel from Homebase in Falkirk and there were two other Homebases within 8 km of the show. One visit to the Wishaw branch cleaned out their stock of gravel, so I had to drive to East Kilbride for more. For the 1998 show I ordered a palette load of gravel from the Wishaw branch of Homebase and 100 bags of bark from the RHS. They telephoned to say I had asked for more than anyone else and would we really need as much. We settled for a lesser number of bags and were able to supply other stands round about. Peter Semple, who at the first show was our Club President, carried heavy bags of compost and gravel, moved troughs and swept up as well as contributing two beautiful troughs. One of his troughs was so convincing that when he took it home and left near his house a window cleaner tried to stand on it to make his work easier. Polystyrene can be made to look like stone but unfortunately you cannot stand on it. John Amand told us at the SRGC Early Bulb Day in Dunblane in February 1998 that they use the bark equivalent of only six bales of peat for their huge Chelsea display. We still have to learn the art of packing paper and plastic round our display plants.

WHITE VAN CAMARADERIE

The rest of Wednesday was spent taking van loads of troughs from Dunblane to Strathclyde Park. I discovered that there is a camaraderie between drivers of white vans. Other drivers wave to you; they let you out into traffic; in general they are considerate. Not

so car drivers. They treat white vans as dangerous pests. They feel compelled to overtake, blow their horn and in general behave rudely. Car drivers do, however, give white vans a wide berth in case the van scratches their car.

PLACING IS A SKILL

While I was away, Evelyn Stevens and Diana Davis were quietly planting up the centrepiece. I was consulted on the pieris since it was mine. It eventually had to be tilted backwards to get the right effect. Once the pieris was placed, the herbaceous plants were set out. Evelyn and Diana worked well together. They have a feel for plants and colour. They know when more height is needed. They seem to think in three dimensions. My idea of hostas and trilliums was too heavy on the eye. They knew we needed a light airy feel in the centre to counter the solid troughs round the edges. It is difficult to describe the skill involved in placing these plants other than to describe it as 'floral art with living plants' instead of with cut flowers. Different coloured Asiatic primulas were placed under meconopsis. Some plants were used in drifts – red geum, pale yellow polemonium, purple *Oxalis* 'Ione Hecker' and blue *Phlox* 'Chatahoochee'. Often an outlier was placed a short distance from the main clump. Solid spires of dark purple *Dactylorrhiza elata* dotted among the frothy flowers of the polemoniums. Once the heights were agreed and enough plants were in place, each one had to be tidied up. Damaged leaves, broken stems, fading flowers and occasional weeds were all removed. Those of us who had exhibited plants at our shows know that judges can spot an imperfection from the other side of the room. We knew the RHS judges would be on top form. We were building the exhibit and telling everyone 'This is what the Scottish Rock Garden Club can do.' We had to be as careful and self critical as we could. The plants were set back in place and the top dressing of composted bark was applied. It is very important to cover all the pots. The pot rims must not show.

AND NOW THE LABELS

While the plants were being set out, Brian Conway started writing out all the labels. The RHS recommends that labels be black and that writing be silver or white. I had bought labels in a range of sizes. It is not easy to get the spacing correct on labels when all plants have names of different lengths while labels come in set sizes.

Big labels with big writing for those plants far from the edge and smaller labels for plants more easily seen. Although we knew Brian was ill, we did not realise that this was the last show at which many of us would see him. Brian died in October 1997. We missed him in 1998. Diana wrote labels for the 1998 show and proved to be as meticulous as Brian. Sedum 'Cape Blanca' caused a lot of discussion. Some thought it should be S. 'Capa blanca'. Diana prevailed with the correct name 'Cape Blanca'. A seemingly small thing like the correct name for a plant is very important at one of these shows. (According to The Plantfinder and the RHS Dictionary, the correct name should be *S. spathulifolium* 'Cape Blanco. *ED.*)

TIME FOR REFRESHMENT

In 1997 I had intended to plant some small alpines in the gravel between the troughs. When we saw the display taking shape, we realised such plants would distract from the overall effect of the troughs and patio. We did need depth around the edges and between the slabs because David Walkinshaw had brought clumps of various sempervivums and saxifrage. He was quite happy to have these clumps torn apart and the individual plants set in cracks. This time-consuming work gave the display a really polished look. It was David who brought us ice cream on the Thursday afternoon in 1997. He could have brought us blankets and hot chocolate in 1998 but he chose not to. Still there was a fish and chip van just outside our tent.

I took it as my job to set the troughs out into their correct positions. I decided we should have a sunny side and shady side and grouped the troughs accordingly. The trough groupings and the angle of the troughs was kept the same at each corner so that the display was symmetrical. Some troughs were placed higher than others. Small and large troughs were mixed. In the centre of each side we placed a 'spot trough', i.e. one with something bold or special. One side had cotyledon saxifrages, another pleiones, another *Meconopsis lancifolia* and the other had the trough with the club stone.

AND NOW THE SRGC STONE

Once all the other troughs were in place we could set up the SRGC stone, kindly lent to us by Henry Taylor, whom I regard as 'Keeper of the Stone'. The SRGC stone is a flat piece of lichened Scottish sandstone with the club emblem, *Dryas octopetala*, and the

words 'Scottish Rock Garden Club' engraved upon it. I am always terrified that some misfortune will befall the stone while it is in my care. If I broke it the Keeper would probably hunt me down like a bounty hunter in the wild west.

TIDYING UP

When the display was finished all the extra plants had to be returned to the van. Boxes were gathered up and the area around our display had to be swept clean. Anne spent two hours going round looking for broken areas and marks on the troughs. Each one had to be examined and any white patches painted over. The gravel had to be smoothed and raked to an even thickness. Building, planting, setting out the troughs, labelling the plants and tidying up took two full days of constant work. It was not until late on the Thursday evening that we had time to go off to look at other displays in the show.

Unless you actually saw the display with the plants carefully arranged it is difficult to appreciate the beautiful associations that we were able to create. Once we started naming the plants we were surprised at how many of them were American. Perhaps we should not have been surprised as many of them are plants of the woodland edge or of the plains. In either case they have to flower when conditions are most suitable, either before the leaf canopy is too dense or before the summer sun burns them up on the open prairie.

NOW FOR 1998

In our second display in 1998 we were bolder. Our team was enlarged to include Jean and Susan Band, Graham Butler, and Ian and Carole Bainbridge. Graham and Susan both grow a lot of plants. They, along with Evelyn, provided most of the plants in the display. On behalf of the Club I would like to thank them all for their generosity. This time instead of a square, we had a rectangle 9m x 4m. This gave us the same area as previously but the different shape allowed us to use it in thirds. We still used the raised blue planting box but this time we raised the inside even higher so that we could look up into the tall plants like *Meconopsis grandis*. By rotating the square box and keeping it at one end of the display we created two triangular corner beds. Running down the centre third of one long side we would build a raised wall. This would slope to the front and

join the highest part of the display (the blue box) to the low end, a decked patio and on the central slope we would build a scree.

The raised wall was a masterpiece of innovation and forward planning. We would build a double wall using polystyrene salmon boxes. We needed about 25 boxes. So that the boxes could be rebuilt in the proper order, all were identified by a special code number intelligible only to Ian Bainbridge who devised the scheme. They were shaped and painted as before but this time they were all covered with sand when the paint was wet. Roger Smyth of the Glasgow Group had given us this tip at the 1997 show. When finished they looked like blocks of Old Red Sandstone from Arbroath Abbey. The wall was filled exclusively with Susan's plants. She and Carole planted them a month before the display. They manipulated little plants into clumps which appeared to be growing on top of the wall before spreading down the sides. Others looked as if they had seeded down from the top. Careful selection of trailing phloxes and penstemons allowed us to hide the joins between the boxes. Once the gravel was in place the effect was very convincing. When the wall was in place at Strathclyde Park, Jean planted saxifrages and sempervivums into the cracks.

BUILDING THE STAGING

Experience gained at the previous show told us that we did not want to carry enormous volumes of material for the scree. Master carpenter Glassford was called upon again. This time he was directed by Ian. We needed a series of wide steps to support the scree. Glassford measured and sawed, hammered and screwed until we had a dais upon which the medal ceremony for the Olympic Games could be held. When Deidre, his wife, came to the show, she was disappointed that all his work was covered up in the completed display. Sandstone slabs led the eye up from the blue decking, through the scree and up to the 'woodland' area. So strong was the staging that we could walk on it without fear of the whole display collapsing. The scree was dressed in pea gravel from Homebase.

PLANTING THE SCREE

Into the scree we planted quite large plants of pulsatilla, corydalis, verbascum and several celmisias. *Saxifraga* 'Southside Seedling' caused a lot of interest as did a large planting of Sherrifmuir-grown *Meconopsis punicea*. The edges of the shady side

were raised with moss covered trunks which Peter had brought from Dumfriesshire. Beside these we planted a few medium sized hostas and ferns, most of which belonged to Alan Thompson, to give a woodland feel. In between these were asiatic primulas, trilliums, roscoeas and blue meconopsis — *Meconopsis* x *sheldonii* clones and *M. betonicifolia*. Old tree roots which Jean and Susan had collected helped to raise the garden levels and at the same time provided planting areas between the roots. The woodland areas were dressed with composted bark. Rhodohypoxis and pleiones gave bright splashes of colour at the front of the scree. Where the scree and raised wall met we blended the gravel over the edges to hide the straight line of the boxes. The edge was also softened with plants.

In 1997 John Main of the RBG Edinburgh had arranged to lend us some trilliums; in 1998 Ian Christie of Christie's Nursery had lent us some of the *Trillium grandiflorum* which he had grown for his own display. The pleiones in 1998 were lent to us by Ian Butterfield. I had managed to hold some back in 1997 but failed in 1998. John, Ian and Ian, thank you again for the plants and support.

EARLY MORNING HEROICS

We knew that the scree gravel and bark top dressing would tend to dry out overnight. Sparkling damp gravel always looks better than dusty dry stuff. How to keep the top dressing damp? Solution. Carole drove through from Edinburgh to the showground to spray over our display just before judging. She had to be in Glasgow before 6.30am. It was very lucky for us that she did. When the road sweepers had cleaned the marquee floor the previous evening they had blown a whole lot of dust over the plants. Carole rescued the situation. How many of us would get up before 5.00am and drive 70 km to dust some alpines?

The final effect was quite stunning. We all agreed that it was one of the best displays of rock garden plants ever staged. Modesty prevented us from boasting of this to the people on the other displays. In both years the mixed planting area was equally interesting. The main difference between the two was one of emphasis. In the first year the garden part was in the centre of the display and acted as a foil for our main statement, namely the troughs. In the second, the public could get close to the meconopsis, ferns, primulas and other treasures, and these plants were the focus, while the troughs decorated the patio area.

OTHER EXHIBITS

In both years we had interesting displays beside our own — Highland Regional Council in 1997 and Belfast City Parks in 1998. They both had large trees and shrubs in their exhibits which effectively screened our area from the rest of the tent. Our planting was enhanced by their displays. The summers of 1997 and 1998 could not have been more different. 1997 was hot, sunny and dry; 1998 was wet, dull and cold. There was also more wind in 1997!

THE GOLD MEDALS

When we were awarded the Gold Medal in 1997 we were overjoyed. Winning it once made it seem even less likely that we could triumph a second time and we were delighted when we did. The only way to appreciate the beauty of these displays as well as all the plant associations was to have been there. We basked in self congratulation both years. For a few minutes we were like luvvies after the opening of a successful new show. We shook hands, patted one another on the back and even hugged. It was very undignified, very un-SRGC show behaviour. In 1998, especially during the three cold wet days of the show, we were warmed by effusive comments from the public. For the duration of the shows our stand was swamped. People had to queue to get close. They joggled for the best positions from which to take photographs. At the end of both shows we were tired but content. Still there is always some comment which will bring you back to earth and reality. While I stood by looking at the crowd admiring our display, two ladies who might have had bit parts in Rab C. Nesbit walked by. One said to the other "What's all the commotion there?" The other looked through the crowd and announced "Oh Nothin. It's jist thae rock plants."

AND NOW THE DISMANTLING

The worst part was the dismantling. Luckily in both years we had helpers who had not been party to the build up. They were less sentimental than we were and within minutes the stand looked as though the Battle of Bannockburn had been fought over it. Plants were pulled up, put in boxes and carried out to the cars and vans. The grit and gravel were bagged for clearing away and the wooden substructure dismantled.

Will we do it next year? Probably. Each year I had to take a week off work. Just I started this article our invitation to participate

in the 1999 Royal Horticultural Society 's third Scotland's National Gardening Show arrived. If any member wants to help on the next display let me know. 1999 will be a challenge. Our area is the same 36 square meters but the dimensions are different – 12m x 3m.

PLANTS IN THE TROUGHS

It is easier to describe the plantings in individual troughs than the whole display. In 1997 we set the troughs on gravel while in 1998 they sat on a patio deck of wooden boards painted with 'Iris Blue' Cuprinol. In both displays troughs were arranged in groups, some raised higher than others with different sized troughs.

Different styles can be used to define the planting. Stone, bleached wood, an old piece of root, a shapely tree or shrub, various textures of stone, grit and gravel, bark or moss all give the trough a specific feel. Once different plants are introduced the possibilities are endless. Troughs devoted to sempervivums are instantly appealing, if the semps are as different as possible. Our sempervivums were chosen from Hartside Nursery for their contrasting rosette size and colour. We used :- *S.* 'Mondstein' and *S. pseudocalcareum* both of which are green with a maroon edge; *S.arachnoideum*, with bright green cobweb covered rosettes; *S.* 'Corsair' a large purple rosette with a thin green margin; *S.* 'Aldo Moro' khaki coloured; *S.* 'Virgil' blue green with a bright green edge and *S.* 'Remus' bicoloured maroon and green.

The two Scottish troughs were admired for their quiet subtlety. In the older trough, from Ian in Aberdeen, a dwarf *Pinus sylvestris* was used beside a vertical slab of schist to give height and shade to the smaller companions which, over the years, had grown into one another. Plants with contrasting leaves spilled over three corners These were:- the slightly furry, prostrate *Salix reticulata*, shiny *Vaccinium vitis-idaea* and *Homogyne alpina* with leaves like inverted parasols. The other Scottish trough got its height from a 20 year old *Salix boydii*. The flat golden mounds of *Silene acaulis* 'Frances' and a mat of *Antennaria dioica* at the front suggested a mountain plateau, while the vacciniums to the side reflected our moorland. Variegated *V. vitis-idaea* 'Gillian Dennis' contrasted with the normal green form. The beautiful variegated *Thymus* 'Highland Cream' (syn. 'Hartington Silver') tumbled over another corner.

NEW ZEALAND CELMISIAS

The silver foliaged daisies from New Zealand evoked many compliments from the public. Part of the reason was the variety of their silver foliage. The soft, almost white, lanceolate leaves of *Celmisia allanii* and *C. incana*, the spiky silver needles of *C. argentea*, small rounded rosettes of *Raoulia hookeri* and the dwarf shrubby habit of *Celmisia ramulosa* with its darker green leaves, with silver reverse, contrasted with very dark whinstone chippings. Carole sprayed the whin chips on the morning of the show to make sure it was almost black when the judges saw the troughs.

HOSTAS

I knew that Edna Hammond grows a lot of hostas and that Alan Thompson specialises in ferns. Both produced gems for the shady side. The hostas were a mixture of foliage colours and leaf shapes. To appreciate them they have to be seen. The varieties Edna planted were, *HH. decorata, ventricosa, gracillima*, 'Pearl Lake', a 'Rough Waters' seedling, 'Twister', 'Saisu Jima', 'Baby Moon', 'Little Princess', which are all various shades of green. Variegated and golden ones were 'Gypsiola', 'Inaho', 'Wogan's Gold' and 'Golden Age'. Fourteen small hostas in one trough. Pieces of driftwood which had been soaked several times to remove the sea salt were used to give height and define the planting areas. One hosta Edna did not use but that Audrey Leach did was *Hosta venusta* 'Variegata' sometimes sold as *H.* 'Masquerade'. It is a tiny variegated plant with leaves only 4-5 cm long. Audrey also got a merit point for including our Scottish endemic, *Primula scotica* in her trough. Harley Milne planted one entirely with heathers. In summer the fresh foliage is good and in autumn they will flower.

FERNS

I had much more difficulty writing the fern names on our master plan. Ferns are difficult plants for the novice to choose because of the complexity of their names. Anyone wanting to start growing small ferns would be off to a flying start if they followed Alan's choice. *Dryopteris tokyoensis*, *Blechnum penna-marina*, *Adiantum aleuticum*, *Asplenium fontanum*, *A. scolopendrium* (Fimbriatum group), *Phegopteris decurvense-pinnata*, *Matteuccia orientalis*, *Athyrium filix-femina* 'Frizelliae', *Cystopteris dickeana*. Different sizes, different foliage, some with dissected leaves others with flat

shiny leaves. A marvellous display and not a single flower. Moss was used to dress the trough and keep up the humidity level around the fronds.

THE TAYLORS PLANTS

Margaret and Henry Taylor used plants from four continents. Standing boldly at the back corner was Himalayan *Calanthe tricarinata* with broad light green leaves and spikes of orange flowers. Also at the back were *Phlox* 'Chatahoochee' and *Fritillaria* 'Martha Roderick' from America and *Primula sieboldii* from Asia. The beautiful Europeans *Haberlea ferdinandii-coburgii*, *Campanula chamissonis* 'Superba' and *Salix retusa* sat along the front. In the centre were three wonderful silvers from Australasia – *Ewartia planehonii*, *Leucogenes leontopodium* and *Celmisia allanii*. In 1997 they had used the calanthe along with *Meconopsis lancifolia* to create a wonderful combination.

LEWISIAS AND VIOLAS

Stunningly bright and not in the least subtle was our lewisia trough. Planted with Ian Christie's *L. cotyledon* hybrids, the pink, red and magenta flowers stopped people in their tracks. Just as floriferous was the viola trough. Seven different varieties of dwarf violas came from Jim Sutherland. To get the desired effect, clumps of three plants of each variety were planted. 'Fiona' (yellow and pink), 'Gazelle'(all yellow), 'Maggie Mott' (blue with yellow centre), 'Sorcha' (blue with a white centre), 'Irish Molly' (khaki and yellow), Julian (deep blue) and Molly Sanderson (black) were the varieties.

JOHANNAS TROUGH

Johanna my daughter planted up a trough which went to both displays. She chose plants which appealed to her. She seems to favour gold shades. *Trollius pumilus*, *Viola* 'Etiane' and *V.* 'Letitia', *Silene* 'Frances', *Sempervivum ossetiense*, *Sedum spathulifolium* 'Aureum' and *Chamaecyparis obtusiloba* 'Tonia', this last a nice little golden tree. Johanna personalised her trough with some little model animals, a mouse and a mole. Other children liked this touch and we hope they will be inspired to plant their own.

HOW TO MAKE THE TROUGHS

Chris Jones produced a superb leaflet on how to make the troughs from polystyrene fish boxes. We distributed hundreds of them at both shows. If they had the plans, we thought people would be more likely to make their own trough. Several of my patients have since told me how good their troughs are and how much they enjoy them. Teachers and therapists who work with handicapped people took the leaflet because our ideas were easy for their pupils and patients to grasp.

I cannot describe all the plants in all the troughs. I hope the descriptions and ideas which I have given will inspire all members to recycle at least three or four fish boxes and plant them with rock plants. The plants like the troughs. They look good and grow well. They are easy to make and easy to look after. If the plants get too big you can just start again. Remember if you want to help next time, volunteer now.

SUPER W. B. (PICEA ABIES 'JOCANDA')

In 'The Rock Garden' January 1996 there appeared a short note by Jaroslav Kasbal about a Witch's Broom which appeared at the top of a 50 m tall specimen of *Picea abies* in the Czech Moravian Highlands. By dint of ropes and ladders and the enlistment of skilled tree-climbers it was possible to detach some material from the broom and thence to propagate it. And that was how *Picea abies* 'Jocanda' was introduced to cultivation.

In 1996, Jaroslav Kasbal did not at the time have a decent photograph with which to illustrate this amazing growth but the Editor did promise to publish one at a later date if it became available. Dr Kasbal has now sent one in which appears as Fig.86 in this issue.

ANNUAL GENERAL MEETING

The Annual General Meeting will be held at

the Battleby Conference Centre,

Redgorton, Perth

on Saturday 30 October 1999 at 2.00 pm

WINDOW TO THE NORTH

Some problems in germinating
Jankaea heldreichii seed

by Hedi and Jim Hancox

We are indebted to Dr A.G. Jacklin for introducing us to a most refined form of alpine gardening. He took the trouble to write a letter to the SRGC about growing *Jankaea heldreichii* (Fig.85) from seed which he obtained from the 1990/91 Seed Exchange (SRGC Journal 1992,22, p.456). His letter appeared coincidentally with the receipt by us of seed from the distribution the following year. We had indicated on our application that *J. heldreichii* was a preferred choice and were delighted when a packet was included in our application.

We lost no time in carrying out the instructions in Dr Jacklin's letter, using a small unheated propagator of the size that holds six 7.5 cm square pots. We put a two centimetre layer of moist sharp sand in the propagator tray. Twenty seeds, the total allocation, were spread over three pots of moist sharp sand which were then placed in the propagator. The letter indicated that an east-facing bedroom window was selected as a suitable site but we found that any window facing north proved satisfactory for the propagator. What seems to be necessary is good light with little or no direct sunlight and an even temperature around 15°C. It may mean turning down the room thermostat.

The seed was sown on 6.2.92 and it started to germinate on 22.2.92. There was great excitement. The letter had described the next stage of lifting the rootless plantlets on to pots of compost, using a pen-knife and with the aid of a magnifying glass. The suggested compost was peat and sharp sand to which had been added Chempack base fertiliser, but there was a bit more information that we needed to know so we phoned Dr Jacklin.

After we explained to him the reason for our unaccustomed jubilation, he told us that he, too, had received seed from the 1991/92 Seed Exchange with the same seed list number but he was fairly certain it was not *J. heldreichii* as the seed was too big and

not the distinctive shape. As we had never seen the seed of *J. heldreichii* we were in no position to make such a comparison. He had decided to sow the seed to establish precisely what it was but we felt that we needed time to overcome our disappointment. It was unlikely to be anything equal or superior to *J. heldreichii*. We finally made up our minds to use the rootless plantlets to give us some practice so we lifted them off with a sharp paper-knife on to pots of compost. Unlike *Jankaea* seedlings, they grew away far too quickly and died before we could identify them.

WE GET ANOTHER CHANCE

However, we did not have long to wait for another opportunity to try this method of propagation. The 1992/93 seed list from Josef Halda contained two collections of *J. heldreichii*: No. 173 from 1200 m and No. 174 from 2100 m. We asked for a packet of 174 and were very generously sent one of each. We prepared two 7.5 cm plastic pots with moist sharp sand and sowed about 20 seeds of No.173 on each pot on 27.1.93. The seed started to germinate on 15.2.93. We then filled four more 7.5 cm pots with equal parts of sterilised leafsoil and Cornish grit and on 19.2.93 lifted 20 rootless seedlings on to the pots of compost to give five seedlings per pot. Further seedlings were transferred to more pots of compost on 1st and 2nd March and a larger unheated propagator used to house them.

As an experiment, the remaining seedlings were tried in a compost of ericaceous compost and Cornish grit but they did not survive. Should we be surprised when their natural habitat is limestone rocks on Mount Olympus? Well, Reginald Farrer wrote — "my best jankaea was stuffed with plenty of rough peat..." (My Rock Garden p. 245). So there you have it.

The main exercise continued with further sowings of both 173 and 174 on 8.2.93, this time direct on to pots of compost consisting of equal parts of sterilised leafsoil, peat and flint grit. One of each went into a propagator on the window sill and similar pots into a propagator outside. The object was to see how well they would germinate and grow on and so avoid the need to transfer them from sand to compost at the cotyledon stage.

Those on the window sill started to germinate after 21 days and those outside after 73. Some explanation of "outside" is appropriate. The propagator was always kept frost-free with a minimum 3°C.

Every night and during the few cold days in February and March 1993 it was kept in our integral garage where the light is not good but the temperature never falls below 3°C.

PROBLEMS OF DIRECT SOWING

The results from sowing direct on to compost were not encouraging. The germination was not as good for us as on sand and the formation of moss over-whelmed some of the seedlings at the cotyledon stage or soon afterwards making pricking out more difficult, so only a proportion survived to be moved on to moss-free compost on 4.8.93. The main advantage of germinating on sand and then transferring to compost is that the seedlings can be moved on before they are overwhelmed by moss forming on the sand, which is most unlikely.

FURTHER SOWINGS IN DIFFERENT COMPOSTS

Meanwhile, further sowings of each collection were made on sand in 1993 on 4.4, 15.5, 8.6 and 9.8. The window was full. In every case, germination occurred within two to three weeks. The compost was varied; in addition to equal parts by volume of sterilised leafsoil and Cornish grit, we tried the following two mixtures:-

1. One part sterilised leafsoil
   Two parts John Innes No.2
   Two parts Cornish grit

2. One part sterilised leafsoil
   Two parts tufa dust
   Two parts peat

There was no significant difference in the results but we preferred equal parts of leafsoil and Cornish grit.

OUTSIDE VERSUS INSIDE

To prevent overcrowding on the window sill we began to disperse seedlings soon after they had been transferred. They really are minute at this stage and not easy to see so, when pots were taken to local groups, a magnifying glass was provided to assure members that they were not just being offered pots of compost.

Until early February 1994 the seedlings had always been kept in propagators with the exception of two trays on the window sill. They had only one cover between them so it was moved from one tray to the other every day or so; a sort of weaning process.

Comparison between plantlets growing "outside" and those "inside" was difficult because those "outside" were mainly from earlier sowings, but they could have been described as more in character with more rounded leaves and rosettes. Those on the window sill tended to have narrower, more pointed, leaves and to that extent could be considered as drawn, but there was no significant difference in the size of the rosettes. At this stage of cultivation there did not appear to be any difference between Joseph Halda's two collections although the note against No. 174 reads "2,100 m. Tiny plants." It is often said that plants from alpine altitudes can withstand much more light and exposure than low-level plants Whether No. 173 from 1,200 m can be considered as a low-level collection is doubtful.

PROGRESS OR LACK OF

By the middle of November 1994 we were still able to report — well out of earshot of the plants — that they were continuing to grow. Most of them had been dispersed and the remainder potted on, using a leaner mixture of one part sterilised leafsoil and three parts Cornish grit. The largest rosette was 9 cm in diameter and, along with others, spent most of the time out of the propagator.

Because of lack of space and facilities in our small garden and our desire to grow as wide a range of plants as possible we had reduced the number of plants of *J. heldreichii* in pots to three by November 1994. We also had four plants in a block of tufa. We soon found that this restriction in numbers was a mistake as the casualty rate was high. Two of the plants in pots did not survive the winter and the one that did, produced a number of side rosettes each year without flowering. Only one of the plants in the block of tufa is still alive but it neither grows nor flowers.

We have had reports that one of the plants which was in tufa in West Sussex flowered in 1997 and another in a pot in North Yorkshire flowered in 1998.

Although in spite of our efforts we have failed so far to achieve complete success, we can endorse Dr Jacklin's method of germinating *Jankaea heldreichii* seed, which we have since used successfully to germinate SRGC seed of that species in both 1997 and 1998. There is hope yet.

MISS J. M. CLARK AND THE MEMORIAL LECTURE

by Ronald Bezzant

Those of you who attend Club Annual General Meetings will know of the Clark Memorial Lecture which is traditionally held after the business meeting. Some may wonder who is being commemorated and why, as I did, when I first joined the Club. To some extent my curiosity was satisfied when Glassford Sprunt put a short note in the Stirling Group Newsletter. Miss Clark ran a nursery in Kippen and Glassford's note was prompted when the Stirling Group was joined by Helen Paul from Kippen who, as a young woman, worked for Miss Clark in her nursery, and she was able to give Glassford first-hand information. In looking through our Journal to fill out the picture, Glassford noted that no obituary had ever appeared for Miss Clark and neither was there any history of the origin of the Clark Memorial Lecture. Ah ha! a detective story, which I thought would be quite interesting to follow up.

Miss Clark's family, comprising her mother, herself and sisters, moved to Kippen in the 1920s from Brechin where, until his death, her father had been minister at Brechin Cathedral. The purpose of the move was to share a house with a widowed sister of her father, which they did at a house called Benview. Miss Janet Clark, known as Miss Jenny, went to Darlington to train in horticulture and when she returned to Kippen, she and one of her sisters set up a nursery specialising in alpine, herbaceous and heather plants. This was known as Castlehill Nurseries. Miss Jenny was an early member of the SRGC. She was elected a member of the first Committee (as Council was called in those days - it changed its name to Council in 1950) on 14 August 1933 and remained a member until the Committee went into abeyance in the early war years. Among the tasks she undertook on behalf of the Club were to serve on a sub-committee to discuss the programme for 1933/34 and also on one to run the Glasgow show in 1937. At both the Glasgow and Edinburgh shows in 1938, Castlehill Nurseries had a trade stand which was highly commended. No reports were ever published for the 1939 and 1940 shows, as it was felt when the opportunity came

in 1946 that the news would be of no interest, so I don't know whether Castlehill Nurseries were represented at these shows. However, they were back at the first shows held after the war in 1946, at Edinburgh in April and Glasgow in May.

The nursery continued throughout the war, no doubt growing more essential produce, although when Helen Paul joined it in the late war years alpines were still a feature of its work. Helen stayed with the nursery until it closed, and so helped it get back to normal once peace came. She relates how Bobby Masterton was a frequent visitor in those years and he always seemed to time his arrival when Miss Jenny was away from the nursery at meal break. The stock plant was usually situated at the end of the row of plants lined out for sale and Helen had the job of preventing Bobby purchasing that. I am sure it was a bit of a game and I doubt whether he ever expected to succeed. Helen reminded him of this many years later when she visited Cluny and to show there was no hard feeling he gave her a thorough tour of the working area not normally open to visitors. She also can remember when she and Miss Jenny went out constructing gardens, and they often had to travel by bus clutching a dwarf conifer or some other select plant in their arms.

When the Club resumed its activities after the war in November 1945, Miss Clark once again was a member of Committee, but unfortunately her service was cut short by a stroke in 1948. This was severe enough to cause her to give up her nursery and relinquish her post on Committee. In recognition of her services Committee created her an Honorary Vice President in 1948. At that time The Club had only one other Honorary Vice President, so it was quite an honour. In the same year her nursery stock was acquired by her manager, Mary Guthrie-Smith, who moved it to Helensburgh and continued trading as Castlehill Nurseries at East Montrose Street. After the nursery was sold, Miss Clark moved to Edinburgh with her surviving relatives, her aunt and one sister (Edith), where she died in 1950.

At its October 1951 meeting Council discussed a letter received from Miss Clark's sister stating that she wished to mark in some way her sister's association with the Club and that she was prepared to donate up to £100 for this memorial. Also she would be guided by the Club as to how this might best be accomplished. At David Livingstone's suggestion Council adopted the idea of a Silver Medal to be awarded to the person gaining the most points in all classes at

all SRGC Open Shows, and this information was conveyed to the AGM held on the same day. At a later meeting of Council in November it was decided to substitute Silver Medal Cards for the Silver Medals, and shows were designated which would count for the award. It is at this point I begin to wonder whether this idea was ever implemented, since what we have above are intentions and I can find no record of their being put into effect in the Journal (maybe some old Year Books or Show Schedules of this era would help). Also puzzling in view of the change to Award Cards is the report to Council in May 1952 that three suitably engraved Silver Medals were available and would be used for that year and the two subsequent years. In its September 1952 meeting Council agreed that Miss Clark's sister should be invited to the AGM to present the Memorial Medal on this the first occasion, although there in no record in the AGM minutes of this having happened.

Evidence on the side that the Medal was being awarded is that Council was still talking about which shows should be eligible to count for the award at its August 1956 meeting. But at its November 1956 meeting it decided to reconsider the form of the Clark Memorial in order to more closely conform with the donor's wishes on the subject. A full debate was deferred until its February 1957 meeting and an announcement was to be put in the Year Book to the effect that the Medal would not be awarded in 1957. At this next meeting of Council, the President (Maj. Gen. Murray-Lyon) reported that he had spoken to Miss Edith Clark and found that she was not in favour of a Medal or other form of competitive award as a Memorial. After much discussion two ideas emerged as to the possible form of the memorial,

1) a Clark Memorial Library be formed
2) a Clark Memorial Lecture be established.

When these were put to the vote the idea of the Memorial Lecture received an overwhelming preponderance. The full wording for number 2) is as follows:

"that the lecture which follows the Annual General Meeting should be known as the Clark Memorial Lecture. The best lecturer available should be chosen ... The expenses and any fee should be a charge against Club funds and the revenue from the capital of the legacy should be used to present to the lecturer some suitable token of having been the lecturer."

There is a Council minute for their June 1957 meeting showing that

Mr Alec Gray would be invited to give the first Clark Memorial Lecture after the Annual General Meeting on 26 October 1957, with the subject being "Miniature Daffodils". It was further decided that the lecturer would receive a book token together with a specially designed book plate. However, no record of this lecture was published in the Journal. The first Clark Memorial Lecture to be printed in the Club Journal was that given by David Wilkie on 15 October 1958 on "New and Rare Plants". This can be found in Vol VI part 3 (April 1959) starting on page 225. Thereafter the Memorial Lecture was well and truly launched and has been given every year after our AGM, and some of them have been published subsequently (including the most recent one in 1998).

I have had help from a lot of people with this short article. In particular I have to thank Glassford Sprunt for starting me off, Gareth Williams for delving into the archives for me, and most of all Helen Paul for her personal reminiscences of Miss Jenny.

For those of you who like to walk their History, the house Benview is opposite the junction as you arrive in Kippen on the Arnprior road. If you now turn right and walk uphill, the first entry to the left in Castlehill Loan and this is the site of the nursery. It is now all built over but you can walk through, still keeping generally uphill and emerge back on the road to Fintry. If at that point you turn right you can walk back to the junction. From the junction looking west towards Arnprior, you can see the Parish Kirk about a hundred metres or so down the road and here there is a memorial window to the family in the centre of the west wall.

It was given to the Kirk during its restoration by Miss Edith Clark and was executed in 1971 by Gordon Webster, an artist from Glasgow, on the theme of flowers for all seasons, which seems very appropriate in the circumstances. The Kirk is well worth a visit if only to see the beautiful restoration, particularly the woodwork.

BOOK REVIEW

The Woodland Garden
by Jack Elliott
Published by AGS Publications Limited
225 pages 74 colour plates
Price £12.95 plus £1.65 p&p

This book was received just before the publication of the January Journal and so then it was only possible to include a brief review of what is a most useful book for those people who grow shade plants.

In some ways it reads like 'The Plantfinder' because, for many of the genera and cultivars described, you can scan the lists in The Plantfinder and find exactly the same plants. This, of course, increases its usefulness because it means you have a ready source of purchase. For example, many people simply grow *Erythronium dens-canis* and are unaware that there are ever so many cultivars of that splendid species. Jack Elliott lists and describes 10 cultivars.

The genus *Erythronium* is a good example of the value of the book because it describes 22 species and 25 cultivars and thus brings together in one place a wealth of information.

The definition of what is a "shade-lover" is stretched somewhat and includes many plants which grow quite happily in light shade but also flourish in full sun. Many of the plants described need a degree of shade in the south of England but do well in full sun in Scotland. Few of the plants listed do well in dry shade and the book is full of instructions about watering in dry seasons. This is a pity because there are many good plants which are ideal for dry shade such as *Chiastophyllum oppositfolium* which are not mentioned at all.

The book is aimed at growers who garden in light deciduous woodland and who can water in dry weather. The phrase " they need humus-rich soil that never becomes dry, in partial shade" really summarises the book.

For those growers who don't have light deciduous shade, there is still much in the book of value, especially the long lists of species and cultivars, many of which can be grown in non-shady conditions especially in Scotland.

AM

THE SCOTTISH ROCK GARDEN CLUB
DISCUSSION WEEKEND 1999
FRIDAY 1 OCTOBER — SUNDAY 3 OCTOBER
at THE RADISSON SAS AIRTH CASTLE HOTEL and COUNTRY CLUB

The last two Discussion Weekends of the Millenium will be held in the heart of Scotland at the edge of 'Braveheart Country'. Within 35 miles of Edinburgh, Perth and Glasgow and only a few miles from Stirling and Falkirk, Airth Castle Hotel is situated on the banks of the Firth of Forth, beside the Kincardine Bridge. Here in Stirlingshire the Highlands and Lowlands meet. North over the water are the Ochil Hills and to the west are the Trossachs with Ben Ledi and Ben Lomomd. The Wallace Monument stands silhouetted on the Abbey Craig just a few miles upstream at Stirling. Many of Scotland's popular visitor attractions are close by including:- Stirling Castle, Bannockburn, Inchmaholme Priory and the Lake of Menteith, Linlithgow Palace, Hopetoun House, Loch Leven, The House of the Binns, Culross, Falkland Palace, Seaworld and the Forth Bridges. There are modern shopping centres in Stirling and Falkirk. Lists of attractions and hotel and B&B accomodation will be sent on request. (SAE please)

Airth Castle is 0.5 miles west of of the roundabout where the M876 joins the A876 and the A905. The M876 has junctions with the M90 and M80. The closest Railway Station is Larbert but Airth is closer to Stirling and Falkirk.

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

As usual there will be a PLANT SALE and AUCTION. Donations of plants will be much appreciated. We are also expecting a large entry for the SHOW and for the HOLIDAY PHOTOGRAPHIC COMPETITION (details in the Show Schedules). If you have lost your Show Schedule ask us for another when you book.

Please use the Booking Form enclosed with the Journal
Applications for bookings together with the appropriate remittance should be sent to:
The Registration Secretary
Mrs Liz Mills, Upper Kinnedar House, Saline Fife KY12 9TR

Members wanting further information should write to Liz at the above address

THE 1999 SRGC DISCUSSION WEEKEND PROGRAMME

Airth Castle set in woodland dates back to the 14th century. We will be using rooms in the new extension which was completed in 1997.The Country Club has a fully equipped health centre which includes an indoor swimming pool, sauna, steam room and solarium.

FRIDAY 1 OCTOBER

16.00 REGISTRATION

19.45 PRESIDENT'S WELCOME AND OPENING ADDRESS

FRIDAY NIGHT IS BULB NIGHT

Presented by the SRGC SMALL BULB GROUP

20.00 **JIM ARCHIBALD-**

-Eurasian bulbs from Southern France to Iran

21.45 SMALL BULB EXCHANGE AND BULB SALE (for details phone 01786 824064)

SATURDAY 2 OCTOBER

08.30 REGISTRATION

08.30 - 09.45 SHOW EXHIBITORS SETTING UP TIME

10.00 **STEVE NEWELL**

- Cushion Plants in New Zealand

12.00 SHOW OPENS

14.00 THE WILLIAM BUCHANAN MEMORIAL LECTURE

MIKE and POLLY STONE

- The world's our mountain, 30 years at Askival

15.30 **NEVILLE and KATHLEEN CARTWRIGHT**

- Arctic Odyssey Kamchatka, Siberia, Spitsbergen, Greenland and Arctic Canada

18.30 Dinner

After Dinner Talk

- Author & Journalist - RENNIE McOWAN

21.30 PLANT AUCTION

SUNDAY 3 OCTOBER

08.30 REGISTRATION

09.30 The HAROLD ESSLEMONT LECTURE

HENRIK ZETTERLUND

-Corydalis in the wild and in cultivation

11.15 THE JOHN DUFF SCOTTISH LECTURE

WILLIE DUNCAN

- An East Neuk garden over twelve months of the year

14.30 **JIM ARCHIBALD**

- Plants of the Southern Andes

MECONOPSIS SHERRIFFII

by Ian and Margaret Young

A beautiful and unknown meconopsis discovered on the Drichung La (4,500 m) during a Ludlow and Sherriff expedition in 1936, was declared by Ludlow to be the gem of the collection. Unable to identify it from Taylor's monograph, they sent material back to Taylor who described it as a new species and named it *Meconopsis sherriffii* after George Sherriff. It was collected by them again on expeditions in 1938 and 1949 and despite the large quantities of seed that arrived it refused to flourish and remained scarce in cultivation. It was seed from the 1949 collection (L17231) sown by Mrs Knox Finlay in 1950 that produced the magnificent specimens that received the Award of Merit at the 1951 Chelsea Flower Show. After nearly 50 years this beautiful plant is still a challenge to the gardener and as scarce as ever it was while other meconopsis, such as *M. paniculata*, *M. simplicifolia* and *M. horridula* that grow in the same habitat, are well established.

We first received a small packet of seed from Bette Ivey about 10 years ago and raised five plants to flowering size. We had high losses through rot just after pricking out the young seedlings. Through experiment and experience we have now decided that it is much better not to prick out in the first year. If the seedlings are over-growing the seed pot they are potted on to a larger pot en masse, with minimum disturbance. It is much better to let the plants establish undisturbed until they start into growth in their second season. They should have developed a good root mass by then and can be carefully teased apart and potted up individually. The roots will get some damage during the separation process but if you are careful it will be a small percentage of damage whereas if they are pricked out as soon as they are large enough to handle any damage, however minimal, has to be a high percentage damage due to the small size of the seedling. Once pricked out we put the plants in a frame and lay a spun polypropylene fleece directly over the plants; this helps protect them from any wind but does not allow humidity to become too high. The plants are carefully watched so that they never get too dry. Most plants will be large enough to be planted out

towards the end of the summer (late August in Aberdeen), where they can grow on unchecked before their winter dormancy. We usually protect the plants with a small cloche during the winter although it does not appear to be essential as some survive without any protection. All plants get a heavy mulch of conifer needles or composted shreddings to help insulate the crown with a free-draining quilt. The following year most plants will flower. *Meconopsis sherriffii* can be flowered in one year from seed but our experience is that there is a greater risk of losses this way by handling the seedlings when they are too small, as explained earlier.

When in flower *M. sherriffii* is most similar to *M. integrifolia*, only instead of yellow flowers it has lovely clear pink blooms (see Front Cover). Plants can produce more than one flower spike but the plant has always remained tap rooted with us; the side rosettes have never offered to root for themselves. It has remained monocarpic in our garden and we have not seen a perennial form.

It is perhaps fitting that we have read that this plant performed at its best at Ascreavie where Mrs Sherriff cultivated it successfully and produced perennial plants. To keep this plant going, it is very important to obtain seed, and so we never leave it to nature to pollinate our plants, choosing to help things along by regular visits with a paint brush during flowering. It is during this process that we have observed that many flowers either fail or produce very little fertile pollen. A similar situation occurs with *M .punicea*, and this is why it produces very little fertile seed. Fertile seed is very obviously fat compared to the flat and empty husk that is formed in many of the seed pods. Once we have gathered the seed we do not sow it straight away, preferring to store it in a dry fridge kept at around 2°C and then sow it in late December or early January as we do with all our home collected meconopsis seed.

M. sherriffii is one of those plants whose rarity in cultivation definitely enhances its desirability; the one-up-manship of having such a rare plant plays a part. If we could only have one meconopsis in the garden then this might not be the one but now we have got it we would not like to be without it and will do everything we can to maintain it and spread it around in the years when it sets abundant seed. Unfortunately we are down to one plant which will flower this year. We have been here before and recovered to build up a good stock but if we cannot get a good seed set this year then we have lost a treasure and will be on the look-out for it again.

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