

THE ROCK GARDEN



THE JOURNAL OF THE SCOTTISH ROCK GARDEN CLUB

Volume XXIII Part 4 Number 93



Fig. 77. Mr Bill MacKenzie, founder member of the Club, and Mrs Bette Ivey, Club President, cutting the Diamond Jubilee Cake at the 1993 Discussion Weekend
J. I. Young

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**THE JOURNAL OF THE
SCOTTISH ROCK GARDEN CLUB**
Volume XXIII Part 4 Number 93
January 1994

ISSN 0265-5500

Edited by:
Drs CAROLE and IAN BAINBRIDGE
3 Woodhouselee, Easter Howgate, Penicuik,
Midlothian EH26 0PG

Individual copies available from:
T. G. SPRUNT
17 Claremont Drive, Bridge of Allan,
Stirlingshire FK9 4EE

Front cover: *Iris kemaonensis* on the Rohtang La, north-west India (p.403) M. & H. Taylor

Back cover: The Miyar Nullah, north-west India. M. & H. Taylor

THE ROCK GARDEN

The Editors would greatly welcome contributions to **The Rock Garden** on any aspects of alpine and rock garden plants and their cultivation. Articles should follow the format of previous journals, with colour slides and line drawings if appropriate. They should preferably be typed, double spaced, or on a 5.25" floppy disk in Microsoft Word.

Pen and ink drawings and vignettes are also welcome, especially in a horizontal format to fit a part page. Articles and drawings should be sent to the Editors.

We also require cover photographs for **The Rock Garden**. Anyone with colour slides for consideration as cover plates should contact the Editors. An article to accompany the cover plate pictures is strongly preferred.

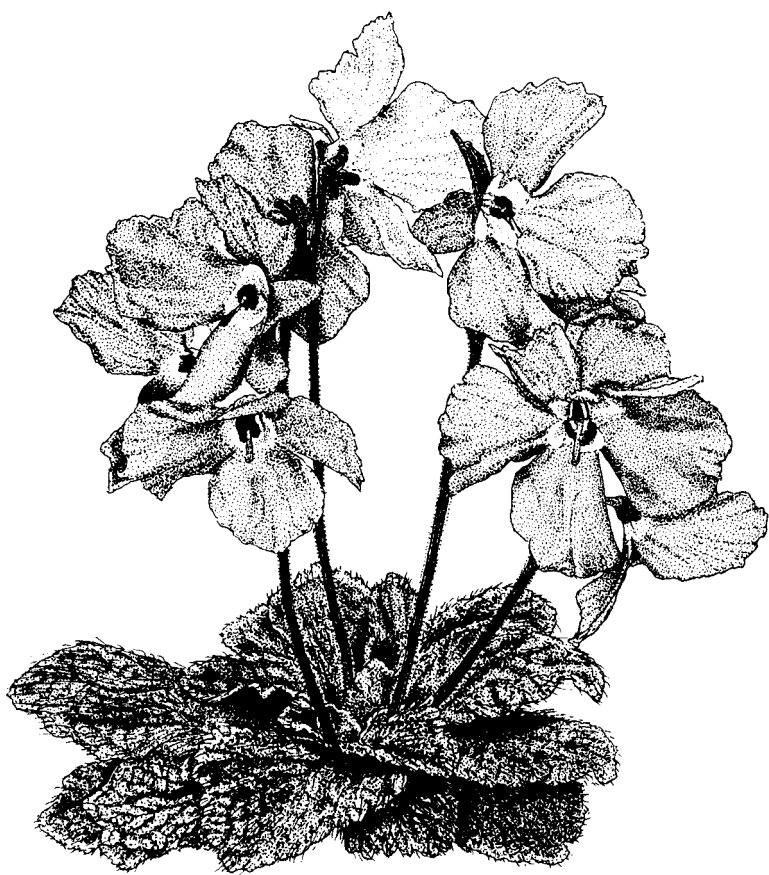
The Rock Garden is published twice yearly by the Scottish Rock Garden Club, on 31st January and 30th June. Any queries about the Journal should be addressed to the Editors.

The views expressed in this Journal do not necessarily reflect those of the Editors or of the Scottish Rock Garden Club.

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The vignettes on pp 394 and 408 are by Duncan Lowe



X Jankaemonda vandedemii

Lionel Bacon

A Diamond Jubilee Message from the President

What a year it has been! Of course, we Scots have always had a reputation for relishing a good party so an event as important as our Club's Diamond Jubilee was the best possible excuse for a whole year of merrymaking.

As the season progressed, with each special event we enjoyed the gathering momentum of our happy spirit of celebration. Undoubtedly this was a well-deserved celebration surrounding the considerable achievement of attaining sixty years of sustained fellowship and fascination with the charm and challenge of growing the wee plants from the world's mountains.

This has been, appropriately enough, a many-faceted Jubilee. Through the many gatherings, whether concerned with cultivation, admiration, education, exhibition or entertainment whether nationally or locally, members have come together to share the pleasure of these festivities.

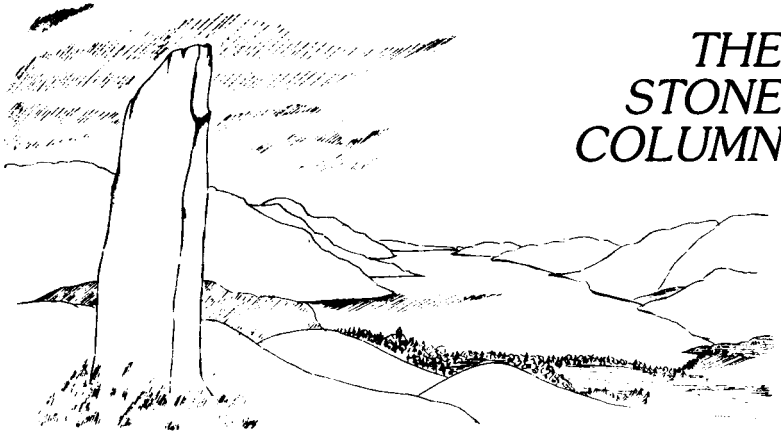
The S.R.G.C. Collection of goodies was assembled to tempt us, and provided much amusement as members vied with each other over which article or garment colour, size or style to choose, to lighten our wallets and brighten our day but also had the advantage of giving us a "corporate identity" so we became walking advertisements for our friendly Club.

This was only part of the effort over the year to widen public awareness of our existence and it is to be hoped that such heightening of our profile will help towards encouraging an ever-increasing membership to continue the health and vigour of the Scottish Rock Garden Club into the next century.



President.

THE STONE COLUMN



Leaves, Wet or Otherwise

When the suggestion was first made, by Don Stead, that we write a regular column for the Journal, it was intended to be chiefly a collation of ideas contributed by many. However, over the intervening years, it has evolved into a personal discourse about our lives as they revolve around the garden at Askival; and also comments on matters which impinge on both the world of horticulture in general, and on the wild habitats of the plants we love. A garden, like a man, cannot be an island, entire unto itself, its life is influenced by external circumstances. Thus we feel we should report on the events of the summer past.

The small Benedictine boarding school where I had taught for thirty years, closed at the end of the academic year. In the present economic climate, I really had no choice but to take early retirement; alpinism is our life now, and we have over twenty years invested in the garden at Askival. Unable to contemplate leaving, we had a further choice to make, to pull in our horns, curtailing our horticultural activities, or to expand Poll's wholesale nursery, so that they become self-supporting. Retrenchment is a dead-end road, offering no challenge, so the latter course really chose itself. Although forced upon us, this change is opportune in many ways. We had been trying to do too much, and the strain was showing: in beds not weeded, new developments slowed, and plants not potted on as they should. Our garden was like a creaky production line, inexorably slowing down. Not that there will be any improvement in the short term, absolute priority must be given to expanding our frames (see below), but in the longer term we now have the opportunity for a thorough overhaul.

Japanese husbands who retire only to spend much of their time

hanging around the house are referred to by their wives as “*nure ochiba*”, wet leaves, difficult to sweep away. Now that I am Poll’s unpaid labourer, there is little chance of my being allowed to stick down. Out in the garden the real fallen leaves have all been collected already, by far the earliest completion of this annual task we can recall. We were greatly helped by a drier than average autumn; November 19th was a perfect day for example. A mild wind overnight blew the dry leaves into heaps, then died away during the day, so we could gather the piles easily with our power blower. There are drawbacks with these machines, the collection bags rarely last more than one or two seasons, on our scale, and the fan blades are steadily eroded by the impact of beech mast, inevitably sucked up along with the leaves.

If the autumn was so dry that aluminium production at Fort William was curtailed by lack of water for hydro-electric power, the same could not be said of high summer. We understand that generally 1993 has been a very poor year for seed, attributed by many to the cool wet conditions. Here, Poll tells me, for it is she who collects our seed, only the early flowers have had a poor seed-set. She puts this down to lack of pollinating insects in a cold spring rather than excessive rain later. In contrast with last year, the rowans in this area had very few fruits, but this is apparently a local phenomenon. Having just planted up four new beds, we were very glad that the weather did not incline to the other extreme. So far our losses total less than half a dozen, including only one of the self-sown holly seedlings gathered into the hedge extension. It was replaced this autumn with a potted reserve.

In the new limestone scree, most of the plants flowered quite well, showing little if any sign of the radical root disturbance necessary when planting into such a stony medium. One day I came across a baffled slow-worm on this bed. It wandered around looking for the azalea cover which used to be here, eventually disappearing into a hole in the retaining wall of a neighbouring bed. Up in the Haze Bed, Poll discovered a bird’s leg and quill feathers protruding from a gap between two of the foundation stones of the bottom terrace. Perhaps a weasel has taken up residence already, but we have not actually seen one for two years or so. Slow-worms are fortunately quite common here, they are carnivorous and so are the gardener’s friend. Still on the subject of wildlife, but not so friendly, are the Japanese Sika deer which have been foraging in the wood outside the garden. They are luckily not such good jumpers as red deer, but we still may have to raise the fence with an extra strand of barbed wire. Rabbits have reappeared on the croft across the road; a youngster entered the garden but made the fatal mistake of

going to ground under a trough. Having inspected our entire perimeter fence for holes, I tried the skull against the front gate, to discover it would pass through the 50mm gap between the rails with ease. Wire netting may not look very attractive, but was stapled on that very day.

Autumn gentians respond very well to being divided and replanted in fresh ground, so it was no surprise, but nevertheless very pleasing, that the Upper Gentian Bed did so well. It was helped by the dry autumn, and even managed to set some seed. Usually the trumpets fill with water, and the capsules do not develop. The display was only interrupted briefly by a cold snap around the time of the A.G.M. on October 16th. *Gentiana x macaulayi* 'Kingfisher' was completely unperturbed by -5°C and went on to flower profusely, as did the freely spreading *G. x* 'Christine Jean'. Among the species, *G. oreodoxa* and *G. sino-ornata* itself are the last to flower, and were equally fine. Would that all Sino-Himalayan alpinines were as frost hardy! In all probability, frostproof flowers involve an energy penalty for the plant, which is unnecessary for spring-blooming plants, such as *Primula whitei* or many rhododendrons.

In a few years time, a second dedicated gentian bed will be required, so that we can rotate our autumn gentians, resting the existing bed with an entirely different planting. On this scale, slotting gentians into gaps in existing beds is not really feasible. Some plants on the other hand seem to be programmed to deteriorate in gardens, no matter how much replanting one tries. Recently, over at Inshriach, I was discussing *Omphalogramma vinciflora* with John Lawson. Time was when they could field-grow this with ease, but no longer. Even soil sterilisation was ineffective in this case. There are two possibilities which come to mind – either the species has deteriorated, for example by genetic drift in cultivation, or virus infection; or there has been a subtle change in climate. A new introduction would not settle the argument: it may not be the same form as the old. Be that as it may, it could still revitalise the cultivated stock, as has happened with *Meconopsis integrifolia*.

One species where enormous genetic drift has occurred thanks to the hand of man is the domestic dog. Not all the changes have been beneficial, as exemplified by well-published problems with some "pedigree" breeds. Until recently we had two dogs, "Tor" the white tomado, a sort of large Jack Russell from working stock, and "Roan" the mobile hearthrug, usually known appropriately as "Moppy". She is from an "open-pollinated" King Charles spaniel, probably with a small terrier. Now they are both into double figures, we thought it wise to introduce a new dog. A puppy learns the ropes much faster from adults of its own species than from human trainers. Poll had always wanted a Lakeland terrier, but had rather given up

the idea when she discovered the price of the show version! Then just at the right moment, when she had finished her bulb repotting, an advert appeared in the local paper – a keeper up by Lochinver was offering twelve-week-old puppies from his working strain! A quick phone-call, and a few days later we were on our way north. We chose a rather circuitous route so that we could visit Inverewe Gardens on the way. It was raining, one of the few wet days in early November, and the bark of such species as *Rhododendron thomsonii* simply glistened. Many of their mature rhododendrons by the paths had been pruned up, enhancing this feature, one easily overlooked when selecting plants for the garden. Mulching and replanting were evident in many areas; no garden can remain static, and this one is definitely going forward. North of Ullapool we detoured again, on very narrow single track roads, so that Poll could visit “her” mountain – Stac Pollaidh. This isolated Torridonian sandstone relic is the nearest we have in Scotland to an American butte!

“Grizzly”, the new member of the pack, is a “red” Lakeland, actually the colour of fallen beech leaves. In spite of having spent all his previous young life out in kennels, he was housetrained in less than a week. Garden training will take longer, but at this time of year we have time to teach him where he is allowed to go. He is learning very fast, but, like all puppies, tends to indulge in unwanted pruning! There are times when I feel like getting out my Manchurian cookery book!

Now that I am no longer walking the mile to school four times a day, Poll insists on regular walks with the dogs. We usually go at dusk, when the light is insufficient to continue gardening. Throughout October we were regularly buzzed by bats, sometimes passing so close that one hoped their echo-location system was working properly. Bats are not supposed to overwinter this far north! Earlier in the year we had seen another flying visitor from sunnier climes, a kingfisher flew under the bridge over the River Tarf as we were watching a dipper. Yet more straws flying in the wind (see No. 92 p. 249), these may be, but I am actually expecting a hard winter this time around, thanks to the eruption of Mt. Pinatubo in 1991. It has happened many times before and on a far larger scale. Much of the higher cultivated land in the Highlands was abandoned following a huge eruption of the Icelandic volcano, Hekla, in 1159 BC. Oak-tree rings indicate very poor growth for the next twenty years! When Tambora in the East Indies blew up, there followed “the year without a summer” of 1816; and more recently a Mexican eruption in 1982 led to cooler than average conditions during 1984/5. All in all, it looks like this coming winter could be the acid test for our new plantings in more ways than one – thanks to the extra sulphate aerosol in the stratosphere.

From Orchard to Frameyard

One of our personal heresies here at Askival is that the best place for most of the alpine we grow is out in the garden, and failing that, or as a reserve, the cold frame. We must be one of the few alpine gardens lacking any sort of glass-house. It would be nice to have somewhere to protect winter-flowering bulbs from Mediterranean regions, and their admirers, from the excesses of the Highland climate, but for us this is not a high priority. Both cold-frame and alpine house basically serve to protect pot-grown plants from excessive winter wet. The small compost volume in a pot saturates very rapidly when exposed to heavy rain; an equivalent soil in the open ground is far better drained, thanks to powerful capillary forces within the larger bulk of the material. Additionally, valuable nutrients will be leached from the limited supply in a pot, while the occupier is dormant. The cold frame is not a "poor man's alpine house", the two are complementary, each with its own advantages and drawbacks. The alpine house protects the cultivator, and provides easier access for those who wish to titivate their plants. On the other hand few true alpine enjoy being under glass in summer, and it is simpler to remove framelights than move all the pots outside.

So important do we consider cold-frames to be that they were one of the first subjects we covered in our Column (Rock Garden No. 72 p. 207-9 and No. 74 p. 4-6). This was ten years ago, since then many visitors have shown considerable interest in our frames, and new members joined, so we make no apology for returning to their construction. We still stand by the basic principles listed in our original article:

- 1) Can the lights be completely and easily removed and replaced?
- 2) With lights on, can the air circulate easily throughout the frame without rain driving in?
- 3) Can the lights be conveniently secured against gales, while still allowing good ventilation?

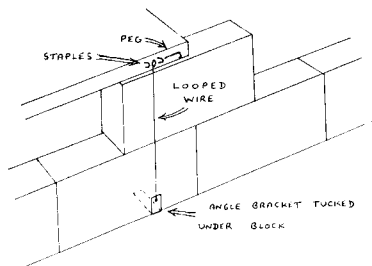
To these we would now add:

- 4) A good depth of sand, 30cm is not excessive, in capillary contact with the pots to smooth out the peaks and troughs in moisture content caused by irrigation, natural or otherwise.

The double-sided raised frame, having two rows of lights forming an inverted vee, which we described earlier (*ibid*) satisfies these criteria very well. We now have five in the original frameyard by the house; but to duplicate these on the larger scale proposed in the ex-orchard area would be excessively costly in both time and materials. At the other extreme we have "temporary" frames made up of two parallel rows of

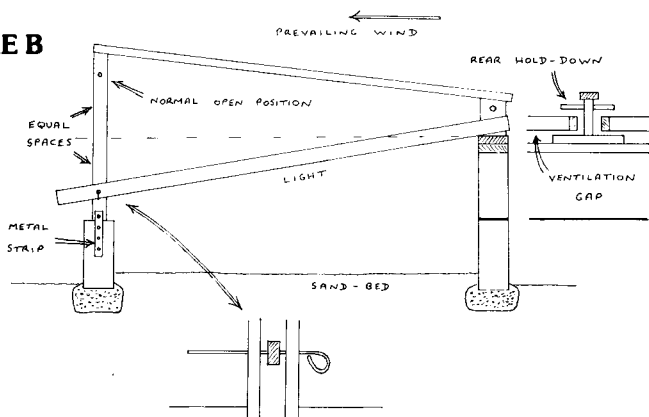
concrete building blocks, the lights resting straight on one row, the other end propped up with a second block under each junction. To hold these lights against the wind we used wires, pegs and staples as shown (Fig. A).

FIGURE A



Such a simple arrangement is far from ideal, the lights cannot be "closed down" when freezing east winds blow, and the concrete blocks could be kicked or knocked over when handling the lights. We decided on a compromise, a single-sided frame, with the blocks mortared together, and a simple wooden superstructure every 1.5m (3 blocks) to hold the lights in one of two positions. (Fig. B)

FIGURE B



Having decided on the type of frame, there remained the layout. The old orchard is roughly triangular, each side about 20m long, but truncated at the apex beside the old compost heaps. It is separated from the rest of the lower garden by a free-standing dry-stane dyke which currently ends at the raised lily bed by the entrance. At the far end lie the leaf-mould pits under two large beech trees and the Orchard Terraces containing some of our smaller rhododendrons, pyrolas and other woodland plants. The remaining side is the only part of our perimeter

which lacks any natural boundary: a post and wire fence cuts straight across the level area which had been the vegetable garden for the Old Convent next door.

The first stage was to erect a visual screen-cum-windbreak across this gap. Larch-lap fencing is too solid, it creates eddies rather than filtering the wind, whereas Paraweb is too transparent. We decided to use 2m high Tensar slotted windbreak, manufactured from black high-density polythene. A local fencing contractor had used this material on a deer farm high up Glen Garry. He put in the necessary posts, 2m apart, joined by two horizontal rails, one at the top, the other near the bottom. These are necessary to prevent the posts being forced towards one another as the Tensar bows in the wind. A right angle bend screening the compost heaps serves to brace one end, the other has a diagonal strut to an extra short post. Being black and slightly see-through, this barrier is surprisingly unobtrusive, less so than the derelict garden next door, "classic willow warbler territory" a visitor called it. This contains such charming plants as the Japanese knotgrass, so we left a gap of almost a metre between our boundary fence and the windbreak. Thus I can walk along spraying a cordon sanitaire with glyphosate.

The frames themselves were planned to run parallel with the windbreak, which left us with a spare triangular area between the fourth and final shortest run and the proposed covered scree along the dry-stane dyke. Killing two birds with one stone, we resolved to stack all the turf taken up from the frame sites to make up a single large raised bed, about 5 x 6 x 7m. This lies partly under the rain-shadow, and wholly within the root-zone of the two large beeches, and so can become the sort of bulb-bed recommended by the late E. B. Anderson, summer-dried by deciduous trees. Before we could start work on this, one final obstacle had to be moved: the stone seat known as the "magic mushroom". This consists of a roughly cylindrical stone, of at least 100kg, topped by a larger slab, some 75 x 55cm, and fully 15-20cm thick. Assuming a density of around 3000 kg/m³ it must weigh around 200kg! Nevertheless we placed a barrow on its side next to the slab, rolled it in, and levered the barrow upright. With Poll pulling on a tow-rope we managed to wheel it up to the chosen site in the top garden grass, by the south corner of the Blue-Ridge Bed. We set the "stalk" firmly in place, then constructed a slightly higher temporary staging over it from concrete blocks, and angle-irons from an old bed. The slab was rolled out of the barrow, more of a controlled fall really, onto the staging. Now it could be levered into the correct position without disturbing the stalk, and lowered straight onto this stone by removing the angle-irons

one at a time. The whole procedure took less than an hour, so the stone mushroom appeared as if by magic, in the upper garden grass!

The Old Orchard had been our bulbs in grass area, known to our children when they were young as the “minefield”. It was out of bounds in spring, for if they trod on an emerging bulb, Daddy exploded! Anticipating the change of use, in previous springs, we had removed and replanted in the upper shrub rose borders, certain of the bulbs, chiefly narcissus, including *N. pseudo-narcissus* itself, the self-sown hybrid with *N. poeticus*, *N. x incomparabilis*, and the fine pheasant’s eye *N. ‘Actaea’*. To be sure of getting the right ones, we moved only bulbs actually in flower, but have observed no reduction in subsequent growth or flowering. A number of cultivars, whose names have long been lost, were also selected, discarding those with bright orange cups and yellow perianths. The combination of red and yellow in a flower always makes me feel queasy!

Choosing my moment from the weather forecasts, I sprayed the whole ex-orchard with Roundup in June, the only time of year when it is warm enough here for a really good kill. The following 72 hours were dry, just what was needed to ensure absorption and translocation. On our return from the U.S.A., I set fire to the dead foliage, to make the turves easier to handle. As each one was taken up, I sorted through it and removed all the remaining live bulbs I could find. The bluebells, easily identified by their white coats, were discarded to the dump out in the sheep-walk. I am certain to have missed a great many, so the triangular turf-stack will have to be left fallow for several years and re-sprayed, they are too invasive to be fit company in this bed! Nothing happens quickly in this garden, such a delay is not unusual. The first boulders were laid at the base of Mt. Sherman (the upper garden main scree) back in August 1990, but it is still just a gravel-pile and likely to remain so for another year at least.

Currently, a large half of the total orchard area has been stripped, sufficient space for the first two runs of frame. While lifting, I was invariably accompanied very closely by the robin in whose territory I was working. It was rewarded with any invertebrates I discovered in the turves, as I searched through them. Such behaviour is thought to be a carry-over from following rooting and grubbing animals. For once the gardener can comply with Burns’ counsel, knowing they are seen merely as a surrogate wild boar!

The first run of frames was placed right against the windbreak, on the north side, so the Tensar will also act as shading. With access only possible from one side this frame is 0.9m wide inside, whereas the other

runs are planned to be 1.2m in usable width. The paths in between are all to be 0.9m. Sufficient space was left clear at each end so that, even when the lights are stacked here, a barrow can easily be wheeled around the corner and along the rows. Actual construction is quite straightforward. I first marked out the frame with pegs and string, and dug shallow 10cm foundation trenches. A bed of concrete was placed in these, and the blocks laid straight on it, mortaring the joints. Elaborate foundations are unnecessary as there is no real weight in a frame. The concrete serves as a convenient substrate so the blocks can easily be set more or less straight and square, using a line and spirit level. Cement is actually quite easy for the amateur to use; if it is wrong there is plenty of time to re-do it, mortar sets very slowly! Also high accuracy is not required for garden frames; it isn't a house you are building, as Poll keeps telling me! Galvanised and pre-drilled steel strip, obtainable from a builder's merchant, was cut into 15cm lengths, one of which was set upright in every third joint. Later, the superstructure uprights could be simply screwed onto the protruding 5cm, all on the same side to maintain an equal spacing for the lights. (Fig. B) For those with a powerful hammer-drill, there are many other fixings available.

All the timber we use is pressure treated, and standard sizes, usually 25 x 50 or 25 x 100mm available from any timber yard. We take a saw, select, and cut the long lengths down to the size required for lights before loading into Grisewald, our Land Rover. Delivery is expensive out here, and I like to see what I am getting. In the office they were once laying bets on how long it would take two grey termites to work through the entire yard. "Oh well a touch of grey, kind of suits you anyway", but we get by!

Some hardy Antipodean heaths

My dictionary defines a "heath" as an area of flat uncultivated land covered in low shrubs, or a plant found in such a habitat. As a vegetation type, heathland occurs where the normal succession to a climax forest has been prevented by factors such as exposure, altitude, grazing, fire, or the underlying soil conditions. Typically lowland heaths are to be found where a nutrient-poor, acid, often sandy soil hinders colonisation by trees. In Australia for example, heath-type vegetation indicates a soil severely deficient in phosphate, whereas Scottish moorland is a sub-climax vegetation created by man's activities – grazing and burning. Above the treeline heath communities indicate a combination of climate and underlying geology which favours their development, rather than that of an alpine meadow. Such conditions are more common in colder,

wetter mountain ranges, more typically arctic than alpine. Alpine heathland is, for example, rare in the European Alps, and absent altogether from the Colorado Rockies.

Amongst heathland shrubs the family Ericaceae is paramount, so much so that *Erica* and "heath" are synonymous to many gardeners. Their success is helped to a great extent by the presence of mycorrhizal fungi living symbiotically with their roots. Such fungi can increase the phosphate supply to the higher plant by up to thirty times, an obvious advantage on severely leached sandy or peaty soils. A typical heath is sclerophyllous, literally "hard-leaved", to resist summer drought and winter freeze; and often evergreen to economise on scarce nutrients. So well adapted are they to extreme conditions that they may also be found in alpine fell-field or feld-mark vegetation. This zone is basically a stabilised scree on relatively level ground, too exposed or stony to support an alpine turf. It generally contains cushion plants and prostrate mat-forming shrubs.

In the Snowy Mountains of Australia this habitat contains heaths belonging, not to Ericaceae, but to the very closely related Epacridaceae. The two families are separated by technical details of their anthers, and are so close that one monotypic genus *Wittsteinia* has hovered between them. Incidentally, we once grew *Wittsteinia vacciniacea* but it did not survive a hard winter outside. There are no such problems with the two members of the type genus *Epacris* which we have been growing for over ten years. Both *Epacris microphylla* and *E. petrophila* may be found in the highest, most exposed fell-fields; the "Kosciusko Alpine Flora" describes how they migrate downwind by layering on the lee-side. As we grow it, *E. petrophila* has formed a low bush about 20cm high, the shoots procumbent then turning upwards like a cassiope (Fig.79, p385). The tiny glossy green leaves are not, however, imbricated, but stand out from the shoots. They are sessile and elliptic, measuring about 1.5 x 3mm. The solitary white flowers appear, again like a cassiope, in the upper axils, but with short tubes and spreading lobes are much more star-like, about 7mm across. *Epacris microphylla* is very similar, but more prostrate in growth, the ovate leaves more congested, on short pedicels of 0.5mm. Our plant represents, however, the high alpine form of this variable and widespread species.

The genus *Richea* is perhaps rather better known thanks to the spectacular tall *R. scoparia*, whose terminal spikes may be of many colours from white to red (Fig.80, p385). We once raised an orange form from seed, but lost all the plants in a hard winter. This species is a

Tasmanian endemic, but in mainland alpine bogs there occurs the smaller, and in our experience, hardier *Richea continentis*. Both have stiff rather pineapple-like foliage, narrowly triangular, with bases sheathing the stem and sharp points. The flowers of *Richea continentis* are carried in upright terminal racemes, the creamy globular corollas contrasting beautifully with the red stems and bracts. *Trochocarpa thymifolia*, another much smaller Tasmanian member of the family, is, like *R. scoparia* unfortunately, but a fleeting memory. Currently we are growing *Trochocarpa distica* with rather larger ovate foliage, 8 x 15mm, slightly convex and finely reticulate above, reddish when young. Our plant from Ken Gillanders' seed, has yet to flower, or be really tested by a hard winter. Even smaller again there is *Pentachondra pumila*, which we have raised in hope four or five times, and always lost when its pots froze solid. It is also found across the Tasman Sea in New Zealand, home to the much more commonly grown *Cyathodes colensoi*. After fifteen or so years of growth, our plant of this has formed a patch almost a metre across, and some 40cm high, scrambling into dwarf rhododendrons. The narrow oblong leaves are dark, somewhat grey-green above, very much paler and glaucous beneath. On young shoots the foliage has reddish overtones, and clasps the stems prominently displaying the undersurfaces. The off-white flowers have longer tubes and smaller lobes than those of our *Epacris*, appearing matt thanks to generously hairy upper surfaces. The much smaller *Cyathodes fraseri*, also sometimes grown as *Leucopogon fraseri*, is native to both Australia and New Zealand. It superficially resembles a more slender *Pernettya pumila* but is easily distinguished out of flower by the 2mm spines at each leaf-tip. The axillary flowers have the same long tubes and bearded lobes of *Cyathodes colensoi*. Although our patch consists of three seedlings suckering amongst each other, we have never seen the small orange drupes of this species, but we live in hope.

The final genus within Epacridaceae of which we have some experience is *Dracophyllum*. Colloquially known in New Zealand as "Grass trees", they have the same kind of distinctive sharp-pointed sessile, sheathing foliage as *Richea*. Of our three species the largest is *Dracophyllum oliveri* which has formed a slender, upright, rather broom-like shrub almost a metre high. The leaves, born in terminal tufts and tending to lie parallel with the stems, are long thin wedges, about 2mm wide at the end of the sheath, by 50mm long. It flowered for the first time last summer, at about 10 years old, racemes of little white tubular bells on short lateral branches. With its dark brown stems, pale creamy leaf-sheaths and bright green needle foliage, this is a singular shrub even out of flower, one we use to test the knowledge of visiting botanists!



Fig. 78 *Paraquilegia grandiflora*. SRGC Diamond Jubilee Print
by Lawrence Greenwood (p.390)

J. I. Young



Fig. 79 *Epacris petrophila* at Askival (p.382)

Polly Stone

Fig. 80 *Richea scoparia*, Royal Botanic Garden, Edinburgh (p.382)

Polly Stone





Fig. 81 *Dracophyllum prostratum* at Askival (p.388)

Polly Stone

Fig. 82 *Anemone rupicola*, Gumba Nullah, N.W. India (p.395) M. & H. Taylor





Fig. 83 *Potentilla atosanguinea*, Rohtang La, N.W. India (p.398) M. & H. Taylor

Fig. 84 *Saxifraga stenophylla*, Doksa Nullah, N.W. India (p.398) M. & H. Taylor



Across the path from *Dracophyllum oliveri* they get a second chance with the lower-growing group of three contemporary *D. pubescens* from Edyth McLellan's seed. They have yet to flower, but this is of little consequence as the most striking feature is their brilliant blue-grey foliage, the leaves wider than *D. oliveri*, basally 4mm, beautifully set off by reddish-brown bark. Our third species came to us labelled *Dracophyllum pronum*, but because the dead leaves persist on the stems, it keys as *D. prostratum* (Fig.81, p386). Planted out in a large trough, it forms part of a low-growing matrix, together with *Rhododendron forrestii repens* 'Rock's form', *Vaccinium macrocarpon* 'Hamilton', *Chiogenes hispidula* and *Loiseleuria procumbens*. Like the last it favours the sunny side, draping the wall and flowering profusely, the blooms well displayed on the slender branch tips. The tiny leaves, only 8mm long including the sheaths, lie closely along the stems, and in our plant are somewhat glaucous, contrasting in both form and colour with the other inhabitants of this trough.

There is far more to the Antipodean alpine floras than *Celmisia* and *Aciphylla*, so before closing I would like to mention briefly a few more dwarf shrubs, heaths in the ecological rather than taxonomic sense, which we have found to be hardy in the Highlands. Many of them will appeal to lovers of the curious, like the Tasmanian endemic *Bellandena montana*, the only member of the Proteaceae which we have in the garden. The foliage has the colour and texture of a eucalypt, but is broadly cuneate, with three or more irregular blunt lobes. The creamy pyramidal flower spikes stand out on the ends of the stronger shoots, and are replaced by the flattened brilliant orange-red fruits, which have given rise to the name "Mountain Rocket". *Leptospermum rupestre* (syn. *humifusum*) we have found much hardier than the coloured dwarf forms of *L. scoparium*, which moved in and out of our collection rapidly. It forms a low spreading shrub, pendulous rather than prostrate, with little shining, blunt tipped leaves and white myrtle-like flowers. This is another endemic of Tasman's Island, as is *Phebalium montanum* in the Rutaceae. Superficially resembling a slender phyllodoce, the latter did nothing in a pot in the cold frame, so, kill or cure, it was put out this spring into the Haze Bed. The cylindrical leaves are somewhat fleshy, 10mm long, and the flowers, if they appear, should be cream tipped with crimson.

Moving to New Zealand, we have always had a soft spot for the "Coral broom", *Corallospartium crassicaule*, as this was one of the first plants we raised from seed, via the 1973 surplus exchange. It has made a rigid, upright bush to about 1m, the dark grey-brown stems bearing longitudinal

woolly grooves, but no leaves. The clusters of small pea-flowers, cream striped purple, are really quite pretty. More often mentioned for the rock garden is *Carmichaelia enysii*, which looks rather like a thick stemmed leafless bilberry, but lacking corallospartium's bold architectural form, has only dwarfness to recommend it. The dull purplish pea flowers (less than 5mm long) are of no account. Also of little floral merit, *Hymenanthera* is of interest as a shrubby member of the Violaceae. Although of coastal provenance we have found *Hymenanthera crassifolia* perfectly hardy, and quite attractive when fruiting – little white pearls! *Hymenanthera alpina* is dwarfier, the smaller oblong leaves more brownish and the branches terminating in a blunt spine. Although it is not certain that they are functionally monoecious, we have planted in groups of three from seed for cross pollination. Also grown for their fruits are the various small coprosmas of which the mat-forming *C. petriei* is probably the best known. We have found the most reliable to be *C. cheesemanii*; more of a prostrate spreader than a mat, it freely produces its orange drupes. Starting from the usual three in 1981, many bird sown seedlings are turning up around the garden. It was to our great regret that the beautiful creeping blue-fruited *C. moorei* of Tasmania did not prove hardy.

Like the related daphnes, pimelias are grown both for their heads of white fragrant flowers and their subsequent fruits. *Pimelia prostrata*, which came to us from Edrom, is just that, a completely flat mat of tiny grey-green leaves, the fruits white and again pearl-like. From the 1987 A.R.G.S. Exchange we raised *Pimelia oreophila*, which has somewhat looser trailing growths and larger leaves, up to 8mm long. They are more noticeably glaucous on the upper surfaces, and thinly-margined with dark crimson. The orange fruits are also rather larger, but are only produced on plants which are functionally female, another good reason for raising seedlings.

Just as heaths, moors and bogs in Scotland may include junipers, so a real "pygmy pine", *Dacridium laxifolium*, is to be found on similar boggy, but well lit, sites in New Zealand. We have three specimens, raised from Edyth McLellan's seed, which have formed low hummocks of congested growths, about 0.75m across after some dozen years. Two have tiny glossy green needles, turning bronzy for the winter, but the third is a superb glaucous blue-grey, with pinkish overtones during cold weather. We had segregated this by the edge of the Conifer Ghetto, but it just formed part of the background until the A.G.S. President, Peter Erskine, remarked on what a good form we had, and that we really should propagate it. That of course takes us back to overflowing frames again, and to our lack of facilities for cuttings. Sometimes, however, it takes a fresh eye to really appreciate what one has in one's own backyard! With that thought I close this brief account of some noteworthy plants willing to share our particular heath, here by Loch Ness.

President's Review 1992-1993

What a wonderful year this has been for our Club. There has been so much going on at times that it was difficult to make a choice as to where to go and what to do to participate in the Diamond Jubilee celebrations. It has been marvellous, I hope you all enjoyed it as much as I did, and I wish at this early stage in my review to accord a hearty vote of thanks to all who helped in any way at all towards the enjoyment of celebrating our 60 years as a very special Club. To those who did not attend the events, for whatever reason, you missed out on some memorable occasions which I will recall later.

We started our year proudly displaying our new logo and badge and each event saw more and more members wearing garments from our S.R.G.C. Collection. Events would be ticked off in the Jubilee Calendar. All exhibitors at our Shows and Displays were given a special diamond shaped Exhibitor's Badge, which now becomes a collector's item – the last opportunity to claim one came at the end of October.

Our Shows got a tremendous boost with the popularity of the special Diamond Jubilee six pan limited size classes, for which the winner received a Duncan Lowe framed drawing. Bench space was at a premium at some shows, and some winners are perhaps running out of wall space. Our thanks to the Show Secretaries and their committees for all their work and patience over the year, and also to the members who man the Club's plant sales tables and to the trade for their support.

Several displays were put up by Groups to publicise our Club's Jubilee. The Angus Group hearties, marshalled by Margaret and Henry Taylor, won first prize at Dundee Flower Show in April for a modern styled rock garden, the base of which was old polystyrene boxes top dressed with stones for scree effect on one side and bark for woodland effect on other side! Part of the display, much commented on, was a slab of stone beautifully engraved by a friend of the Taylors showing the club name and logo. This stone formed part of the presentation table at the St Andrews Weekend.

The West of Scotland Group put on a plant display at the Winter Gardens, People's Palace, Glasgow Green, at the beginning of June. Ayrshire Group used the publicity boards to feature the Club's Diamond Jubilee over and above their usual entry at the Ayr Flower Show. Aberdeen Group also utilised the boards in conjunction with a raised

bed display at the R.H.S. show at the Duthie Park in Aberdeen.

The Edinburgh Group delighted us with a special lecture by Brian Mathew early in March. Stirling Group had a most enjoyable cheese and wine party after the Show, preceded by a lecture given by Norman Stevens, and the West of Scotland Group entertained us to a buffet supper and lecture by Sir Peter Hutchison. Aberdeen Group finished the official Jubilee lectures by having Paul Christian to give a talk at the Late Dwarf Bulb Display. The strength of our Club where it matters most is with the Groups and we owe a great deal to the work done by the Group Conveners and their committees – believe me it is well appreciated.

To publicise the big event down south Dr Jim Cobb delivered a special lecture at the Spring Gardening Fair at Wembley. It was a great shame that this did not receive the better publicity it deserved.

One of the main features of our year was to be George Smith giving a series of lectures as the Diamond Jubilee Travelling Speaker. Unfortunately George was unable to fulfil this commitment due to ill health; we wish him a speedy recovery. To all the Special Lecturers my sincere thanks for all the preparation work you put in to make the lectures something memorable for us.

The first main event of the Jubilee calendar was the Oban Weekend organised by Dr Hilary Hill and the Lorn Group. Now this was something completely different. Over 150 participants were treated to two mini lectures, Primulas by Jim Jermyn and Peat Garden Plants by Dr Alf Evans, before we were let loose to visit eleven beautiful west coast gardens in and around this magnificent part of Scotland. It was a super weekend, and even the ubiquitous midges were on their best behaviour. Thank you, Hilary, for all the excellent organisation.

At the end of June, eighteen stalwarts led by Jim Jermyn set off for Lake Garda and Selva to spend a glorious fortnight walking in the mountains, finding, admiring and photographing the alpine plants. After all, that's what it's all about. Thank you, Jim, for the happy memories we have of our Dolomites holiday.

If by any chance a member found time hanging heavily on their hands then they could have gone to visit many of our members' gardens which were opened under the Jubilee Garden Visits Scheme. I found this exercise exciting and any member who did not grasp the opportunity to get in the gates of these 50+ gardens certainly missed something. I enjoyed meeting the garden owners, meeting the members going round the gardens and being inspired by the different garden designs, range and size of the gardens and the variety of plants they contained. It was a privilege to be allowed into these gardens and my sincere thanks to all

who permitted us to see how their garden grew. My apologies to the garden owners whose gardens I was unable to visit – I ran out of time.

The Diamond Jubilee Weekend was held this year at St Andrews, always a popular venue with members. Our special guests were Bill Mackenzie, our sole surviving Founder Member, and Peter Erskine, President of the Alpine Garden Society, our sister society over the border. Nearly 200 members enjoyed a varied programme of lectures compiled by Ian Douglas, Convener of the Fife Group. Prior to the Conference Dinner on the Saturday evening a reception was held, at which Peter Erskine proposed the health of our Club and intimated that in due course we would receive leather bound volumes of the Encyclopaedia of Alpines as a gift from the Alpine Garden Society in this our special year. This is indeed a magnificent gift which will be well admired and appreciated by all when it goes on display. Presentations of Lawrence Greenwood prints were made by me on your behalf to the Alpine Garden Society to hang in their Pershore office, to the Edinburgh Royal Botanic Garden for all their help and co-operation over the years, and to Anne and Sandy Leven and family for all the time, work and effort they have put in for us in connection with the S.R.G.C. Collection. Earlier in the year prints were sent to Hilary Hill and Jim Jermyn in appreciation of their part in the celebrations. Before our Founder Member cut the Jubilee cake, made specially by Margaret Taylor, I presented Bill with an engraved piece of Caithness Glass and a new badge. I then asked Bill to present the Rutland Salver, which he had donated to the Club, to the first time winners Maureen and Brian Wilson from Aberdeen.

The Weekend was tinged with sadness by the sudden death of Jeremy Kaye on the Friday night. I am sure that it would have been Jeremy's wish that the Conference carried on as planned. I tendered our sincere condolences to Linda on her tragic loss.

Over the year I also expressed sadness at the deaths of John Aitken from Aberdeen, Jack Martin, Dunblane, Don Clark, Dalbeattie, Admiral Sir Nigel Henderson, Castle Douglas, and Gilbert Barrett of Falkirk. Our Honorary Member Mr H. Shimizu died earlier this year in Japan.

The Club received a handsome legacy of £5,000 from the late Gilbert Barrett and £250 from Joseph Smith. Several donations were given during the year, namely £155 from the North Northumberland Group, £100 from Inverness Group, £500 from Aberdeen Group, £150 from Ayrshire Group and £115 from the auction at the St Andrews Weekend. All of these monies to go to the Exploration Fund. On your behalf I express thanks to all who have given money to the Club by way of donations large or small.

We have also received donations of books and slides from one of our Past Presidents Mrs Kathleen S. Hall, these to be used in the best interest of the Club. We wish Kathleen good health and enjoyment in her new home.

The Exploration Fund received five applications, and it was decided to grant one award to Joel B. Smith, to assist this young person with his trek to the Himalaya, which hopefully will result in seed for the Exchange and an article for The Rock Garden.

The Early Dwarf Bulb Display again proved popular. The morning talk this year, entitled "Bulbs of Southern Turkey", was given by Dr Michael Almond who delighted us with his astounding photography. A Summer Jubilee Display was held in Perth and was well supported. It made the public aware that rock gardening is not just a spring activity as many think. Another innovation this year was the Late Bulb Display held in Aberdeen, where the speaker was Paul Christian on the subject of – guess what – bulbs!

In Jubilee Year "The Rock Garden" has, as ever, been a high point in the Club's continued success. The popularity of our eminently readable journal does not of course come about by accident and many thanks are due to the contributors and to our busy Editors.

The other important functions of the Club, notably The Seed Exchange, Publications, Library and Slide Library, have all performed with their usual efficiency throughout the year. I cannot stress how much the members appreciate all those who give their valuable time in running these facilities available to most members.

The Treasurer is happier this year, the membership figures have increased, up 171 from last year. Our recruitment drive has been worthwhile. I hope the new members will find that membership of our Club is money well spent and that their interest will be maintained. The total membership is now 4537 made up of Scotland: 1833, England, Wales and Ireland: 1585 and Overseas: 1119.

David Rankin has now become Edinburgh Group Convener succeeding Ron McBeath. Ian Young is the new Chairman of the Standing Committee of Show Secretaries relieving Sandy Leven to concentrate on the Publicity Managership.

My thanks to our retiring four Council Members, David Atkinson, Viv Chambers, Bob Edge and Morris Wilson. I hope they have enjoyed their term on Council, it has been grand having their support, even though we did not always agree!

This year again the A.G.S. Salver for the highest aggregate number of first prize points in Section One was awarded to Margaret and Ian Young, very many congratulations. The Youngs were also the first time

winners of the Esslemont Quaich for 3 pans new, rare or difficult. The Golden Jubilee Salver awarded to the individual who has given outstanding service to the S.R.G.C. is awarded this year to Sandy Leven. Who better to receive this accolade in Diamond Jubilee Year? Sandy has worked tirelessly, not only this year, but in the years beforehand as Chairman of the Show Secretaries Committee, and as Publicity Manager, but above all he has been the ideas man behind many of the events and purchases which have delighted us in 1993.

Finally there is a great deal of skill in our Club over and above growing alpines. We are indebted to our artists for their work. To Anne Chambers for the drawings on the coffee mugs, to Duncan Lowe for the logo, the Calendars and Jubilee Special Class drawings, and to Lawrence Greenwood for allowing us to screen print the *Paraquilegia grandiflora* as a limited edition print for the Diamond Jubilee (Fig.78, p384). We admire your talents, thank you for allowing us to capitalise on them.

I wish to take this opportunity of thanking Mrs Joyce Tulloch who has done a tremendous job in auditing the Club's Accounts over a number of years. A new Auditor was appointed at the Annual General Meeting, namely Michael Braithwaite from Hawick. Our Treasurer looks forward to having the same good working relationship with Michael as he had with Mrs Tulloch.

Our new Secretary is settling in fine. I am enjoying working alongside Jan and learning with her! My sincere thanks to all the officials who have shown tremendous patience with this tyro.

Last year at the end of my review I said I had experienced an exciting year; this year I have run out of superlatives.

Elizabeth Ivey.



A Taste of India

MARGARET AND HENRY TAYLOR

Chai brewed on a yak-dung fire is not everyone's cup of tea, but gives the authentic flavour of Himalayan adventure. Where are we? In the Miyar Nullah (valley), north-west India, adjacent to Kashmir and Tibet, sitting in the evening beside our camp fire at 3700m. This is a remote fertile valley, with wonderful friendly Buddhist villagers, on the sunny rain-shadow northern slope of the Himalayan range. There is no road, just a narrow stony track with something nostalgic to a Scot, the occasional whisky still in the village street. When we asked if this was permitted they said, "Oh no, it is illegal. Only chang (beer) brewing is allowed, but we would know days in advance if any fat government official was walking up our nullah".

***Paraquilegia* in the Gumba Nullah**

Jaloh (let's go) as soon as we finish breakfast and the sun begins to shine on the jagged tooth of rock guarding that side valley, the Gumba Nullah.

Just under the quarry-like cliff at the entrance is a fine stand of *Anemone rupicola*. This has splendid gleaming white 6cm saucers with mauve-blue backs to the rounded petals, the whole plant 5 to 10cm tall (Fig.82, p386). Nearby in very short turf is a close relative of our European "King of the Alps", but this *Eritrichium nanum villosum* has longer, larger leaves and 5cm stems to the blue flowers, making it less exciting than our more compact European.

Climbing up a goat track, we see in streamside gravel brilliant carpets of stemless pink daisies, *Waldheimia glabra*, the small notched leaves smelling pungently of chrysanthemum. This plant is easy from cuttings and seed germinates readily. Unfortunately flower colour can vary from gorgeous rose to greyish white, so seed-raised plants can be a sad disappointment. In cultivation it has a reputation for shy flowering, but if it is well fed and grown trailing over the edge of a trough in a sunny position it flowers freely. In the wild it has its feet bathed in nutritious ice-cold snow melt and its head in fierce sunlight, quite a tricky recipe for us gardeners. Also in streamside habitats we find the less common, rather straggly, *Waldheimia tomentosa* with grey woolly leaves and larger white to pink flowers. To our surprise, a few picked flowers kept fresh in damp

sphagnum dropped good viable seed onto the floor a week later.

While trying to build a stone dyke windbreak to shield the 12cm yellow *Corydalis gowaniana* for a photo, we are befriended by a young shepherd boy who shyly adds stones to our wall. After taking a photo of him with his dog, we are invited to share a meal with father and brother outside their summer stone "igloo". These nomadic Gaddi shepherds spend the summer months with sheep and silky-haired goats on the rich grass close to the melting snow, then walk many miles south over the high passes to the warmer edge of the Punjab plain to overwinter. Near their hut among the rocks grows the 15cm deep purple-blue *Aconitum violaceum*.

Tired towards the end of a hot hard day at around 4300m, I (Margaret) am still photographing the startling *Waldheimia glabra* when an arm-flailing Henry 150m above catches my eye. Can it be the plant we hope for? It must be, even the most fanatical hunter wouldn't make me climb up there unnecessarily at this time of day. Gasping laboriously up through fallen rocks and over a late snow patch (at the end of July), I reach the shady north-facing cliff and can't believe it – every chink in the rock face has tufts of pale lilac *Paraquilegia anemonoides*, one of the world's star alpinines (Fig. 78, p384).

The flowers are held upright, not dangling like those of the superb deep blue Bhutanese form collected years ago by Ludlow and Sherriff. On a subsequent visit in August there were still a few flowers, but most of the seed pods had been eaten off by some bird or beast. Was the culprit a pika, the furry hamster-like animal that sat watching from the rocks? Actually a few of the green pods of the paraquilegia yielded viable seeds. We have searched diligently in this region but have found the paraquilegia only on this one cliff. A small piece of rock, when tested at home with acid from our car battery, gave off bubbles indicating limestone, though this is not common in this part of the Himalaya where the rock is mostly granite or schist.

Tremendous willpower is needed for climbing at this altitude. Hyperventilation pushes out more CO₂ than normal from our lungs, so blood becomes more alkaline, sometimes causing headaches and pins-and-needles in fingers and toes. Acetazolamide can be a help in relieving these symptoms. We pick up lots of useful information from having a doctor in the party. I was most interested to hear our attractive young doctor tell an overattentive gent that we were from Australia and I was her father!

On this same cliff there is the taller *Anemone polyanthes*, multi-headed rather like the European *Anemone narcissiflora*. Also on the limestone there are a few small compact cushions of *Saxifraga pulvinaria*.

Tug of War at 3700m

While we are up the side valley, our Indian guide and pony men are having a rest day and enjoying a bit of sport. Tug of war is one against one here. Opponents on all fours crouch back to back with a loop of yak-hair rope around the back of the neck, down the front and through the legs. At the count of *ek*, *do*, *tiin*, each man crawls away from his opponent, bare fingers and toes scrabbling for a grip on the turf, while supporters shout encouragement. When we get down to camp, I size up the situation and sneakily choose the lightest Indian as my opponent. Margaret reckons my face turned a deep purple with the effort of beating Bir Singh at this altitude. The following year, when Margaret gave him a photo of our contest, it was quite touching to see the pleasure on Bir Singh's face.

Beside our camp, in a damp hollow, there is a large stand of *Iris hookerana*, 25cm tall in shades of mauve to deep purple. The dry turfy areas are attractively carpeted with the pink and rust of *Persicaria*, or is it *Bistorta*, or the more familiar *Polygonum affine*? Those bally botanists! Further afield towards the main river the puffy calceolaria-like yellow flower is *Pedicularis bicornuta* growing among a 30cm white aconite, later identified at the R.B.G.E. library as *Aconitum rotundifolium*.

The near side of the big river has shallow water with sand bars. In the sand there are gorgeous patches of *Epilobium latifolium* with large pink flowers on stems only 15cm tall. Also in the sand are dark green mounds of the white-flowered *Arenaria festucoides*.

Back at camp, Bihari, the only Hindu among our Buddhist men, has the unenviable job of killing and butchering a sheep for our evening meal. Having seen the live sheep being dragged reluctantly to camp, there are some extra vegetarians in our group this evening, though our doctor assures everyone that the meat could not be fresher! After the feast we sit around the fire with metal beakers of local whisky. An unforgettable scene with a full moon over snow-capped peaks and the embers of our yak-dung fire being raked towards our feet to ward off the chill of the night. Bihari translates the gist of a long complicated song about a man selling firewood to another and not getting paid for it. After more whisky, a few Europeans join in roaring and galumphing, trying to copy the slow sinuous wiggles of body and arms and flying feet accompanying the rhythm of plastic and metal water container "drums". Bihari says, "It's better in Simla where I come from, we have electric light and disco dancing"! The night is cold, but beware of the heavy yak-hair blankets, one of our girls got severely bitten by fleas.

Paradise Camp and Doksa Nullah

On our walk back down to the next campsite, while passing through juniper scrub, our bird experts point out the Himalayan rubythroat and a yellow wagtail. By the way, bird-spotter disease can be diagnosed from the black eye obtained by stumbling over stones while walking with one's head in the clouds. It is certainly worth keeping your eyes on the ground to see blue streamside gentian relatives, *Lomatogonium carinthiacum* and *Gentianella falcata*, the latter with a blob of white hairs in the centre of the flower.

This is a happy place to camp at 3600m, still above the treeline in a meadow of dwarf blue nepeta and the edelweiss, *Leontopodium himalayanum* (actually rather a dull grey flower). Our men are marvellous at producing tea as soon as we reach camp.

The Doksa is a very pleasant side valley just above our tents. It was most exciting on our recent August trek to see *Delphinium cashmerianum* in full flower, as we had spotted it in bud on a July visit. The woolly buds open to large soft blue flowers on 20cm stems. It grows near streams on coarse scree which is well drained but moist. Unfortunately when this delphinium is grown here in Britain at sea level it reaches 60cm. What keeps it dwarf at high altitude? Is it the much lower night temperature or the extra U.V. light in its 4500m Himalayan home? Growing also at our limit on this climb is a very attractive yellow cushion of *Potentilla biflora*, altogether superior to the much more common *Potentilla cuneata*. In this region *Potentilla atrosanguinea* can have brilliant red flowers in place of the more usual yellow. With its silky silvery leaves it is most striking at high altitude when only 10cm tall (Fig.83, p387), but is another which tends to stretch up in the garden. In fine silty scree *Saxifraga stenophylla* spreads around with red strawberry-like runners. Sometimes it has narrow-petalled plain yellow flowers, but other plants are broad-petalled with most attractive brown veining (Fig.84, p387).

In turf hollows back near our camp there are lots of *Androsace primuloides*, usually pink, but white-flowered ones (Fig.85, p404) are fairly frequent. In cultivation this androsace benefits from winter cover to keep the wet off its dormant rosettes. *Pleurospermum candollei* found among the rocks has showy large hydrangea-like heads of white on celery-leaved plants typical of an umbellifer.

Bed Tea, Sahib

For several years I have had the good fortune to be a botanical leader for a tour company now called Himalayan Holidays (Margaret comes as a client so theoretically I lead my wife!) We walk for a fortnight with our

local Indian guide, cook and pony men. The ponies carry tents, luggage and food for the trek. Bed tea at 6am is followed by a bowl of warm washing water, with breakfast shortly afterwards. This gives an early cool start to our walk which is usually arranged to finish at the next camp around 1 pm. Then we lunch and rest, free to potter around camp or river, or, if fanatical about plant hunting, head up the nearest side nullah towards snow and spring flowers.

Everyone shares a sense of achievement on completing a hard journey on two feet through a vast landscape away from the bustle and traffic of modern life. The journey is made all the more pleasant by the company of our helpful Indian friends. On our first stay at Doksa, the eldest of our group had his 70th birthday and Tashi, our very good cook, made a special meal including maumaus. These are like mini Cornish pasties with the pastry decorated in leaves and flowers. This whole district is clean and tidy and, due to our careful cooks, neither of us has had any stomach upsets on our three treks.

Blue Poppies

At the entrance to each major side valley there is a chorten (shrine) so Prem, our chief guide, lights a small fire of sacred *Juniperus macrocarpa* to announce our presence and ensure the protection of the local (pre-Buddhist) nature god. We gradually descend into open forest of *Pinus wallichiana* and white-barked *Betula utilis* ssp. *jacquemontii*. On the edge of the wood there are brilliant blue flowers of *Geranium regelii*, a compact local version of *G. pratense*.

If we are lucky and the normal bridge has been washed away, we cross the main river by a Juhla (box bridge). This is a wooden apple crate dangling on a couple of pulleys from a steel cable spanning the river. Prem hammers loose nails back into the box with a handy stone, then a victim climbs in and friends pull on a rope to drag the box across. An exciting experience with that torrent thundering just beneath!

The Gangphu Nullah above our camp in the pines near Chaling is very good for flowers. It is a cold place where snow lies late and *Meconopsis aculeata* is particularly plentiful. This 30cm meconopsis with deeply-lobed leaves has flowers which can be clear blue or sometimes shot with purple to give lovely shimmering colours. It grows in scree or on rock ledges not far from water. Generally we are trekking on the dry rain-shadow side of the Himalayan range, but in 1992 a freak change of wind brought some monsoon rain into our area. The bad effect was landslides, the good effect a plentiful germination of seedling meconopsis, so 1994 could be a particularly good flowering year.

Another rock ledge plant is *Eritrichium canum*, 10cm tall with upright, linear, silvery leaves.

The white 12cm *Saxifraga sibirica* grows in moist scree and we spot one with extra large flowers. Here also is the occasional *Lloydia serotina* and the deep blue 12cm *Pseudomertensia echioides*. Heading back down beside the track we came on compact bushes of *Lonicera obovata* and collected some of the 1cm shining purple fruits for seed. Unfortunately when these were left to dry outside our tent, a yak tiptoed up, ate the berries and ran off with a valuable boot sock. A hurried chase retrieved a well-chewed sock but not the berries.

Wedding at Chaling

Our Indians have relatives living in the village so we are invited to a wedding one evening. Up we climb on a notched tree-trunk ladder to a rooftop room in a strongly built stone house. Shoes off we sit in semi-dark around the wall on folded blankets drinking salt-butter tea, quite palatable if considered as soup, then we have home brewed chang and whisky. Food pots are decorated with swirls of butter as symbols of good fortune. It certainly is a strong house as there are about 30 dancing and 20 sitting around the edge of the room. Drums and flute playing, girls in best silk waistcoats scream out a verse in loud high-pitched voices, then the men roar the next verse. All the while a placid elderly lama sits in the corner beside a table with little butter and dough images of mice and other animals. This is in the bride's village, there are to be further celebrations tomorrow down the valley in the bridegroom's home. The 18-year-old bride is completely covered in a shawl with money pinned to it. She is crying, our men tell us, because she does not wish to marry the lazy 25-year-old drunkard chosen for her. She had even run away to hide in the rocks for four hours but had been found and brought back. This seems sad and alien but we are told that pressure of local custom and responsibility might change the chap. Our men assure us that their wives had not cried and run away!

Araldite Again

Beside each village, elaborate irrigation ditches ensure good crops of barley, buckwheat, peas and potatoes so our villagers are well fed and healthy. They also grow a cash crop of *Saussurea costus* (Kuth). This is a big burdock-like plant with a valuable root which is lifted, dried and sold in Delhi as a medicinal cure-all. *Cannabis sativa* is a common weed sometimes growing to 2m and said to be of excellent quality, though chewing a leaf had no noticeable effect. Also enjoying the irrigation,

Aquilegia fragrans grows to about 60cm with large cream or pale blue sweetly-scented flowers. There is a less pleasant scent from *Codonopsis clematidea* though the pale blue flowers have attractive dark markings if you look inside the bell. Damp streamsides are a home for *Parnassia cabulica* and for *Sedum ewersii* with brilliant pink flower heads and succulent leaves. It is more of a struggle to reach the 10cm tall golden daisy on the rock ledges, *Inula obtusifolia*. Back at camp we join in gathering cones of *Pinus wallichiana* for the fire, then regret our zeal when resin plastering these cones sticks immovably to hands and clothes.

In drier areas beside the track there is the yellow *Morina coulteriana*, the thistle *Cousinia thomsonii* and sprays of red strawberry-like fruits of *Chenopodium foliosum*. Also on dry gravelly banks there is an attractive 8cm pale pink *Androsace rotundifolia* ssp. *glandulosa*. On the steepest driest slopes there are prolific stands of white 1m tall *Eremurus himalaicus*.

We never go far without our Araldite, this time it fixes a flapping bootsole, but I draw the line at gluing back a filling in a lady's broken tooth. The exit from our peaceful Buddhist valley in Lahoul entails a long walk through a precipitous gorge before we are back to the motorable road and its insane free-for-all.

“Peep, Peep, Don't Go To Sleep”

We travel by private bus the 166km over the mountains to Manali in the Kulu valley, taking a long day of 10 to 18 hours if our luck holds and we have only minor delays for road rebuilding or punctures. Indian traffic noise is augmented by the practice of hooting before overtaking, vehicles having a notice on the back “Horn Please”. This would appear to be the only consistent rule of the road, so you can understand the sign outside a garage “Painting and Denting”. By the way, whisper has it that 600 rupees (£10) passes the driving test. We notice that any driver, before setting off, bows and says a prayer to the steering wheel and Ganesh, the elephant-headed god of good luck whose image hangs inside the vehicle. Don't get me wrong, Indian drivers are very skilled: the unskilled are quickly weeded out. Nevertheless, Europeans normally emerge from a road journey in a state of jelly, demanding knock-out drops before ever entering a vehicle again.

Rohtang La

On our last free day in Manali, those who can face a couple of hours in a taxi return to the 4000m summit of the pass, a wide saddle well

worth exploring (£12 gives you a taxi and driver for a whole day). The monsoon mist can extend from Manali just to the saddle where it is strange to emerge suddenly into the sunshine of the northern rain-shadow slope. First we explore this borderline west of the road for some special plants. In short turf on steep grassy banks the sky-blue *Cyananthus lobatus* flowers in August. Here the stems are only 10cm long, nothing like as straggly as the plant in cultivation. While admiring *Primula minutissima* (Fig.87, p405) and *P. macrophylla moorcroftiana*, we come on small clumps of pink *Arenaria glanduligera* and scattered plants of a silvery-leaved androsace which may be *A. muscoidea* or *A. robusta*.

East of the road is even better. In July, snow blankets this area, but recedes to small patches by late August. Climbing towards cliffs, we squelch over a wet area with the tiny *Potentilla microphylla*. This has most attractive yellow flowers followed by small red strawberry-like fruits. By this time the mist is billowing around, so bright waterproofs are needed if we are not to lose each other. The short turf is studded with *Gentiana tubiflora*, like a Himalayan version of *G. verna*. Unfortunately all the flowers are tightly closed because of the cold mist. Does it ever open? In cultivation it seems to self-pollinate and ripens seed remarkably quickly within three to four weeks.

Around boulders at the foot of the damp shady cliff there is a 15cm stoloniferous fern with lovely brown fur on the underside of the fronds, perhaps a dryopteris which should certainly be hardy as it grows here above 4000m. Nearby in mossy ground we find the 10cm yellow *Corydalis meifolia* which has very finely dissected blue-grey leaves.

But look at the yellow cushions in the moss on top of the boulders to see the exciting stemless *Saxifraga jacquemontiana*. It is highly desirable though said to be reluctant to flower in cultivation. There is another saxifrage in cracks in the cliff, the less showy pale pink *Saxifraga pseudo-pallida*.

Primula reptans

Scurrying around, loath to leave the summit before heading 1000m down the wet southern slope to our taxi waiting at the shanty town of Marhi, we achieved our ambition in finding this primula on our most recent visit. It grows on a steep wet slope close to a snowbank and is in full flower on 29 August, having only recently emerged from that snow (Fig.88, p405). When you consider that the fresh snows of winter start in late September, this plant must have a growing season of only a few weeks in every year. With the mist and hairs in the throat of the flower, we can't be certain but most seem pin-eyed. The flower colour here is a medium

lilac, paler than the thrum clone currently grown in Britain. The mist fogging the camera lens is a minor problem compared with the thrill of success after three years of searching.

Downhill from now on

At the north-west end of the Himalayan chain, our monsoon is lighter and not so continuous as further east. So, during the monsoon months (the best time for flowers) there is a mixture of sunny and wet days, though it is always safer to carry waterproofs on the mountain as it may suddenly turn very cold as well as wet. This southern slope of the Rohtang is incredibly rich in flowering plants both in July and in August. Of course, some completely span both months, like *Primula involucrata* which starts in early July at 3000m and continues to the end of August at 4000m. Despite this long flowering period we have failed to get a really sharp photo of this primula as the willowy stems refuse to stand still in the breeze. *Iris kemaonensis* is at its best in July (see cover plate) though there are still some of the beautifully mottled blooms to be seen in early August. In rich soil in the garden this iris flowers well and a good clone can be rapidly multiplied. *Primula reidii*, with its pure white scented flowers and long silky hairs on the leaves, spans both months and probably continues in bloom even later. A further long-season plant is *Anaphalis triplinervis monocephala* which has good-sized white "everlasting" flowers and silvery woolly leaves.

We mentioned some July flowers in a previous article (Rock Garden Jan 1989, pp.142-146), now we would like to highlight a few that appear in August. *Lagotis cashmeriana* dots the upper slopes with blue, reminiscent of gentians in the Alps, but a closer look reveals that it is a member of Scrophulariaceae with thick bronze green succulent leaves. Another lagotis has been recorded by Oleg Polunin at the upper altitude limit for flowering plants in the Himalaya - 5945m. Among the rocks *Cremanthodium ellisii* has hanging yellow flowers on 20cm stems and large upright leaves that seem out of place at high altitude. On cliffs beside a snowy gully there are beautiful, pale blue, wide-flared bells of *Codonopsis ovata*, while on more level ground there is the strange, woolly, purple *Dracocephalum wallichii*.

The new tarmac road snakes down the mountain in long hairpins, but on foot we take the more direct route of the old pack mules. About 300m above Marhi on the shady cliffs that harbour *Primula reidii*, we come on *Saxifraga moorcroftiana*. It has hairy parnassia-shaped leaves and 15cm panicles of showy golden flowers. Also 15cm tall, the good blue *Erigeron multiradiatus* has flowers 5cm across. Where the herbage



Fig. 85 *Androsace primuloides*, white form, Doksa Nullah, N.W. India (p.398)
M. & H. Taylor

Fig. 86 *Lilium polyphyllum*, Manaslu Nal, N.W. India (p.408) M. & H. Taylor





Fig. 87 *Primula minutissima*, Rohtang La, N.W. India (p.402) M. & H. Taylor

Fig. 88 *Primula reptans*, Rohtang La, N.W. India (p.402) M. & H. Taylor





Fig. 89 *Campanula cochlearifolia*, Penken, Austria (p.415) Richard Simpson

Fig. 90 *Haastia sinclairii*, Mt. Hutt, New Zealand (p.420) Chris Chadwell





Fig. 91 *Leucogenes grandiceps* in seed, Mt. Nimrod, New Zealand (p.421)
Chris Chadwell

Fig. 92 *Pimelea traversii*, Mt. Nimrod, New Zealand (p.421) Chris Chadwell



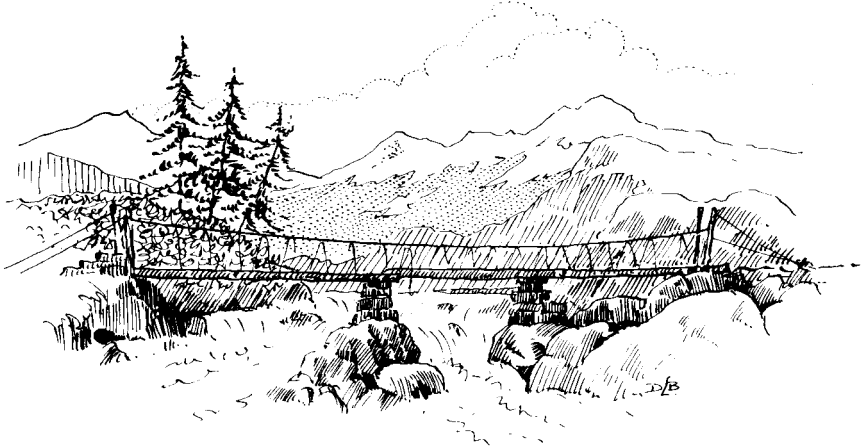
is taller there are 60cm spikes of pink *Morina longifolia* over acanthus-like leaves.

From Marhi we have a hair-raising taxi ride down the hairpins to Manali at 2000m, the blighter of a taxi driver free-wheeling to save petrol. The last two spectacular plants which we must mention grow 300m up the Manaslu Nal in damp clearings in the forest. Both are lilies at their best in mid July. *Cardiocrinum giganteum*, about 2m tall and well known in cultivation, towers over a 1m lily which we have never met in gardens. This is *Lilium polyphyllum* with recurved Turk's-cap flowers varying from pink to pale cream spotted with purple and around 6 flowers per stem (Fig.86, p404).

Dynamite

Next day we set off on the bus journey down through the mountains to the hot depressing poverty of the Punjab plain, but one more adventure awaits. Heavy rain has brought down rocks in the Mandi gorge, boulders 2m diameter are piled on the road. Soon a solid mass of vehicles jam into every gap on the road on each side of the landslide. When a chap arrives with a box of dynamite and the fuse starts smoking, we all stampede back in panic to dive under a lorry before the stones rain down, it is more fun than fireworks night. No problem, after 15 blasts and a lot of shovelling, in 7 hours we are back to the normal speed on mountain roads (10mph). Our driver, or perhaps the guiding hand of the mountain god, leads us safely to Chandighar.

India gets into your blood. The customs and people of the remote villages have a strange half-modern life, but with elements that jolt us back in time to our ancient roots; the wealth of flowers is an extra bonus, jaloh!



We'll Get to the Trough Eventually

BRIAN BIXLEY

Our garden surrounds an old farmhouse. Not old by Scottish standards, but reasonably ancient by ours, the house being built at the end of the 1880s. We were quite a young couple when we bought the house and its surrounding farmland in the 1960s. It was difficult to sell farms at that time, so that though we were both teachers without prospect of financial fortune, we were able to find the purchase price.

What is less clear is why we should have purchased it at all. We lived then, as now, in Toronto, about 110 kilometres away, and were looking for a house there. Our attention was caught by an advertisement in a morning newspaper, and we drove out to see the property on a fine, softly warm May evening, more as an adventure into the unknown countryside than with any serious intention of buying. But, urban kids both, we were captivated by the old neglected house, and its position in high, isolated open fields. We drank in the views across the valley to the south and over the gentle hills towards the woods to the north, and we were drugged by the stillness and the silence. After some protracted negotiations, we became the owners of a house, two barns, and a hundred acres of marginal farmland.

That advertisement changed our lives, though the change was not immediate. The house was in good shape structurally, but it had no running water and only the hint of a kitchen, and the heating strategy seemed mostly based on ugly and desperate efforts to keep out the winter cold. All this was a rude shock for town softies, and as we had little money to correct these deficiencies, the property became more of an idea for us than a reality. We visited it infrequently, a weekend, a few days in the summer. Even when we put in a bathroom and a modest kitchen and central heating, so that we could be at the farm with greater comfort, we seldom were. Our lives were still focussed on the city and its attendant attractions.

On one of our winter forays we set out a bird feeder, and suddenly there was colour and movement. We were hypnotised. We bought bird books and field glasses. Summer Saturdays no longer saw us at the galleries or at the ethnic markets, but in the woods, bitten by mosquitoes, hoping to catch a glimpse of an ovenbird or a tanager.

More crucially to this story, we learned that there were shrubs and trees that were particularly attractive to birds. We fenced (because the land was rented to a neighbour for his cattle) an area to the east of the house, and we made sweeping shrub beds in which we planted viburnums and honeysuckles and mountain ash and, yes, even some daphnes, all of these to provide cover and food for the birds that had become our overwhelming and completely unanticipated obsession. Trees sprang up uninvited in the new fenced area, the seedlings no longer grazed down by the cattle. As long as the seedlings weren't in or too near to the shrub beds, they were wrapped or protected with wire cages in the winter to protect them against rabbits, and thus we made ourselves victims of the dreaded *Acer negundo*.

British garden books give no hint of the invasive dangers of this tree. The new RHS *Gardeners' Encyclopedia of Plants and Flowers* states baldly that the ash-leaved maple is a "fast-growing . . . spreading tree". *The Hillier Manual of Trees and Shrubs* tells us that the "Box Elder" is a "fast-growing . . . tree . . . A very popular maple". Not here it's not. We loved the saplings when they first grew, for they did indeed grow quickly, and since the house was sitting in those open fields we were hungry for some protection and privacy. Many of the trees produced seeds, zillions of seeds, loved by the winter-visiting evening grosbeaks. But if the grosbeaks didn't get them, they fell to the ground where every one germinated, and every seedling rapidly became a "fast-growing tree". The rate at which they will take over some unattended waste ground, in the country or in the city, along the roadsides or amongst your zinnias, can only be compared to that of *Veronica filiformis* which the RHS *Encyclopedia* wisely does not mention. There is a Stephen King story to be written, or a David Cronenberg movie to be made about the menace of the Manitoba Maple as it is known here, though in Manitoba it is probably called the Ontario Box Elder.

Through the 1970s our interest in birds gradually yielded to a curiosity about the shrubs we had planted for them. From there it was a short leap to the world of herbaceous plants. We started to read the gardening literature, though not for long the "how-to-do-its" which we quickly scorned, because though they were relevant for the British gardeners for whom they were primarily written, they were not particularly useful for the conditions in which we were learning to garden. There was very little indigenous gardening literature, and what there was was unfailingly pedestrian. No, our enthusiasms were for Elisabeth Lawrence and John Raven and later, when we realised that you didn't need to be at least a baronet to benefit, for Russell Page.

By the mid-1980s we were dedicated, if not very successful, gardeners. That decade brought two new passions, for clematis and then, more slowly, for rock garden plants (perhaps because we had discovered E. B. Anderson's *Seven Gardens*). Readers of this Journal will think of that as an inexorable progression, from the lower to the higher learning, from darkness into light, but not everyone sees it that way. It is one of the great paradoxes of gardening, that rock gardeners are the cream of the horticultural crop – “the community of horticultural saints”, Allen Lacy has called them – but that they have the least attractive gardens. However, that is another story. By the late-1980s we were members of the major rock garden societies, not excluding the unexpectedly thriving and enthusiastic Ontario RGS.

Our first area for alpine plants was a long low east-facing bank along the west side of the driveway, and here we grow some quite nice things: saxifrages and androsaces, corydalis and jeffersonias, ramondas and *Arisaema sikokianum* at the shadier northern end; drabas, eriogonums, *Degenia velebitica*, *Phlox* ‘Vanilla’, *Arenaria hookeri* and some penstemons at the sunnier southern end. In 1986 we built a fenced garden with raised beds along the north and west sides, so that clematis could be grown on the fence and alpines in front of them. This was not a total success, if success is to be judged by the rarity and difficulty of the alpines grown there (though perhaps we should be embarrassed by Shaftesbury's indictment of the “inferior virtuosi . . . in love with rarity for rareness' sake”), since the clematis wanted lots of moisture while many of the alpines did not. So those beds have largely been given over to small and middle-sized easy plants that flower for long periods during the summer, and are consequently a source of delight to the innocent.

At the back of the south-facing house there were five enormous Manitoba Maples in a row running west from the driveway to the well. They were so large that some of their branches reached out over the back of the house, providing shade but also provoking anxiety that the branches might break and tumble on to the roof. They were on the house side of the barnyard fence amid assorted undergrowth, old milk churns, scraps of wire, pieces of piping, broken glass, and they were the remnants of a purge that had been carried out during the winter of 1982-83 when we had cut down all the smaller trees in a desperate effort to rid ourselves of them before we were swallowed up. Fortunately, they had never produced any seed, and since if they were to be cut down that would have to be done professionally and expensively, we had simply done nothing. On the barnyard side of the fence and almost directly under the wellhead was a large cracked cattle trough, itself filled with

junk, and deep in the shade of the maples. It was barely accessible through the thicket of suckers rising from the closest maple.

In the fall of 1988 we noticed with panic that one of the trees had for the first time – or perhaps it was the first time we had noticed – produced a prodigious seed crop. If the seeds were allowed to ripen, they would fall into the shrub beds, into the herbaceous borders, into the alpine plant areas where at least we would notice them and pull them out before they became established. But there were now other parts of the garden, a windbreak of spruce to the west, a field of long grass in the former barnyard which we had now appropriated to the north, where the seeds could germinate and grow unobserved for a year or two or three, by which time they could become difficult to tug out. We delayed and delayed, but finally we engaged a tree service to cut out the miscreant tree.

The call came to the office, “We’ve cut out your tree, but what about the others? They’re dirty trees; do you want us to take out the others?” “Yes”, I said, “take them out”, and then I forgot until three o’clock in the morning when I woke suddenly. “The trees”, I whispered, “the maples; I forgot to ask you. They’re all gone”. “Sounds good to me”.

And good it was. Later, where the trees had been, we made a long vulgar herbaceous border, filled with heleniums, heliopsis, hemerocallis, *Cephalaria gigantea*, raspberry bergamot, *Artemisia lactiflora* and yellow and white *Verbascum chaixii*, with *Clematis tangutica* flowering prodigiously on the solid fence that ran from the driveway almost to the well, almost to the trough. The bed lights up the garden during the dry days of July and the August *canicule*. It is an odd contrast to the trough, now filled with miniscule plants, and where, at the end of August, the only flowers are the rather uninspiring Cambridge blue mops on *Trachelium rumelicum*.

Neither of us has useful technical skills. We seldom read the articles about trough-making, even though they sometimes have inviting titles (“The Five-Minute Trough”, or “Trough-Making for the Trowelless Gardener”), because we know our troughs would collapse long before any plants had been put into them. So we have been envious of our gardening acquaintances, many of whom have very attractive home-made troughs, filled with the gems of the alpine world. But now as a kind of *acte gratuite*, for we had really done nothing to earn it, we had our own trough, and quite a trough it is.

It is 60cm high, 95cm wide, and over 3m long. The planting area is a bit less than that suggests, for the walls of grey green- and rose-tinted cement are 10cm wide. It is on a solid cement base, as we discovered when, the maples still in place, we had thought about trying to move it.

Presumably it was built *in situ* by some farm predecessors. Rain did not collect in it, indicating that the basal cracks provided drainage. The fence that ran at the back of our “vulgar” bed was extended around the trough, both to shield the trough from high winds and to provide climbing space for clematis and honeysuckles. Immediately to the west are tall white cedars and a sugar maple, so that the west end of the bed falls into shade soon after midday, while the east end stays sunny much longer.

The trough was filled about half-way with pea gravel. Then as the trough was topped-up, the gravel was mixed with increasing amounts of a commercial potting soil, though with an overall propensity towards austerity. This was relaxed for the saxifrages and androsaces and campanulas planted at the shady end; there is no reason why, in a large space, the soil mix should be uniform. A problem has arisen from time to time, however, with the gravel, which has maintained the excellent drainage, but which has, in these relatively early days – this is the fourth summer – sometimes permitted the soil to wash downwards. We noticed this summer, for example, that *Androsace* ‘Millstream hybrid’ was struggling in spite of some special watering. When I lifted the plant, its roots were in almost pure gravel. One or two large stones were set into the gravel surface to provide mini-crevices. In these, *Kelseya uniflora* and *Jankaea heldreichii* have grown well at the shady end (though neither has flowered), while *Petrophytum cinerascens* flowers at the sunny end.

In principle, our part of southern Ontario receives consistent snow cover. In reality, snow comes and goes during much of December, and there is usually a later warm spell (‘the January thaw’) that takes away all or most of the snow. This means that the plants could easily find themselves in damp soil while exposed to temperatures of -25°C or lower. Many would certainly not survive in such conditions. So we built a wooden frame to sit on the trough. This frame is covered with thick plastic, both to keep out the cold and support the weight of the snow, and is put in place in early November, with the ends left open so that there is plenty of air circulation but no direct rainfall. When temperatures start to fall regularly into the -4°C to -7°C range, the ends are closed, and are left closed until the middle of March, when the temperatures will have started to climb back into the same range.

The great anxiety is that, with the ends closed and no snow, sunny days will raise the temperatures under the plastic so sharply that the plants will be cooked. Since much of the time we are not here to open and close the ends, we have no control over that possibility. Sunny winter days are often accompanied by temperatures much, much lower than -7°C , and though

we have lost plants over the winter, it has not appeared to be because the temperatures under the plastic have risen too high. Some of the winter casualties have not found it warm enough, and others have found four months without moisture too long. But so many plants are thriving because, or in spite, of this regime that we would be foolish to change it yet.

In addition, six plants – *Draba mollissima*, two *D. cappadocica*, *Gypsophila aretioides*, *Dionysia aretioides* and *Jankaea heldreichii* – are covered with closed plastic cones whenever rain threatens (or when we know we will be away from the garden for any length of time). Because the cones sit unevenly on the gravel, air can move around the plants, and they have shown no signs of discomfort even if the cones are left in place on the hottest days. The plants have responded extremely well to this treatment, as have other plants in the open garden.

It would be tedious to provide details of all of the plants that are grown in the trough. There are almost a hundred in all, but that includes small seedlings, many with unpredictable futures, and in any case, it is characteristic of representative groups of alpinists that some are coming, some are going. As I write, there are nine species or forms of androsace, over thirty saxifrages, and more than forty other species. Some plants – *Gentiana cachemirica*, *Moltkia petraea*, and an *Acantholimon venustum* – swiftly grew too large and had to be moved, with predictable results in the case of the acantholimon, which was 80cm in diameter. An *A. glumaceum* is now 50cm across, and spreading over *Gypsophila aretioides* and one of the drabas, so we are rather hoping it will die. Several raoulias were lost, which puzzled us, especially as *R. australis* manages to cling on in the open garden.

Puzzlement is perhaps the right note to end on. Many of the plants do equally well outside the trough, without the attention they receive there, and success or failure in the trough often seems as much a matter of chance as of special conditions. Protection from winter moisture is obviously a necessary condition for success in some cases, and further experience may reveal to us in which.

A Walk on the Penken

RICHARD C. SIMPSON

The Penken Mountain rises to 2400m to the west of Mayrhofen in the Ziller Valley of the Austrian Tyrol. The underlying rock of the area is either limestone or schistose. Early pioneers of plant community ecology soon realised that the distribution of certain species was related to the presence of calcium in the soil. Some species are lime tolerant (calciphiles), whilst others will die in the presence of large amounts of calcium (calcifuges). Rhododendrons, *Calluna vulgaris* and *Vaccinium* spp. come to mind as calcifuges, whilst calciphilous plants are thymes and rockroses. However, in the wild, *Rhododendron hirsutum* grows on calcareous soils whilst *R. ferrugineum* is indicative of base poor conditions. Recent research has shown that it is not a direct effect of calcium but rather that the calcium ion interacts with aluminium complexes in the soil and inhibits the uptake of essential mineral salts by the roots of affected species.

The first striking plant encountered on the walk was the Martagon lily (*Lilium martagon*) with its graceful nodding purple pink flowers scattered amongst the tall grasses at the edge of the mountain paths. In the vicinity vegetation was obviously calcium tolerant as evidenced by the plant associations. Yellow flowers of rock rose (*Helianthemum nummularium*) intermixed with the varied pinks of *Scabiosa lucida*, *Thymus* spp. and marjoram (*Origanum vulgare*). Also present were the unusually coloured brown and yellow flowerheads of *Trifolium badium* and the brilliant yellow clusters of *Anthyllis vulneraria*, colouring the edges of the path and limestone outcrops. The overall impression of yellowed meadows was completed by the huge flowers of *Arnica montana* and solitary heads of *Crepis aurea*, complemented by the clustered orange glow of *Hieracium aurantiacum*. The pink family was represented by *Silene nutans* (Nottingham catchfly), *Silene vulgaris* and occasional flowers of red campion (*Silene dioica*). Several campanula species were present in the sward, usually on rock outcrops or disturbed soils. These ranged in size from the fairy thimbles of *Campanula cochlearifolia* (Fig.89, p406) through the larger blue flower clusters of *C. rotundifolia* to the taller spikes of *C. barbata*, and in woodland *C. latifolia*. *Campanula barbata* is my favourite with its flowers of many shades of blue,

but always with the tell-tale bearded throat: an occasional white form was also found. The wide variety of microhabitats in which the plant grows demonstrates that it is a highly competitive species. For all its wide occurrence throughout the alpine regions it is still a lovely plant, easy to grow from seed and flower in a wide range of garden soils.

There are probably several clones of this species since stature and number of individual flowers on the spike show great variation. The plant is usually shorter in the alpine meadows and becomes taller as one descends into the forest and valleys.

The Ziller Valley is intensively farmed with a mixed economy of arable farming and cattle grazing, both for milk and beef. The lowest slopes are clothed with elder, birch and hazel woodland, with evidence of old coppice as in Lake District woodlands. These woods are but a hem to the spruce forest, timber operations revealing that many trees must be of the order of one hundred years old. The herb layer here consists of *Vaccinium myrtillus* and *V. vitis-idaea*, with *Arctostaphylos uva-ursi*, the presence of which relates to the acidity of the soil occasioned by the needle-litter of conifers. A rich fern flora is evident; *Dryopteris* ssp, polypody, hard fern, oak fern and black spleenwort were noticed. The ground flora is rich in mosses, though lichens seem less obvious than in many British deciduous woodlands. Fruit was abundant, bilberries, raspberries and alpine strawberries were being picked by local parties. The most spectacular shrub was *Sambucus racemosa*, bearing huge bunches of berries of an intensely shining red.

The tree line comes somewhat abruptly at about 1800m where one rambles into meadows strewn with flowers of many hues. Most notable here were rampions, eyebrights, *Silene* spp. and *Arnica montana*, and everywhere orchids grew in abundance. Some thirty species of orchid occur in the area. Older mountain buildings had roofs weighted with huge rocks against winter storms, cow bells tinkled in tune, and meadows were being cropped for hay, the locals using horse-drawn sleds for transporting this to the many barns around the meadows. On very steep slopes workers collected the hay in huge sacks. Everywhere in the alpine valleys, amid the pastures, amongst the peaks delightful gasthof, or more basic alpine hutte, offer a peasant-based fare but with mouth-watering gateaux of berries, wild fruits and nuts, a welcome sight after climbing the paths and peaks. Waterfalls are more spectacular across the main Zillertal in the feeder valleys of Stillupgrund and the Salzach. At the heads of such valleys rise mountains of 2000-3000m, the Zillertaller Alps, separating the Tyrol from the Alto Adige region of Italy.

Amidst forest clearings several different orchids were seen, including

the dark red helleborine (*Epipactis atrorubens*). The ethereal beauty of the flowers of grass of Parnassus (*Parnassia palustris*) was noted in damper woodland. Here too a solitary clump of one-flowered wintergreen (*Moneses uniflora*), with bashfully hanging bells and four flashes of brown indicating stamens. Rock faces by the forest track were habitat for the brilliant red stars of *Sempervivum* spp. and occasional specimens of *Allium suaveolens* and round headed rampion (*Phyteuma hemisphaericum*). Butterflies, hoverflies and bumblebees were much in evidence. Many of the butterflies were dark in colour, said to be an adaptation to absorb most warmth from the sun; this is paralleled in alpine flowering plants by the intense reddening of the leaves of certain species by anthocyanin pigments. Apart from abundant insects there was little direct sighting of other animals, though squirrels and woodmice betrayed their presence by an abundance of nibbled spruce cones on the forest floor. Other plant associations of forest clearings amidst tall grasses were the alpine thistle *Carduus defloratus*, *Adenostyles alliariae*, and the lovely blue sow thistle *Cicerbita alpina*.

In total some six dozen species were identified. Familiar favourites tormentil, yarrow, eyebright, self heal, *Veronica filiformis* and *Leucanthemopsis alpina*. Miniature associations were truly delightful; thyme and *Gypsophila repens*; thyme, bearberry and *Allium* sp. with a tiny unidentified violet; tormentil, heather and hard fern.

The base from which all these treasures were discovered was Mayrhofen, set amidst the mountains of the Zillertal. This is a well-known winter resort with good communication to all the feeder valleys by post bus, but equally interesting at other seasons with over fifty waymarked trails. A floral extravaganza from true high alpiners such as edelweiss, *Androsace* spp. and *Gentiana* spp., through to those of alpine pastures and woodlanders including *Aquilegia alpina* and the fascinating dark flowers of *Aquilegia atrata*. Something for all; prizes rare, prizes common, but all of fascination peculiar to the world of rock gardening.

A Himalayan Plant Hunter's Foray into New Zealand

CHRIS CHADWELL

"You will be feeling a bit tired after your flight, so not too much sight-seeing today", was the alarming greeting received, plus a crunching hand-shake, on arrival at New Plymouth airport. Being let off lightly with an abbreviated three-hour tour of Taranaki District came as a relief, since some 42 hours had passed since I had left Gatwick on an economy flight via Houston, Los Angeles, Honolulu and Auckland. Needless to say, every other passenger from the UK had the sense to break the journey.

Fortunately, I was prepared for my energetic host, John McIntyre, a retired sheep farmer. Years of expeditions to the Himalaya had accustomed me to arduous schedules and I was resilient enough to survive the legendary New Zealand hospitality. In fact, it was during my 1983 Kashmir Botanical Expedition (see *The Rock Garden Vol XIX*) that I met John and his wife Orrel, then on a tramping holiday. I strongly recommend that any plant lover who heads out to the 'Land of the long white cloud' takes it easy for the week prior to departure, as you will not get much rest on your holiday here.

The New Plymouth area boasts Mt. Egmont (or Taranaki as it is known to the Maoris), a 2517m peak. The near perfect symmetry of its cone makes Taranaki one of the most beautiful mountains in New Zealand and the twin of Japan's Mt. Fuji. Most of the rock garden species we cultivate from New Zealand originate in the South Island but there is still plenty to find in the North. This Himalayan plant hunter was put through his paces on the slopes of Taranaki by John Jordan, a local dairy farmer and occasional mountain guide, with expeditions to Alaska, the Andes and recently Central Nepal under his belt.

Not wishing to be shown up, I rapidly ascended through scrubland and sub-alpine scrub dominated by Leatherwood (*Brachyglottis rotundifolia*) and *Hebe odora*. I eagerly photographed all the hebes encountered for the benefit of my uncle, Douglas Chalk, author of 'Hebe and Parahebe'. Once we had negotiated the tussockland, true herbfield was reached, with the ground completely carpeted by small plants less than 15cm high. Here the most common plants are mountain daisies, particularly *Celmisia gracilentia*, everlasting daisy (*Helichrysum* sp.),

Anisotome aromatica and *Forstera bidwillii*. As with much of the New Zealand flora, taxonomic difficulties abound, such that putting a reliable name on the plants encountered in the field is even more difficult than usual. This is no reflection on the competence of the local botanists, just that their flora is so complex. An impoverished British flora, combined with a surfeit of botanists, both amateur and professional, has resulted in a level of understanding of our native plants not matched in other parts of the world.

We just managed to reach beyond 1650m on Taranaki during that afternoon. Here the plant cover becomes patchy, the dominant surface being bare substrate. Depending on the size of the substrate particles, the terms gravelfield, stonefield or boulderfield are applicable. Time prevented further exploration and to be honest not too many species remained which were of ornamental merit, except the cushion plants *Colobanthus* sp. and *Montia calycina*.

That evening I gave a hastily-arranged slide presentation on western Himalayan plants to the local Inglewood Horticultural Society. And what a knowledgeable and well-travelled audience they were! They were well accustomed to international speakers, since the world famous Pukeiti Rhododendron Trust is located nearby, but much the same applied all over the country. Fortunately I passed muster and a mutually appreciative lecture-tour ensued. New Zealand is often described as being a bit old-fashioned but in terms of horticultural expertise and enthusiasm, the country is most certainly not behind the times.

I must admit to not being upset at escaping from New Plymouth after a hectic few days. Thank heavens John McIntyre was retired and past his energetic peak. I flew on to Christchurch via Wellington and was met at the airport by Margaret Bulfin (nee Simpson), recently retired from Botany Division, Department of Scientific and Industrial Research at Lincoln. Margaret had spent decades researching seeds and is regularly called upon by forensic scientists to track down locations based upon seed-coat identifications.

The next day I was driven up the ski-field track towards Mount Hutt. This journey has been made by hundreds of visiting botanists and horticulturists from around the world and in Margaret I had the best guide of all. It really is an outstanding mountain. The scenery reminded me of the borderlands of western Tibet and I was to notice similarities in habitats and growth form of the plants. Our first port of call was to an impressive colony of *Raoulia eximia*, one of several species commonly known as 'vegetable sheep'; like many before me, I marvelled at the velvety glaucous foliage and soon learnt why serious New Zealand

plantspeople carry a pair of long-pointed tweezers – seeds are often embedded deep inside leaves. Next came an excursion on steep loose rock debris to search for the admirably camouflaged *Ranunculus crithmifolius*, characterised by mottled, greyish-brown fleshy leaves. Flowering was over and we hunted for the brownish fruiting heads, often hidden beneath surrounding stones by the curious bending of the stalks as the fruit ripens. My final find for the day, just as light snow began to fall, reminding us that we were well above 1500m, was *Haastia sinclairii*, named in honour of Dr. Andrew Sinclair, surgeon and early New Zealand botanist. Its whitish tomentum on the leaves provides excellent camouflage for this plant on the high screes (Fig. 90, p406).

As we headed down from Mt. Hutt I was handed over to Heather and Gordon Hill, who had foolishly agreed to give up some eleven days of their holiday to take me around Canterbury and surrounding mountain districts in search of alpinists. Heather and I had corresponded for a number of years and it was her excellent photographs of New Zealand species which had encouraged me to undertake this trip. Gordon, who runs a dental practice, is not interested in plants but has a four-wheel drive vehicle, so was collared to provide transport. His compensation was to disappear off fishing at the end of some days in the hills. Ski-field tracks provide remarkably speedy access to many higher alpinists, not forgetting the opportunity to get back down to civilised accommodation each evening.

For most of our time in the mountains we were joined by the Pringles, well-known in New Zealand for their native plant garden at Fairlie, who interestingly enough had just returned from a botanical trek in Kashmir. The Himalayan connection with New Zealand continued when I met Bill Sykes (affectionately known as 'Botany' Bill). In the early 1950s he was the Royal Horticultural Society's representative on the British Museum (Natural History) Polunin, Sykes & Williams and Stainton, Sykes & Williams expeditions to Nepal. The best known introduction from the 1954 SSW expedition was the blue soldanelloid *Primula reidii* var. *williamsii*. Sadly, Bill is the only survivor from those expeditions and so I was delighted to swap stories about Nepal and view his glass-mounted slides.

Whenever I head out to the Himalaya, alpine enthusiasts always urge me to concentrate upon mat, mound and carpet-forming species. Well, there are a lot more of these to be found in New Zealand than in the world's highest mountain range. Mt. Nimrod was the first of the Hills' favourite haunts that we explored and we immediately found several gems to delight a 'bun' enthusiast. This was also the only time I

encountered some drizzle and thick cloud during my month in New Zealand. It is important to stress that not only do most New Zealand rock garden species which we grow in Europe originate from the South Island, but also that the 'rain-shadow' districts, to the east of the Southern Alps, yield the majority of them. The south-west of the South Island, known as Fiordland, supports rainforest. This is not of the same type found in the tropics but the 'rain' part is true enough. Milford Sound, a popular port of call for luxurious ocean liners during world cruises, boasts an annual rainfall in excess of 700cm (some 23 feet), while not far away in Central Otago the rainfall is only 30cm. After a talk I gave in Timaru, during which I had embellished my experiences of heavy rain and the accompanying leeches in Nepal, one native of the 'wet' west of New Zealand pronounced that it rained there too. The figure quoted above is of decidedly 'monsoonal' dimensions, so I heartily agreed.

Most readers are familiar with the 'North Island edelweiss' (*Leucogenes leontopodium*), a species mastered in cultivation by the Youngs in Aberdeen (though Dr Hugh Barr's specimen at Penrith comes a close second). Less often seen in our gardens is the 'South Island edelweiss' (*Leucogenes grandiceps*), which has a wide distribution in the mountains of New Zealand but with a distinct preference for rock outcrops, where it is often conspicuous, as was the case on Mt. Nimrod (Fig.91, p407). The moss-like cushions of *Chionohebe pulvinaris* had us flat to the ground on the summit plateau. It appreciates highly-exposed rocky sites, especially eroding ridge crests. The genus *Chionohebe* arose in 1985, from what was previously *Pygmaea*, because of their close relationship to *Hebe*, and more so to *Parahebe*, as the flowers bear some resemblance. The name is derived from the Greek *chion*, which means snow and this seemed appropriate enough, since my fingers were rapidly numb after examining the species in miserable conditions on a mountain top.

At slightly lower levels *Pimelea traversii*, a curious member of the daphne family with salmon-pink flowers (Fig.92, p407), was common on partly stable rock debris. Further down the track still, I was introduced to a peculiar New Zealand seed collecting technique, ideal for *Scleranthus uniflorus*, a widely and easily-grown species which forms mosslike mats up to 10cm or more across. Its small dry fruits are tedious to gather individually but by applying a liberal amount of spittle to the palm of one's hand and pressing down firmly on the mats, the nutlets become attached! Clever lot these Kiwis. Beside a trackside stream *Parahebe lyallii* trailed, creeping and rooting at intervals. This highly-branched

shrublet, distinguished by its small but broad reddish leaves, is a useful rock garden plant.

Derrick Rooney writes a regular feature on natural history and horticultural matters for 'The Press', Christchurch's leading newspaper (see Rock Garden XX for his article about Samuel Butler). I was interviewed during a fine day's excursion to the Upper Ryton valley. Derrick has something of a reputation for not suffering fools gladly but I managed to pass the examination and we got on well – even if he did later describe me in his article as “chunky” and an “anachronism”! His battered Land Rover, with a low wheel base, showed remarkable manoeuvrability, an essential characteristic when faced with a locked gate (the key secured from the runholder did not fit). This seasoned traveller in jeeps over high Himalayan passes was more than a little concerned that we would come to grief but this was no doubt another New Zealand ‘test’ of my credentials as a modern-day plant hunter. Mind you, I decided to get out and walk when the manoeuvre had to be repeated on the way back down the valley . . .

On level ground at the head of the valley was one of my favourite New Zealand alpiners – *Coprosma atropurpurea* (*C. petrei* var. *atropurpurea*), a creeping and rooting shrublet forming mats up to 1m or more across. The purplish-red translucent berries are embedded in the foliage. As we reached the snow tussock grassland, *Celmisia viscosa* became abundant but there was no evidence of flowering. It is quite normal for massive populations of celmisias not to flower well or at all for several years. Even when they do, as is this case with many members of the Compositae (Asteraceae) family, not all the seed is good and viable. I am not alone in suspecting that the reputation for poor germination of some New Zealand alpiners stems from poor seed, rather than short viability. One cannot germinate non-viable seed, however promptly one sows it. There is often a great deal more to gathering viable seed than seems to be generally appreciated. Not all plants are as helpful as gentians, for example, with capsules which open up to readily liberate easily recognisable viable seeds. On scree and loose rocky debris we came across the quite delightful *Hebe haastii*, named in honour of Sir Julius von Haast, a German geologist and explorer, which shares with *Parahebe birleyi* the highest recorded elevation for flowering plants in New Zealand - 2900m. At its best this trailing shrub, with almost fleshy leaves in four distinct rows and large compact flower heads at the branch tips, ranks very highly, so it comes as no surprise to learn that it has proved difficult to grow.

From Canterbury I headed south to Dunedin, to spend a week with

Jack and Doris Scott. Jack has been responsible for introducing into New Zealand many of the world's finest rock garden species, though other growers, as is the way of things, later produce finer specimens, particularly for the show bench, an activity which has only just come to the fore here. I understand that a *Paraquilegia anemonoides* shown by Joe Cartman received the top award at one of the earliest shows. Heather Hill later wrote to say that the New Zealanders who had attended the Warwick Conference observed that the 'Brits' could really grow plants in pots!

Jack kindly arranged for me to spend a day with Professor Mark from the local University. He was taking some ecology students on an introduction to the Old Man range and had a spare place in the jeep. The striking rock formations of the plateau summit suffer the most severe exposure, yet the rock is almost totally obscured by lichens. At ground level, those sites exposed to the maximum wind blasting are again largely covered by lower plants but other exposed surfaces support dwarfed mats, cushions and turfs of higher plants which are of special interest to us as alpine gardeners, with the following genera represented: *Dracophyllum*, *Raoulia*, *Abrotanella*, *Cotula*, *Celmisia*, *Chionohebe*, *Anisotome*, *Myosotis*, *Phyllachne*, *Hectorella* and *Drapetes*. A taller herbfield dominated by *Celmisia*, grasses and dwarf shrubs occurs on the more sheltered sites. A low, slender, much-branched whipcord hebe forming yellowish-green clumps 5-20cm tall caught my eye. *Hebe poppelwellii* occurs in somewhat sheltered moist sites, especially depressions in cushion vegetation, and has a very limited range in central Otago, presumably explaining its scarcity in cultivation.

I think it would be helpful to quote some notable environmental features provided by A. F. Mark (my guide) & C. D. Meurk, of the Botany Department, University of Otago, within their notes on 'Vegetation and Environment of the Old Man Range, Central Otago': mean January temperature less than 5°C; frequent freeze-thaw alterations; a very brief frost-free period (maximum of 8-11 days in five years); extreme exposure; over 150cm of precipitation; frequent fog (58% of days with more than 2 hours of fog); freely available or excessive soil moisture. Who says that botanists do not provide any useful contributions to horticulture? I can thoroughly recommend Mark's 'New Zealand Alpine Plants', not only as the best field guide to the country's rock-garden species but also being a unique insight into alpine environments, applicable the world over. Few authors of botanical guides have much ecological knowledge and so there is seldom much meaningful



Fig. 93 *Gentiana* sp., Rock and Pillar Range, New Zealand (p.428)

Chris Chadwell

Fig. 94 *Coprosma pumila*, Rock and Pillar Range, New Zealand (p.428)

Chris Chadwell





Fig. 95 *Celmisia semicordata stricta*, growing in Co. Antrim (p.432)

Harold McBride

Fig. 96 *Celmisia semicordata* 'David Shackleton' (p.432)

J. Shackleton





Fig. 97 Cushion celmisias in flower in Harold McBride's garden,
Co. Antrim (p.432)

Harold McBride

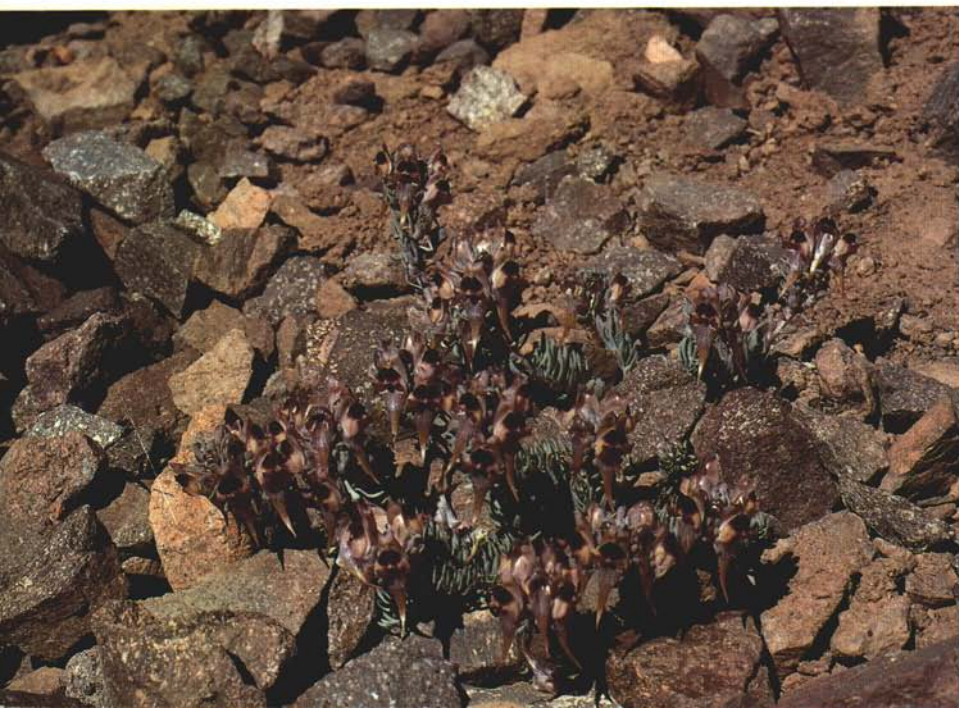


Fig. 98 *Celmisia incana* (p.432)

Harold McBride

Fig. 99 *Linaria tristis*, Morocco (p.436)

Charles Aitchison



information on the habitats of individual species, which would prove so helpful in our understanding of their growing requirements. Mind you, the scientist concerned is not a much-despised plant taxonomist responsible for irritating name changes but a man accustomed to working in the field. Unfortunately this volume is not in print, so do not miss the opportunity to grab the first second-hand copy you find for sale.

Members of the Otago Group of the New Zealand Rock Garden Society arranged for me to spend a day on the Rock and Pillar Range, the easternmost point of the central Otago mountains, some 50km from the coast, all consisting of chlorite schist. The gentians up here are glorious. Who says white is a dull colour? After viewing an array of forms of large white gentians I can state categorically that it is not true (Fig.93, p424). The problem was putting a name to them. *Gentiana bellidifolia* could be distinguished but the others defeated me and would have required a pressed specimen and checking in a herbarium to be sure. *Phyllachne colensoi* was common in short open snow tussock-herbfield and herb moor overlying peat, forming bright-green mats up to 50cm across. This range also has impressive snowbank vegetation, in areas of prolonged snow-lie, characterised by *Celmisia haastii*, *Celmisia prorepens*, *Coprosma pumila* (Fig.94, p424), *Ourisia glandulosa*, *Pernettya alpina* and *Caltha obtusa*.

My final port of call was appropriately enough with Joe Cartman, known to exhibitors for his first-class *Clematis x cartmanii* 'Joe' and as the author of 'Growing New Zealand Alpines', the best cultivation guide to the country's rock garden plants. I spent several days at Joe and Anne's place outside Christchurch. Within easy reach of his home was a precipitous scree adorned with snow-white *Craspedia incana* and *Carmichaelia monroi*. And not to forget the hebes: Joe took me to see a lavender-flowered *H. raoulii*, growing amongst rocks, whilst travelling in the direction of the familiar Arthur's Pass. This makes a compact plant in the garden, provided care is taken to discard straggly specimens.

It has never been my practice to single out a favourite plant from a particular country but on this occasion I would like to highlight a species which to me should rank in anybody's 'top ten' alpines. The choice may surprise some, since, firstly, it belongs to the carrot family, Apiaceae (formerly Umbelliferae), which is often confined to the ornamental trash can en masse by gardening experts. This is a mistake in New Zealand at least, which boasts many quite delightful alpine representatives such as *Anisotome*, *Gingidia* and *Lignocarpa*. Secondly, it comes within a genus best known for its larger members – the speargrasses or spaniards, whose razor sharp leaves make answering a call of nature in

some native grasslands a hazardous affair! *Aciphylla dobsonii* forms very distinctive brilliant golden coloured hard cushion-like masses up to 60cm across, which impressed me just as much as any *Paraquilegia*. The spectacular globose flower-heads are on short stout stems. It is often the most important plant along exposed ridge crests.

To conclude, I can do no better than to quote Dr John Richards, AGS Bulletin 49(2) . . . "I was able to visit high levels in a number of different areas largely through the well-known (but nonetheless real) kindness and hospitality of New Zealanders. All of the New Zealand plantspeople . . . whom I met were prepared to go to a great deal of personal inconvenience and expense to make sure that a visitor was made welcome and comfortable, and to show him (or, quite rightly, to show off to him) their mountains and plants".

We should applaud New Zealand's willingness to host the next Interim International Rock Garden Conference in 1996. If you have long been hankering to go there yourself, what better excuse than to support those organising the gathering by attending. You will not be disappointed by the country, its people, nor, I am certain, by the professionalism of the conference. But, make sure you get a few days' rest before you set off, because as guests you will not be allowed to miss anything!



Romulea bulbocodium

Edith Clark

The Superior Daisy

HAROLD McBRIDE

In Ireland we have a long tradition of growing Australasian plants, particularly the genus *Celmisia*. Farrer, in his renowned book 'The English Rock Garden', written over seventy years ago, suggested "that if you wanted to see celmisias growing with vigour and in abundance you must travel to Ireland". While the Irish climate seems to suit celmisias they are of course to be found growing with equal vigour throughout Scotland and the north of England. The genus is usually well represented in most Irish public gardens such as Glasnevin Botanic Gardens, Co. Dublin and the National Trust gardens, Rowallane and Mount Stewart in Co. Down. In recent years a number of private gardens have built up extensive collections, perhaps the finest has been at Beech Park, Co. Dublin, where the late David Shackleton had a fine representation of the genus. David grew his celmisias in raised beds with an open, moisture retentive compost; indeed most collections in Ireland follow this pattern. I have noted, however, that in the very moist conditions at Inverewe on Scotland's west coast, celmisias thrive in scree conditions and seem to appreciate the very fast drainage provided.

Celmisias are valuable garden plants and their handsome variable foliage creates interest throughout the year, while their profuse white daisies put up a brave show in early summer. While in the majority of Irish gardens the larger celmisias are grown as "spot plants", particularly those with "silver" foliage, a number of serious collectors have made Australasian beds where they combine celmisias with aciphyllas, hebes, helichrysums, astelias, carex, libertias, ranunculi and so on. I have found that most of these plants, including celmisias, enjoy close association both above and below ground level. The diverse architectural foliage of these genera seems to blend well, which may not always be the case when in association with plants from other countries.

Propagation

Celmisias grow readily from fresh viable seed, germination usually takes place 10-15 days after sowing. I have found that the seed compost should be kept quite damp for best results. I once left some newly sown seed pots standing in a dish of water for 14 days while I went on holiday

and on my return I discovered that all the pots had germinated very well. During damp summers in Ireland it is not unusual to find seed germinating while still on the seed-head. Germination of autumn sown seed is unlikely to take place after June 1st when barren pans can be discarded. Seedlings are pricked off at the four-leafed stage and planted into a peaty compost where they are given protection from direct sun and excess wet. Damping off can be a major problem and it may be necessary to treat seedlings regularly with a dependable fungicide.

When growing celmisias from seed of garden origin many of the resulting plants may turn out to be hybrids. While these are valuable garden plants it can lead to many plants being grown under the wrong name. Each year a number of self-sown seedlings appear in my raised bed, some of which are quite obviously hybrids, with foliage so diverse that one can only guess at their parentage. In turn these plants may set viable seed which further complicates matters. Celmisias also hybridise in their natural habitat and I have raised quite a few plants from New Zealand collected seed which appear to be hybrids. However, freshly collected New Zealand seed remains the best source of increasing the number of specimens in cultivation.

Celmisias can be propagated by cuttings and I normally find autumn quite a suitable time. The freshly detached cuttings are placed directly into a shaded section of the Australasian bed and they root quite rapidly, indeed when spring comes around such plants will be ready for planting out.

Pests and Diseases

Pests are not usually a serious problem although I have had both celmisias and aciphyllas attacked by vine weevils. The flower buds and stems of the larger celmisia species are often attacked by aphids and while no major damage occurs to mature plants, such attacks on seedlings can prove fatal. Regular examination of young plants and treatment, if required, is essential.

My garden is subject to late spring frosts which often seriously damage the flowers of ericaceous plants, but celmisias are hardy plants and I have seen little evidence of frost damage on them.

The Large Celmisias

The most widely grown celmisia in Irish gardens is, without doubt, *C. semicordata* in its various forms. These are vigorous plants which form large clumps or rosettes, the spear-shaped leaves are usually silver above and white below. *C. semicordata* is quite a variable plant; *C. s. var aurigans* has a beautiful golden pellicle and is a much sought-after plant;

C. s. var. stricta, which I grew from New Zealand seed collected in western Otago, has stiff narrower leaves of sheerest silver (Fig.95, p425). In Ireland the most revered and admired member of the family is the variety 'David Shackleton', which has a broad silvery, almost white, pellicle (Fig.96, p425). It may well be a hybrid as, unlike other *celmisias*, it never sets seed in my garden. Among the larger *celmisias* which are regularly seen in Irish gardens are *C. hookeri*, *C. verbascifolia*, *C. traversii*, *C. spectabilis* and the largest Australian species *C. sericophylla*. Other species of Australian origin include *C. longifolia* and *C. asteliaefolia*. The prostrate *C. saxifraga* from Tasmania is also to be seen in a number of collections.

The Smaller *Celmisias*

The cushion *celmisias* *C. argentea* and *C. sessiliflora* require plenty of moisture, and if planted in full sun *C. argentea* in particular will cover its cushion with sessile flowers. I grow these plants at the front of the Australasian bed or in deep troughs in the company of smaller members of the family such as *C. incana* (Fig.98, p427), *C. allanii*, *C. armstrongii*, *C. major* var. *brevis*, *C. viscosa*, *C. bellidioides*, *C. prorepens*, *C. gracilentia* and *C. alpina* (Fig.97, p426). A number of *celmisias* which favour rock crevices in their natural habitat appreciate similar situations in the garden. *C. hectori* is a small shrub whose stiff narrow leaves of sheerest silver make it a popular foliage class plant. The various forms of *C. angustifolia* are popular plants and benefit from regular propagation. *C. ramulosa* var. *tuberculata* is known in New Zealand as the 'Trailing *Celmisia*' and carries this habit into our gardens where it enjoys nothing better than scrambling over rocks in a scree or raised bed.

These small members of the genus make excellent 'bed-fellows' for some of the smaller antipodeans such as *Leucogenes leontopodium*, *Leucopogon fraseri*, *Craspedia lanata* and *C. incana* and of course the small hebes such as *Hebe cheesemanii*, *H. haastii* and *H. chathamica*.

Quite a number of the smaller aciphyllas also thrive in such conditions. *Aciphylla spedenii*, *A. dobsonii*, *A. simplex* and *A. similis* are among my favourites of this prickly race of plants.

The last decade has seen a great increase in the popularity of Australasian plants in gardens and I am sure more and more gardeners will become fascinated with *celmisias*, the superior daisies.

High Alpines of Morocco

CHARLES AITCHISON

Childhood legends of the exploits of Hercules and the giant Atlas left a fascination for the peoples and mountains of these far off lands. 'The Rock Garden' in 1988 was the spur, with an advert from a S.R.G.C. member willing to take a group to the High Atlas Mountains of Morocco in search of flowers. So in anticipation of interesting plants five of us set out in April 1989, led by Hamish Brown of Scottish 'Munros' fame. The successful trip led to invitations to David Tattersfield from Branklyn Gardens and myself to join Hamish in two further flower trips in the north-west of the High Atlas. Seeing spring move up the mountains through the months of April, May and June gave us an understanding of the habitats and ranges of some of the endemic high alpines. Moroccan plants are an exciting surprise, not of new genera but of the familiar in unfamiliar landscapes and new species from familiar genera.

The Atlas Mountains extend two thousand kilometres, from the Atlantic across Morocco into Tunisia. In 1871 Sir Joseph Hooker, accompanied by John Ball and George Maw explored part of the High Atlas, gained a general understanding of the flora of this range and concluded that it is a southern extension of the European temperate flora, but so long isolated from that of neighbouring regions that new specific types have been developed. In what Hooker called the 'Middle Zone' (1200-2000m and therefore corresponding with the subalpine zone of Europe) fifty-five percent of the species collected were Mediterranean, while in the 'Superior Zone' (above 2000m and the equivalent of the Alpine zone of Europe) forty-four percent of the species found were central and northern European, and no less than twenty percent were endemic. The others include many species from Spain and Portugal, but usually in distinct forms or subspecies. The Atlas Mountains are for geologists, zoologists and botanists part of the Western Palearctic zone.

During the French occupation from 1912 their botanists explored the whole of Morocco. In June and July 1936 E. K. Balls and Dr. R. Seligman explored and collected to the south and south-west of Marrakesh. The Royal Botanic Garden, Edinburgh, holds an E. K. Balls herbarium. James C. Archibald explored the same area and the mountains further east in 1962 and wrote two excellent articles, published in the A.G.S. Bulletin and 'The Rock Garden'. The former

was illustrated with black and white photographs, some by Janette Stephen and some by Dr Seligman.

Our trips covered seven weeks in the mountains, travelling by bus, hitching lifts in camionettes, but mostly walking, sometimes with mules and cheerful muleteers. We slept in ski hotels, youth hostels, berber village houses, alpine huts and bivouacked under the stars, with the Milky Way wheeling overhead and frost sparkling in the dawn at heights. We followed the N'fis River from its source in the west to where it meets the Tizi n'Test road through the mountains six days to the east. In another year we walked north from the top of the Tizi n'Test Pass down into hidden valleys, across high mountains to Jebel Igdat and then along a high ridge and more summits over three thousand metres high, including Jebel Erdouz and Jebel Gourza. E. K. Balls and Archibald reached Erdouz from the north, Hooker and Ball reached Gourza summit after escaping from their escort. Further east we explored the Mizane Valley draining the north and west slopes of Jebel Toubkal, at 4167m the highest mountain in north Africa, some one thousand metres higher than the Igdat-Erdouz group. We explored the other four-thousand metre summits and adjacent valleys of the Toubkal area, with to the north Tachedirt (reached by E. K. Balls), and Oukaimeden (a ski resort) and the valley west down to Asni. We saw the beauty of the high mountain plants at their best between mid May and July.

Carduncellus pinnatus

Carduncellus pinnatus appears along the paths as the fertile greens of the irrigated high valleys are left behind and the streamside walnut trees in their bronze spring foliage begin to thin. The vegetation becomes sparse with bushes of spiny xerophytes weaving tapestries from the white of *Arenaria pungens*, the yellow of *Cytisus pungens*, the blue of *Erinacea anthyllis*, to the pink of *Ptilotrichum spinosum* over a backcloth of parched soil in shades from buff, through browns to red. This stemless thistle grows in the dry stony soil from 2000m upward, like a green star of 10cm radiating pinnate leaves, whose spines form concentric circles protecting the central sky-blue flower. On Jebel Toubkal it grows to over 3000m and even higher to 3500m and more profusely on the ungrazed slopes of Jebel Erdouz. The species is in cultivation and can be propagated by root cuttings taken in early spring.

Draba oreadum

Draba oreadum is a superb draba, growing from near the upper limit of the carduncellus to the summits of all the four thousand metre peaks,

including Jebel Toubkal where it is the highest plant among the nine species we found above 4000m. The purple black rocks of Toubkal show its 10cm cushions of silver haired leaves to perfection, while the hairs protect the developing white flowers from desiccation by wind and sun. On the ridges of Jebel Igdat and Jebel Erdouz, with less pressure from grazing, the plant comes off the cliffs on to stony soil and shingle in areas of frost terracing.

Gentiana tomezyana

Gentiana tomezyana grows in wet grassy flushes in company with *Gentiana verna* ssp. *penetii* and *Narcissus bulbocodium*. We found it growing from 2500m upwards in the Mizane Valley and the two valleys to the west. It is a diminutive plant, looking more like a biennial than an annual. The alternate paired leaves clasp the flower stems and overlap each other like scales. The flowers have five petals and a plica between each petal and are usually white with sometimes a hint of the palest blue.

***Geranium* species**

This geranium was a surprise, not being mentioned in any articles I had read before our 1993 trip. It grows in the upper Azzaden Valley at 3500m. The first plant, which David found, had only two flowers and grew in deep shade beneath towering north-facing cliffs, not ideal for photography. After careful ascent up steep snow gullies and rocks in the exit ravine from a giant north facing corrie we reached the sun, sparkling on a tiny stream of snow meltwater running through boulders and gravel with an alpine lawn of grasses, blue *Myosotis alpestris*, yellow *Potentilla tomezyana* and white *Arabis conringioides*. Amongst these were 30cm wide clumps of a geranium, not unlike *Geranium cinereum* of the Pyrenees. The Macdonald Encyclopedia of Alpine Flowers says *G. cinereum* grows in the Atlas Mountains as subspecies *subcaulescens*. The Azzaden Valley geranium was in form and colour quite unlike any *G. cinereum subcaulescens* I have seen in Greece. It grows in tight firm cushions of basal red-stemmed, 2cm, circular leaves. Each leaf is split into five tridentate lobes, covered on both surfaces by tiny hairs. The paired flowers are 2.5-3cm diameter, with five slightly overlapping, ovate petals, rounded to slightly notched at their apices. The petals are white with six to seven pinky-purple nectar guides along their lengths. The anthers are yellow.

Research through publications on return found the following: in 'Hardy Geraniums' Peter F. Yeo states "the true *Geranium atlanticum* . . . is not in cultivation in Britain at present". "Section Subacaulia, The

Cinereum Group. The number of species is in doubt. The group occurs in the Atlas Mountains of Morocco, in S. E. and N. Spain, in the Pyrenees, French Alps, Apennines, E. Italian Alps and Balkan Peninsula, and throughout Turkey, extending thence into Transcaucasia, Syria and Lebanon.”

Margaret Jordan, in a very thoroughly researched forthcoming article “The Life and Plant Hunting of E. K. Balls, 1892-1984” writes of E. K. B.’s 1936 expedition to Morocco: “Another good plant of the Djebel Ghat was *Geranium cinereum* ssp. *nanum*: hard cushions of closely curled silver foliage above which rise the delicate pink, almost transparent flowers on threadfine stems.”

Could the plants we found be *Geranium atlanticum* or *Geranium cinereum* ssp. *nanum* or are these two names for the same plant?

Linaria tristis (Fig.99, p427)

Linaria tristis var. *lurida* was introduced to cultivation from seed by Archibald and must surely be the weirdest and most fascinating of the High Atlas alpine scree plants. Archibald was afraid for its continuing existence in the unstable screes of Jebel Toubkal as the insatiable goats in their hundreds constantly move the screes downwards. However the linaria grows from 2500m upwards to the summits of all the four thousand metre peaks in the Toubkal group, not only in unstable screes but in stable screes and boulder fields on slopes and on level areas such as the Tazaghart Plateau. It also grows in similar sites on the ridge and chain of peaks from Jebel Igdad over Jebel Erdouz to Jebel Gourza and on screes below the ridge which rarely drops below 3000m. Parts of the linaria’s range, such as the upper Azzaden Valley corrie and the Tazaghart Plateau are not grazed. In June the north screes below Ras summit had only recently lost their snow cover and the current year’s shoots had not grown from the long spaghetti-like roots, which still held the previous year’s dead flower shoots with seed capsules. The young emerging shoots are well camouflaged, resembling a sedum with succulent glaucous blue-green leaves, a purple overcast making them difficult to pick out against dark purple porphyry scree. The numerous toadflax flowers are clustered upright around the top of the stem, their lips in the air, looking as if they are about to jump up and squeak. The flower colour varies markedly even among nearby plants. The ground colour varies from pale yellow through apricot to greyish purple. The lips are darker, from crimson through maroon to purple and almost black. *L.t.* var *lurida* has deep purple-blue lips. The hoods and the spurs are delicately etched in fine purple stripes, with a reflective sheen from

the smooth surface of the necks joining the spurs to the velvety textured lips. Broken flower shoots root readily, an ability which may enable some seeds to be produced even if the shoot ultimately perishes.

Matthiola scapifera (Fig.100, p444)

Matthiola scapifera was the plant supreme, the highlight of the six days walk in from the Tizi n'Test to find it on the north-east ridge of Erdouz (3579m), on both sides of the col, to the north of which were the abandoned lead and zinc mines, near where E. K. Balls and Archibald camped. This stock grows at intervals for three and a half kilometres north-east from the col along the ridge, not on cliffs but in crevices on rock outcrops and between stones on the shingly soil, unprotected, ungrazed, and beautiful, open to the sky, varying from lavender-violet through bright pink to pinky-purple. The saxatile plants grow tight and hard with 1-1.5cm rosettes of pinnatisect lanceolate crystalline silver-edged leaves. A lens revealed tiny hairs and sticky glands protecting both surfaces. The flowers have a finer crystalline texture to their wavy-edged crucifer petals; the nicest crucifer I have seen. Early next morning high above the clouds the matthiola was there to greet us, five kilometres east, on Jebel Imlit summit (3245m). E. K. Balls found it also on Jebel Ghat 160km further east, and not far from there Hamish Brown has seen it en masse on Ighil M'Goun (4071m).

Matthiola scapifera is in cultivation, introduced by Archibald, and received a Preliminary Commendation in 1972. Unfortunately in cultivation the plant loses its natural compact habit.

Phagnalon helichrysoides (Fig.101, p444)

Phagnalon helichrysoides is a shrubby composite with two forms, the type being the larger with leaves like miniature oak leaves silvered on their undersurfaces by dense hairs. The flowers, 1-1.5cm rayless, yellow buttons set in bronze involucre, open in spring from overwintering buds. I have only seen the type growing at 2500m on the cliffs of the Azzaden Valley in the gorge below the Lepiney Refuge. There it is in shade under overhanging ledges on north facing cliffs. The slender branches hang in one and a half metre by half metre gold and silver cascades. Some plants appear to root along the branches in crevices.

Phagnalon helichrysoides var. *lanatum*, in contrast, grows on sunny cliffs in several valleys of the Toubkal massif and on cliffs and large granite boulders of the N'fis upper valley on the Tichka Plateau. It is a smaller plant growing flat and hard over rock surfaces with a gnarled trunk emerging from cracks in the rock. The narrow revolute leaves are

10-30mm by 2-3mm, usually densely covered in white hairs. The flowers are usually stemless and are smaller than the type.

The two forms grow within a few metres of each other on the Azzaden cliffs but no intermediate forms were seen.

Phagnalon helichrysoides var. *lanatum* grows from seed and even more easily from two to three centimetre cuttings inserted in gritty sand at almost any time of year. The cuttings must be watered frequently until rooted but will rot if covered by plastic. There have been contrasting experiences with cuttings of the type, David Tattersfield had 100% rooting from cuttings left standing in a jar of water inside a sunny window while after twelve weeks in sand, in greenhouse shade, mine had still not rooted.

Pterocephalus depressus (Fig.102, p445)

Pterocephalus depressus is an exciting scabious relative, forming woody mats up to 75cm across, rooting as they go on stony ground at altitudes from 1850m to 2500m. It is unfortunately so attractive, not only to alpine gardeners but to grazing animals, that many of the plants have their stemless flower buds nipped off before opening. Only on our third trip was there a plant in flower for photography. On the first trip we failed to identify the plants and thought they were possibly a species of legume. The 15mm long, pinnately-lobed, blue-green leaves are closely packed, folded along their midribs and have an attractive glistening texture. The large 3cm flowers are a delectable raspberry pink and mature to attractive silvery chocolate coloured feathery seedheads.

Saxifraga demnatensis

Saxifraga demnatensis is a sticky-leaved, mossy species in the *Saxifraga* section. The botanists now consider it a subspecies of *S. pedemontana*. It grows high on exposed cliffs in the Atlas Mountains where E. K. Balls discovered it, and was first introduced to cultivation by Archibald in about 1962. David Tattersfield had found it on our second trip on non-calcareous cliffs on the east side of the Mizane Valley facing the west slopes of Jebel Toubkal, at about 3300m altitude, and he relocated the site for precarious, acrobatic photography of plants almost out of reach, with flowers dancing in the stiff breeze. We saw it again on the following days on other cliffs in the Mizane and Azzaden Valleys, often out of reach or as loose dead clumps on the high screes, exposed by melting snow, torn from cliffs by winter winds or avalanches.

The species grows to large cushions of 3cm long aromatic bright green leaves covered all over with glandular hairs. The leaves are deeply

divided into three to six lobes. The 10cm flower stem sometimes has a small leaf about half way up and a bract below the branched inflorescence, of about ten white flowers each with lime green ovaries and filaments. In cultivation this plant requires protection from winter wet.

Viola dyris (Fig.103, p445)

Viola dyris is a delightful miniature high alpine, which Archibald feared might be at risk of extinction from overgrazing. He found only one plant on the west side of Jebel Toubkal. We found it on the Jebel Igdat, Jebel Erdouz ridge growing to the summits of both mountains and in the Mizane and Azzaden Valleys from 3300m up over the three cols we crossed, and on to all the 4000m summits. It was sparse on the unstable screes but on some of the more level stable higher screes and gravels was gratifyingly abundant, a plant every square metre. The warden at the Lepiney Refuge said these areas were not grazed by domestic flocks. Where it was most abundant, the viola varied from white with violet nectar guides through violet to dark purple. Some plants had much yellow at their centres. The dark green, glossy cordate leaves are edged with fine hairs and are smaller than the 5-10mm triangular flowers, whose two topmost petals are larger than the lower three.

Many a mountain range has its own species of viola and *Viola dyris* from the High Atlas holds its face in the sun, the equal of many in beauty and adaptation to its harsh environment.



Geranium cinereum subcaulescens

Heather Salzen

Show Reports 1993

Morecambe – 20th March 1993

This was a very colourful, sociable event, with ninety-nine exhibitors bustling around trying to stage over seven hundred plants, meeting old friends.

The Forrest Medal for the star of the show went to Mr G. P. Mawson of Dronfield for *Primula allionii* 'Alexina', a phenomenal dome of deep pink, with flowers so closely packed they must have been glued in place. Glassford Sprunt's incredible nine-year-old *Dionysia aretioides* 'Paul Furse' was a 40cm dome of solid yellow with never a leaf visible, and earned its Certificate of Merit, as also did Eric Watson's 10cm jewel, *Dionysia viscidula x archibaldii*. It had been sown in January 1991, so only two years had produced this winner with pin-eyed flowers of deep pink with a darker ring. Dionysias are back and deservedly so, with the following recipe divulged – one part each of, J.I.2, coarse sand, chicken grit, perlite, vermiculite, but of course the vital missing ingredient is Eric's expertise in handling and watering.

The Hollet Trophy and the Ivor Barton Memorial Trophy went to a surprised David Mowle, because many of his plants were in square plastic pots formerly rather frowned on by judges, but they could not pass over his *Narcissus willkommii*, fritillaria and iris.

The special Diamond Jubilee Award and AGS Medal was fiercely contested by six entrants with widely diverse plants, the deserving winner being Mrs M. Taylor of Slaggyford. Outstanding plants in this class were *Saxifraga retusa* and *Dionysia curviflora*.

Other plants which took the eye in the open classes included a tall, rather straggly but beautiful rosy pink *primula kisoana*. Another primula was the hybrid *P. x miniera* in a special large, lilac, crinkly-petalled strain. Also, we are envious of people who can flower *Soldanella carpatica alba* so prolifically. Of the shrubs, *Trochocarpa thymifolia* from Tasmania was of great interest. It is evergreen with tiny brick-red bells and exerted yellow stamens. Also highly desirable was a feathery white dwarf form of *Prunus incisa*. The class for three plants distinct judged for foliage and group effect is not easy to stage. The winning trio, *Pinus leucodermis* 'Schmidtii' in bright green, with marbled *Cyclamen hederifolium* and wine purple *Leptospermum scoparium nicholsii nanum*, made an attractively textured group.

In section II, the Michael Roberts Memorial Trophy and the SRGC Bronze Medal were both won by Mrs P. Roberts of Forton. Among her exhibits was a superb pan of *Trillium rivale* with over 30 flowers and a floriferous *Gagea* species. Dr A. G. Jacklin of Runcorn took the Diamond Jubilee Award with three well presented dionysias, *DD. bryoides*, *michauxii* and *aretioides* 'Phyllis Carter'. Throughout the show there were lots of interesting primulas. The tiny lilac *Primula yunnanensis* had small oval leaves with farinose undersides. A very good fern class included a perfect *Athyrium nipponicum pictum* which is apparently hardy locally.

The Reginald Kaye Trophy in section III was won by Mr T. Roberts of Thornton among whose entries was a fine *Saxifraga oppositifolia latina*. Other stars in this section included *Hepatica japonica* with delicate pink dark-stamened flowers and the pale cream *Primula elatior pallasii*.

The artistic section was new to this show with very high quality paintings, drawings and photos. Our personal favourite was Mrs Turbolt of Cheltenham's painting of *Cyclamen persicum* showing marvellously lifelike leaves and flowers. We are fortunate in the talents found in our club. Also fortunate that our people are willing to travel such distances for a get-together.

Morecambe certainly fires you with the essence of alpine growing – ambition should always exceed ability. Next year . . .

Margaret and Henry Taylor

Stirling – 27th March 1993

The day of the Diamond Jubilee Stirling Show was coldish and grey, but this gloom was more than counterbalanced within the Albert Hall by the displayed wealth of colourful and well-grown plants. This was most strikingly epitomised by the 40cm diameter dome of Glassford Sprunt's Forrest Medal-winning *Dionysia aretioides* 'Paul Furse', lighting up the centre of the show benches like a huge shining sun. Glassford tells me that there were over 2700 bright yellow blooms on his plant – I did not count them myself! Glassford also won with his *Dionysia* the Institute of Quarrying Quaich for the best non-European plant in Section I.

The two Diamond Jubilee classes were well contested. In Section I, Fred Hunt was the winner with plants showing the quality of perfection in growth and presentation which is instantly recognisable as Fred's hallmark. Outstanding amongst his entry was a lovely specimen of *Shortia uniflora* with about two dozen pale pink fringed bells. In Section II the prize was awarded to Cathy and Barry Caudwell for a varied entry of well-grown plants.

The Carnegie Dunfermline Trust Trophy for the most points in Section I was awarded to Ian and Margaret Young for their outstanding entry. We have now come to expect this of them as routine! Two plants in Class 1 were particularly memorable, namely 20cm pans of fine specimens of *Trillium rivale* and *Narcissus watieri*, awarded a certificate of merit. The pan of *Trillium rivale* comprised about 40 perfect blooms. Of several other specimens of *T. rivale* in the show, one which stood out was *T. rivale* 'Delnorte' in which the flowers were much more heavily spotted in deep pink, shown by Margaret and Henry Taylor. Ian and Margaret Young also won the Ben Ledi Plants Trophy for the best European plant in Section I with a magnificent specimen of *Arum creticum* with eight 12cm blooms with pale cream spathes and pale yellow spadices.

Bulbs feature prominently at the Stirling Show and as usual included good entries of fritillarias, *Narcissus*, irises and *Corydalis*. The latter included the lovely and recently-introduced blue-flowered *Corydalis flexuosa*. A fine pan of *Fritillaria bithynica* with about a dozen greenish-yellow bells of solid substance gained a certificate of merit for Fred Hunt. Other fine bulb entries included *Narcissus bulbocodium obesus* with narrow deep green foliage and large deep yellow flowers also shown by Fred, *Narcissus alpestris*, elegant flowers with slightly twisted white petals, shown by Margaret and Henry Taylor, the juno irises *I. caucasica* with greenish-yellow flowers and the blue-lavender *I. graeberiana* shown by Richard Lilley, *Fritillaria aurea*, with eight delicate and compact blooms in the pan, winning a first for Bette Ivey in a class with eleven entries, and a large pan of *Crocus scardicus* with compact yellow flowers in perfect condition, shown by Bob Maxwell.

Section II was very well supported, with an array of well-grown plants. In a well contested competition, John Denney did well to be awarded the Fife County Trophy and a bronze medal. Amongst his entries were excellent specimens of *Saxifraga stolitzae*, *Cassiope* 'Beatrice Lilley', *Corydalis cashmeriana*, *Paraquilegia anemonoides* and *Androsace vandellii*, none of them the easiest of plants to grow well.

A gold medal was awarded to Lawrence Greenwood, who again supported the Stirling Show by displaying 18 of his lovely watercolour botanical paintings. Also on view for the delight of members and the public were the paintings, photographs and drawings featuring Geraniaceae entered in the Twice Yearly Competition.

Evelyn Stevens

Edinburgh – 3rd April 1993

Superlatives have frequently been used in show reports, sometimes,

perhaps, without full justification. Fred Hunt's winning exhibit in the Special Jubilee Class was, however, deserving of every accolade. His choice of plants was interesting and varied, each from a different genus, all were in tip-top condition. They were: *Androsace vandellii*, *Fritillaria conica*, *Polemonium viscosum*, *Primula* 'Fairy Rose', *Rhodothamnus chamaecistus* and *Shortia uniflora*. The equivalent six pan class in Section II was won by Cathy and Barry Caudwell, Inchture, with *Corydalis flexuosa* CDR 528 (purple-leaved form), *Pleione formosana* 'Oriental Splendour', *Primula aureata*, *P. juliae*, *P. mistassinica* var. *macropoda* and *Tulipa clusiana* var. *chrysantha*.

The Forrest Medal was awarded to Eric Watson for *Dionysia microphylla* GWH 1302, a fine form with purplish-violet, white-eyed flowers on short stems. It was good to see Eric's skilful growing and presentation rewarded once again.

The Henry Archibald Rose Bowl was awarded to Fred Hunt for the brilliant blue form of *Tecophilaea cyanocrocus*, *Fritillaria bucharica*, with neat, pendant, white starry flowers and the increasingly popular pale blue *Corydalis flexuosa*. Margaret and Ian Young won the three pan class for plants, new, rare or difficult in cultivation, with fine cushions of *Haastia pulvinaris*, *Raoulia eximia* and *Xerodraba* sp. P&W 6210. The rarely seen *Eritrichium howardii* was of special interest in Jim Cobb's runner-up entry which also included the very neat, white-flowered *Phlox muscoides*, surely a fine trough plant. The equivalent single pan class was won by Eric Watson with a spontaneous hybrid between *Dionysia bryoides* and *D. tapetodes*, a very small, neat cushion with pinkish, yellow-eyed flowers.

The single pan class for *Androsace* was won by Jean Wyllie, Dunblane, with a good, broad-petalled form of *A. vandellii*. Edith Armistead took the two pan class with *A. ciliata* and *A. pyrenaica*, the latter neat and well flowered. The class for *Dionysia* was won by Eric Watson with *D. microphylla* GWH 1302, a challenging plant to cultivate.

Other noteworthy winning plants, all shown by Margaret and Ian Young, were a bright pink hybrid pleione derived from *P. 'Versailles'* x *P. pogonoides*; a good, large pan of *Trillium hibbersonii*; and a large specimen of *Argyroxiphium sandwichense* ssp. *macrocephalum*, the Hawaiian silver-sword. This unique Polynesian alpine grows on the volcanic slopes of the high mountains of Hawaii, formerly known as the Sandwich Islands, hence the specific name. The silver sword certainly makes a magnificent show plant.

Section II contained more exhibits than in recent years, a total of over 140 plants. Amongst these, B. Graham, Cramlington, produced three



Fig. 100 *Matthiola scapifera*, Morocco (p.437)

Charles Aitchison

Fig. 101 *Phagnalon helichrysoides*, Azzaden Valley, Morocco (p.437)

Charles Aitchison

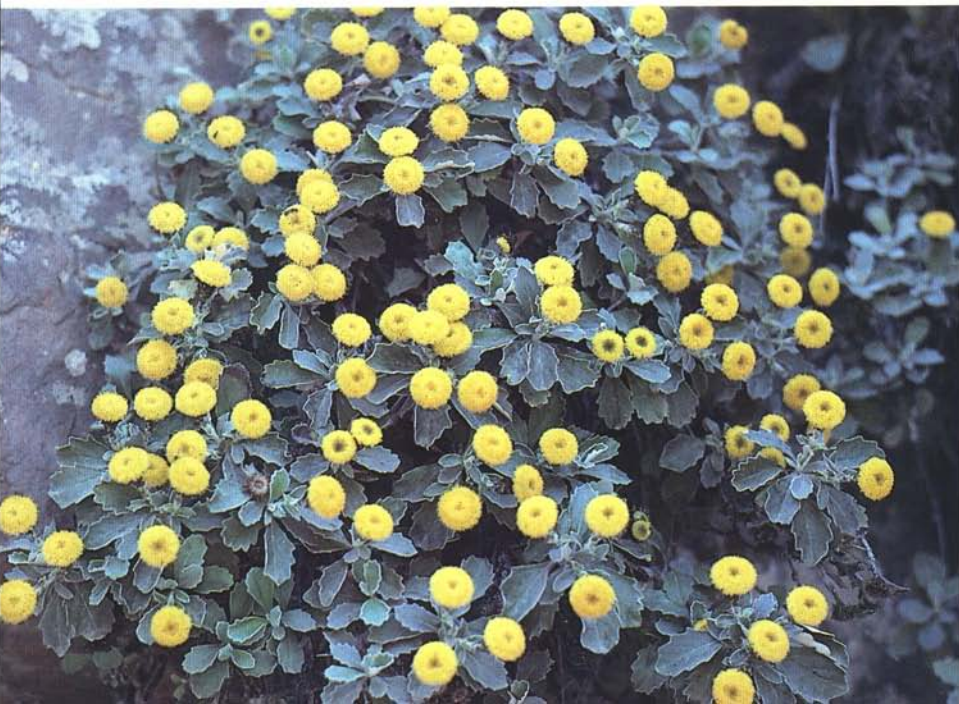




Fig. 102 *Pterocephalus depressus*, Morocco (p.438)

Charles Aitchison

Fig. 103 *Viola dyris*, Morocco (p.439)

Charles Aitchison





Fig. 104 *Ranunculus asiaticus*, yellow form. Award of Merit, Newcastle Show 1993. Shown by Fred Hunt (p.452) Alan Porrett

Fig. 105 *Lamium armenum*, Newcastle Show 1993. Certificate of Merit. Shown by Robert Rolfe (p.451) Alan Porrett





Fig. 106 *Rhododendron* 'Sarled'. Aberdeen Show 1993 (p.456) Mike Hopkins

Fig. 107 *Cremanthodium amicoides* (p.457)

Dennis Graham



separate class winning dionysias; *D. tapetodes* H 1164, *D. curviflora* and *D. aretioides*. George Young, Stocksfield, Northumbria, showed a good large specimen of *Androsace muscoides* and won other classes with *Erythronium umbilicatum* and *Trillium hibbersonii*. There were nine entries for plants grown unprotected in the open ground. The winners were Jane and Alan Thomson with *Saxifraga* 'Bridget', a particularly attractive cultivar with pale pink flowers on deep reddish stems. A special prize of £10 for the best plant in Section II, shown by a first-time exhibitor, was won by Alec Lothian, a sprightly newcomer to showing in his seventies, with *Fritillaria meleagris*. The Boonslie Cup, for a miniature garden, was won by Moira Land, West Linton.

Certificates of Merit were awarded to plants of *Haastia pulvinaris* (Margaret and Ian Young), *Primula* x 'Linda Pope' (Evelyn Stevens) and *Corydalis* x 'Highland Mist' (Fred Hunt). The latter was of particular interest being derived from a deliberate cross between *C. solida* and *C. transsilvanica*. The large plant shown had deep pink, well-formed trusses of flowers above compact foliage. Fred mentioned modestly that 'Highland Mist' had the merit of flowering later than other *Corydalis*, surely one for the future!

Ian H. McNaughton

Perth – 17th April 1993

The Perth Show is now well established in its new home at Rodney Pavilion on the banks of the Tay. The surrounding gardens and walks along the river are being developed and improved each year which adds to the day's pleasure for many. The high standard of plants submitted each year seems to surpass that of previous years and thanks and congratulations should go to all exhibitors as a wonderful riot of colour filled the Pavilion with plants, exhibits and displays from far and wide. Of particular note was the encouraging expansion of Section II which augurs well for the future!

The star of the show was an immaculately presented plant of *Primula* x 'White Linda Pope' exhibited by Fred Hunt of Invergowrie, which won both the George Forrest Memorial Medal and the Major-General D. M. Murray-Lyon Trophy, best for a Tayside exhibitor. Fred also won the Diamond Jubilee six pan class with plants including *Fritillaria hermonis* ssp. *amana* and *F. affinis* var. *tristulis*, *Dianthus microlepis* 'Rivendell' and *Primula* x 'Dr Lennon's White'; all perfectly presented giving overall a well-balanced exhibit.

The winners of Section I and the L. C. Middleton Challenge Trophy were Ian and Margaret Young from Aberdeen who also picked up the

Dundas Quaich for the three pan class, but the plant that caught my eye out of their many firsts was a *Clematis petriei* presented on a piece of driftwood – it is good to see exhibits with imaginative and artistic presentations. Other plants in Section I were two from our President Bette Ivey from Kirkmichael both winning trophies; a wonderful scented *Rhododendron cephalanthum* picking up the E.H.M. Cox Trophy and a perfect pot of *Fritillaria tubiformis* which was awarded the Bulb Trophy. Jean Wyllie from Dunblane won the Joyce Halley Award for the best plant in the show grown from seed with a perfect flowering cushion of a show favourite, *Androsace vandellii* but it was her plant of the painted trillium, *T. rivale roseum* that turned my head! The best Asiatic Primula and winner of the R. S. Masterton Memorial Trophy went to Glassford Sprunt for his charming plant of *Primula rotundifolia*. It was good to see nurseryman Ian Christie getting in on the act with an amazing flowering plant of *Cassiope* x 'Muirhead' which received a Certificate of Merit – we hope this will encourage more of these 'professionals' to show off their wares.

Two other Certificates of Merit were awarded, the first was my favourite of the show, a *Daphne petraea* 'Grandiflora' from James Cobb of Kingsbarns (I picked up the scent on Dundee Road!) the other, a superb plant of *Lewisia brachycalyx* exhibited by L. Clarkson from Blackpool. There would have been another Certificate of Merit for me – an eyecatching *Cyclamen persicum* with well over 100 flowers rising out of a crown of leaves, exhibited by one of the judges, Peter Semple. Another judge, local David Martin, won class 37 with a fine plant of *Iris pumila* 'Knick Knack' with subtle flowers of cream and mauve.

Local members, Barry and Cathy Caudwell from Abemyte took all the honours in a very well appointed and competitive Section II, winning the local Perth Trophy and the Perth Salver and a Bronze Medal for the most points in this section. The Junior prize went to Pamela Howat.

Richard J. Salvin

Glasgow – 1st May 1993

The Glasgow show could be seen as a triple triumph for its show secretary, Rodger Smyth. The show itself was a resounding success with hall and benches well filled. Moreover, the counter attraction of the World Orchid Conference and Show at the Scottish Exhibition Centre did not discernibly diminish attendance figures but rather "drew" several English exhibitors into Section II as a bonus. Finally, it was to Rodger's own pan of *Ranunculus amplexicaulis* x *parnassifolius* 'Nuria form' that the judges awarded the George Forrest Medal. The dark green foliage was a perfect backdrop to the numerous, refined white buttercups serenely poised above

it: a combination which presented a picture of a near faultless alpine . . . compact, healthy, floriferous and well-balanced. A worthy winner!

It was rather unfortunate that David Martin's *Clematis x cartmanii* 'Joe' found itself in the same class as the Forrest Medal plant otherwise it might have contended for top honours itself. For sheer "flower power" this was easily the best 'Joe' I've seen in this or any other show. David effectively used a vertical frame to support and contain the sprawling stems. This apart, there also remains the question of whether or not the whole *C. x cartmanii* grex is in need of additional clonal names. The situation on the show bench might get confusing otherwise.

I counted no less than five mature potfuls of that magnificent alpine shrub *Daphne petraea* 'Grandiflora', the best of which was exhibited by Sandy Leven. Such a glut of this perfumed beauty was a feast for the eye and nose, almost too much for one show to bear. Nevertheless, Sandy's plant, along with *Erinacea anthyllis* and *Fritillaria lusitanica* had to take second place in class 2 to Ian and Margaret Young's well-balanced trio of an exceptionally fine *Fritillaria pyrenaica*, *Trillium grandiflorum roseum* and *Clematis x cartmanii* 'Joe'. The *Erinacea anthyllis* was almost matched in Section II by Keith Taylor's plant which formed part of his winning six in Jubilee Class B. He must have considered his long journey from Leicester well worth the effort.

The Youngs took class 1 and the Dr William Buchanan Memorial Rose Bowl for six pans with a group which included *Daphne petraea* 'Grandiflora', a well flowered *Ramonda nathaliae* and a lovely pan of *Erigeron aureus*. Fred Hunt's six in this class contained that most elegant of frits, the American creamy-white species, *Fritillaria liliacea*. This beautiful plant is nearly extinct in its San Francisco Bay habitat so it is doubly delightful to see this rather difficult adobe species grown and presented so well by Fred. Yet another American frit, *F. glauca*, caught the eye in Fred's prize-winning six in Jubilee Class A. However, the deep, bitter yellow pendent flowers with characteristic blue-tinged leaves might not be to everyone's taste.

The Glasgow show usually hosts a variety of silvers and cushions and this show was no exception. Keith Taylor combined both qualities in his pan of *Raoulia x petrimia* which took a special prize for best plant from a first time exhibitor. Nevertheless, as a near perfect definition of this type of plant, Fred Hunt's *Helichrysum pagophilum* would be hard to beat.

Within the classic alpine families there were some fine examples to be seen. It was nice to be able to admire at close quarters Ian and Carole Bainbridge's *Primula barnardoana* and their two androsaces, the pink centred *A. villosa taurica* and that ubiquitous favourite *A. vandellii*

Gentians, too, made their presence felt and none more so than Maureen and Brian Wilson's *Gentiana verna angulosa* which was so well flowered it was awarded a Certificate of Merit. Nonetheless, it is as cultivators of gesneriads that the Wilsons particularly excel. Among other treasures they brought along, the two bigeneric crosses *X Jankaemonda vandedemii* and *X Briggandra calliantha* demonstrated skills which were rewarded with the James A. Wilson Trophy and the Bronze Medal.

Finally, in what was a high quality Glasgow show, there were many examples of those unusual and strangely beautiful plants which delight us with their presence yet bewilder and tantalise us with the fabulous variety that the alpine world is able to conjure up. One such, *Tropaeolum azureum* (P&W 6055), helped Ian and Margaret Young take the William C. Buchanan Cup for three pans new, rare or difficult. However, I'll finish with the most eye-catching (!), or strident, plant in the show: Jean Wyllie's deep magenta *Lewisia* 'John's Special' (biggest and best of the bunch) reached parts of the retina other lewisias could only dream of; like the eyes in the portrait it seemed to follow you around the hall. No collection should be without it!

John Lee

Northumberland – 8th May 1993

A late date after the mild winter had many people wondering what sort of display the Northumberland show would be. They need not have feared: the plants appeared in profusion and the public poured through the door to make this a very successful occasion.

As ever, the Open Section contained many outstanding plants and selection of the best plant in the show cannot have been easy. However, the very fine and well-flowered specimen of *Saxifraga pubescens* 'Snowcap' (B. Swales, Mansfield) was awarded the Farrer Medal. Two superbly grown specimens of the Turkish dead nettle, *Lamium armenum* (Fig.105, p446) were shown by R. Rolfe (Nottingham), who was awarded a Certificate of Merit for the larger specimen. A neat mound of *Helichrysum pagophilum* was given an Award of Merit. T. G. Sprunt (Bridge of Allan) received a Certificate of Merit for his *Shortia ilicifolia*. The E. G. Watson Trophy for one pan, in flower, of a plant new or rare in cultivation, was won by C. Booker (Whitworth) for his pale yellow *Gilia* sp., a native of South America.

The AGS Medals for the large and small six-pan classes were awarded to F. Hunt (Invergowrie), who also picked up a S.R.G.C. Diamond Jubilee Award. His large group was, as always, carefully selected and full of contrast: the delicate charm of the china-blue form of *Corydalis*

flexuosa CDR 585 was an apt foil for the brash red and yellow forms of *Ranunculus asiaticus*. The yellow form (Fig.104, p446) was given an Award of Merit. The corydalis was but one of many fine plants originating from the Himalaya and China that were very much in evidence on the benches; some were old favourites, but there were new species and re-introductions to cultivation from collections made in the wild recently.

There was much discussion of Alan Furness's large pan of the spectacular *Meconopsis punicea* (Certificate of Merit and Cultural Commendation). Nine plants in the pan have produced over 20 of the blood-red flowers with their long, pendent petals. It's a pity that this magnificent plant is essentially monocarpic; will seed be set to keep it in cultivation? Two other poppies from this same region were also shown: a fine specimen of the yellow *M. integrifolia* 'Wolong' (Award of Merit) and the deep violet-flowered *M. delavayi*.

In the 'from seed' classes were numerous small species of primula, including some from recent collections: *P. pinnatifida* CLD1092, *P. barnardoana* KEKE500 (now regarded as a variety of *P. elongata*), from East Nepal, and the Soldanelloides Section *P. wollastonii* EMAK475, collected in Nepal by Ron McBeath.

Also of Chinese origin is *Pleione aurita*, a species only recognised and introduced to cultivation recently. A small pan with four purple flowers was first in Class 37 (T. G. Sprunt), and is reputedly no more difficult to grow than the commonly cultivated pleiones.

Sections II and III were fiercely contested with many fine plants that would have performed well in the Open. Both section aggregate awards were won by local group members: the Gordon Harrison Cup by G. Young (Stocksfield), who also collected the S.R.G.C. Bronze Medal, and the Cyril Barnes Trophy by T. Teal (Ryton). Mr Young's fine pan of *Iberis spathulata* was judged the best plant in the small-pan classes of the show and received the new Sandhoe Trophy, donated by Mr and Mrs R. Brown. This prostrate shrublet, a native of the Val d'Eyne area of the Pyrenees, was about 12cm across and totally swathed in white flowers; it was also awarded a Certificate of Preliminary Commendation. Also from Section II, B. McWilliam of Morpeth was awarded a Certificate of Merit for *Salix herbacea*. The S.R.G.C. Diamond Jubilee Award for Class 52 was awarded to P. Freeman (Low Worsall).

The display of a large collection of magnificent paintings of alpine plants by Lawrence Greenwood was given a Large Gold Award.

David Millward

Aberdeen – 15th May 1993

The weather that morning and the previous evening had been a trifle wet; to be more precise would involve the use of unacceptable vocabulary. Suffice to say that it had rained continuously, heavily for some 48 hours before. This, coupled with extremely cold, overcast conditions with intermittent rain for the whole of the previous fortnight meant that a number of plants planned for exhibit were not ready and a number of plants were still showable after Glasgow two weeks before! However, this did not appear to affect the total entries, up over a third from last year, and the benches were again full to overflowing.

By now we had come to expect great things from the Jubilee Classes, and once again we were not disappointed, with four entries in Jubilee A and seven in Jubilee B. The standards were very high with Margaret and Henry Taylor taking the A Class, with a display that included the unusual *Meconopsis punicea*, and Brian and Maureen Wilson taking the B with three gesneriads amongst their six.

The six pan was won by Ian and Margaret Young as was the three pan but Ian and Margaret's greatest triumph was the winning of the new Esslemont Quaich, for three pans new, rare and difficult, with *Tropaeolum azureum* P & W 6055, *Jankaemonda vandedemii* and *Haastia pulvinaris* slightly overshadowing the winning of the Forrest Memorial Medal with *Leiophyllum buxifolium nanum*! With those in the bag and several other wins there was no doubt about the destination of the Walker of Portlethen Trophy for the most points in Section I.

The various foliage and shrub classes, including conifers, were well represented, with the grey-leaved *Synthyris pinnatifida* by Henry and Margaret Taylor in class 25. The Simpson Salver for best dwarf rhododendron was taken for the fourth time in six years by the hybrid *Rhododendron* 'Sarled', being won this time by Mike Hopkins.

Also well represented were the Asiatic primulas, six two-pans and eleven single pans. The Craig Cup for best primula in the show went to Fred and Monika Carrie with a beautiful large-flowered *Primula reidii williamsii* complete with its wonderful scent. *Primula sieboldii* was evidently popular with several entries of both white and pink varieties; what was interesting here was the variation in height of both flowers and leaf distinctly demonstrating differing growing conditions.

The *Lewisia* classes did not seem to be as full as usual, however two interesting crosses, *L. brachycalyx* x *rediviva* and *L. leana* x *cotyledon* by Ian Christie, whilst not obtaining first place, provided some potential for future winners. A well-flowered old favourite *L.* 'George Henley' by Jane Machin took first place in the single pan class.

A much neglected genus, the sempervivums, attracted a large entry of eight double pans all to a very high standard, with a whole range of colours and textures. It is gratifying to see some renewed interest in these plants that can be just as difficult as other plants to reach show standard.

Section II provided its usual high standard of entries. The two pan was won by David Sharp with *Clematis x cartmanii* 'Joe' and *Oxalis x* 'Ione Hecker'. Mrs Alicia Thompson did extremely well for a first-time exhibitor, taking both the special prize for best entry by a first-time exhibitor and the Aberdeen Quaich for Best Plant in Section II with a beautiful large flowered *Gentiana acaulis* 'Belvedere'. A large entry of sempervivums also featured in Section II with an exceptional *Rosularia pallida* by Elizabeth and Ron Smart. Top honours in Section II must go to Brian and Maureen Wilson taking the Bronze Medal for most points with a notable entry of exceptional quality including a number of their gesneriads.

Rosie Jones swept the board in the Junior section with four worthy entries and Heather Salzen once again provided a wonderful selection of paintings.

Mike Hopkins

Discussion Weekend, St Andrews – 25th-26th September 1993

The high standard of exhibits at the Diamond Jubilee autumn show gave the judges no shortage of plants to choose from in their quest for the Forrest Medal winner. Sandy Leven's (Dunblane) *Cyclamen africanum*, from his winning entry with *C. cilicium* in the two pan class, in prime condition, with many fine flowers of a good strong pink, was a worthy victor.

There were around thirty cyclamen scattered throughout the competitive classes and more on display which illustrated the great variety and charm of this delightful genus. It seemed it was a little late in the season for that old favourite *C. hederifolium* to feature strongly but Alice Spensley (Richmond) won the East Lothian Cup for the best plant in Section II with her pink form. Section II was well supported, a very encouraging sign for the future of our shows. Once again, Barry and Cathy Caudwell (Abermyte) were successful in the special Jubilee class, this time with *Primula serratifolia*, *Corydalis wilsoni*, *Romulea macowani arricola*, *Myrtus nummularia*, *Cyananthus microphyllus* and *Rhodohypoxis baurii conferta*.

In both sections foliage plants were much in evidence; David Sharp (Lhanbryde) showed *Celmisia argentea* and several good conifers, Harvey Shepherd (Bolton) won with three excellent ferns, Audrey Leach

(Alloway) showed a *Saxifraga fortunei rubrifolia* whose rich foliage was set off by dainty, spiky flowers. Audrey also showed the attractive, oddly named, *Erpetion reniformis* 'Putty'. Kath Rimmer (Ormskirk) in Section II, and Jean Wyllie (Dunblane) in Section I both showed *Erigeron* 'Canary Bird' with almost as many flowers as in springtime. Jean had more 'off-season' flowers on an *Androsace vandellii* which accompanied the 'Canary Bird' and *Cyclamen africanum* in the three pan entry which won the East Lothian Trophy. In the Ericaceous class, Betty Craig (Edinburgh) had a *Cassiope* x 'Muirhead' that was in full flower; this plant often obliges with flowers at this time to brighten our gardens.

Brian and Maureen Wilson (Cults) have provided entries to gladden the hearts of show secretaries all year and did not fail at St Andrews. They won the Peel Trophy with three magnificent gentians, *G.* 'Kidbrooke Seedling', *G. macaulayi* 'Kingfisher' and a *G. sino-ornata* hybrid. This year has seen stiff competition for the Rutland Salver (for the overall winners in Section II over the year) donated by founder member, Bill MacKenzie. On Saturday evening it was a great pleasure to see Brian and Maureen, who have won this trophy by a considerable margin, being presented with it by Bill MacKenzie himself. It will surely be an extra thrill for the Wilsons that they have this connection with a man who actually knew George Forrest. Maureen also won the Wellstanlaw Cup for a floral arrangement, beating Carol McCutcheon who had successfully transported hers all the way from Northern Ireland! Carol (Newtonards) brought several fine entries to benefit the show, including her miniature garden, which won the Logan Hume Trophy, a smart *Celmisia asteliaefolia* and the very lovely *Gentiana depressa*, which achieved a Certificate of Merit.

James Forbes (Dairsie) showed a charming *Stachys betonicifolia alba* and Roma Fiddes (Kintore) a wonderful *Loasa* sp. with large tangerine flowers and a lovely *Campanula cashmiriana* amongst their 3-pan entries. James Cobb (Kingsbarns) had a good *Campanula carpatha* in the seed class and Margaret and Henry Taylor (Invergowrie) included *CC. zoyisii* and *raineri* in their winning Jubilee A entry, along with *Lewisia sierrae*, *Erigeron chrysopsidis* 'Grand Ridge', *Crocus banaticus albus* and a *Rhodohypoxis* x *Hypoxis*.

Edith Clark (Newport-on-Tay) won a Certificate for her display of drawings and Lawrence Greenwood (Todmorden) was awarded a Gold Medal for his utterly enchanting and highly skilled exhibition of watercolours.

Ian and Margaret Young

Plant Portraits

***Rhododendron* 'Sarled'** (Fig.106, p447)

Mike Hopkins

Rhododendron 'Sarled' is an ideal small rhododendron for the rock garden or peat bed, making about 45cm all round in ten years or so. It also makes a wonderful show plant, in recognition of which it received an A.M. in 1974. The cross is between *RR. sargentianum* and *trichostomum*, both of the Pogonanthum section. The cross exhibits the small glossy green leaves with brown indumentum beneath and umbels of daphne-like flowers typical of the section. The long-lasting pink buds are attractive in themselves and provide an extension to the even longer flowering period of white flowers with a hint of pink. This can last up to three weeks in all, given ideal cool conditions. The leaf is of a good glossy type, forming a neat, compact, all-year-round plant.

The flowering is profuse, almost covering the plant at its peak, and this flowering is very reliable. This season is the third season for the particular plant shown in the photograph, and the third season for it on the bench at the Aberdeen show, taking the Simpson Salver for the latter two years. It is noteworthy that the same hybrid also won the Simpson Salver on two previous occasions in recent years.

Typical rhododendron growing conditions are required, that is an acid, humus rich, well-drained soil in a cool sheltered spot with plenty of moisture. Classified hardy (H4 -20°C minimum), frost does not appear to affect the buds and flowering is late enough – mid to late May in north-east Scotland – to avoid the worst of the frosts whilst in flower. The particular plant illustrated has lived all its life in a pot; the first two years in plastic and the last year transferred to clay. The combination lives all year outside with the pot half buried in soil. It is brought under a cold all-glass frame three weeks before the show with the last three to four days in the warmth of the house to finish it off.

The plant has exhibited no signs of distress about living in a pot but this has no doubt contributed to maintaining its neat compact habit. Each year the plant has been repotted in a slightly larger pot, with a soil mixture of 2/3 of a proprietary ericaceous compost and 1/3 granite grit. The top dressing of composted wood chips has been removed, a sprinkling of JI base fertiliser added and the top dressing replaced and refreshed.

In common with most dwarf rhododendrons, *Rhododendron* 'Sarled' has proved completely pest and disease free. The worst problems it suffers are physiological and it can show a slight yellowing of leaves that is easily cured with a dose of chelating agent.

Cremanthodium arnicoides (Fig.107, p447)

Dennis Graham

Cremanthodium arnicoides (D.C. ex Royle) R. Good is a herbaceous composite growing amongst shrubs and in open sites around 4000-4500m from Pakistan along the Himalaya into south-west China. In the mature plant there are usually several flower heads in clusters on two to six stems and with large oblong leaves. The flower-heads, which appear in July, are about 5cm across with many ray florets of a bright pale yellow. Although in cultivation for some years, it has never become common, even although it is quite showy when in flower. Plants take a number of years to come to maturity – the plant in the photograph is about ten years from seed; it started to produce a few flowers after six or seven years. In my garden it grows at the base of a peat wall in a rich fairly well drained soil in partial shade. In summer the plant soon shows signs of wilting after a few days dry weather, and must be watched, because even after a short time the wilting becomes irreversible, and if there are any flower-heads they are liable to collapse. It might be worth trying on the edge of a bog bed or near a pool, though the crowns and leaves are very susceptible to attack by slugs. It is a sound perennial and in autumn the crowns die back below ground level. It has not set viable seed so far and I have not risked dividing the crowns; it may be quite difficult to propagate.

Book Reviews

Primula

by John Richards

Illustrated by Brigid Edwards

Published by B. T. Batsford

300 pages, 70 colour plates

Price £35.00

Ever thought that your chosen subject on Mastermind would be primulas? Well, here are three questions to change your mind. "Which species should probably be called *Primula nana*? Secondly, what is the correct name of the popular candelabra hybrid, 'Inverewe'? Lastly, which primula was discovered in cultivation before being discovered in the wild?" (sic.) On the other hand, if you have read John Richards' superb new book on the genus you should be through to the next round with no passes.

Until recently nobody had attempted to look at the entire *Primula* genus, although Roy Green's "Asiatic Primulas" and "Primulas of Europe and North America" by Smith, Burrow and Lowe covered a lot of the genus. Suddenly, we have two books, with Josef Halda's "The genus *Primula* in cultivation and the wild" only months ahead of this book. Both are excellent books, well worth having in your library, but I find John Richards' book the more thought provoking. It is written in an elegant style with a wry sense of humour in places. The first sixty or so pages are concerned with the history, cultivation and possible evolution of the primula and its relatives, as well as current scientific theory on heterostyly and homostyly (i.e. pin and thrum fertilisation). Now, you may wish to skip this part, but it does allow one to understand the reasons for reclassifying some of the species in the later pages.

The next part of the book provides an overview of the sections and subsections of the genus, with the species within a subsection being arranged so that similar plants follow on from each other, rather than being dealt with alphabetically. Each species is treated in much the same way with the plant description followed by notes on its distribution, cultivation, natural variation and importance in hybridisation. There are some errors. *Primula sertulum* is not, as far as I know, in cultivation (certainly it hasn't been collected by Cox – C5108 is a rhododendron species), but such errors pale into insignificance compared with the wealth of information that the book contains.

A feature of this book are the outstanding illustrations. If, like me, you find it hard to visualise the difference between a leaf which is narrowly oblanceolate from one which is merely spoon-shaped, then it must come as a relief to see how illustrations have improved in recent years. Duncan Lowe's line drawings of European primulas were works of art. Then, in Halda's book, we had Jarmila Haldova's line drawings of over 350 of the species. Now at last we have 116 colour paintings by Brigid Edwards, and over 50 colour photographs, mostly taken in the wild. The paintings are excellent visual descriptions of the shape and habit of many unfamiliar species. True, there are some problems. Our endemic *Primula scotica* appears to be red and not a deep, rich, purple. *Primula forrestii* is a much richer orange-yellow than in the illustration. Likewise, *Primula glomerata* would have been better illustrated with its head hanging to one side, which is one of the characteristics readily distinguishing it from *Primula capitata*. But these are really only small quibbles in an impressive collection of finely detailed paintings.

The photographs are even better and quite take the breath away. Few of us will have the opportunity of visiting Nepal to see a mat of *Primula muscoides* covered with its delicate white flowers, but Ron McBeath's photograph gives us nearly the same pleasure. Many of the photographs show us the natural habitats of the more difficult species, giving clues to their requirements if brought into cultivation. Mind you, few of us have that mossy rock overhanging an icy torrent, as shown with *Primula soldanelloides*. On the other hand after seeing the photograph of *Primula wollastonii*, I might consider growing this plant on its side like a lewisia.

Other features that I liked about the book were the excellent glossary; the hardback cover (it's going to get a lot of handling); the clear layout; the size of print and the durable quality of the paper (I think that somebody described the paper in Halda's book as "rain forest friendly"). In all, this is a book for both the specialist and the enthusiastic amateur, and a must for everyone's book shelf – not that it's likely to be on the shelf very often!

Oops, nearly forgot. The answers were *Primula edgeworthii*; *Primula* x 'Ravenglass Vermilion' and *Primula aureata* (discovered amongst seed sent to Edinburgh in 1936, but not discovered in the wild until 1952).

IDS

Pests and Diseases of Alpine Plants

by P. R. Ellis, A. R. Entwistle and D. G. A. Walkey

Published by the Alpine Garden Society

320 pages, 28 colour plates, 35 figures

Price £23.50

It is to be hoped that the thoroughly repellent vine-weevil pictured on the rear cover of this excellent reference work does not deter alpine gardeners from buying a copy of what could prove to be one of the most essential books ever published for the serious grower!

The three authors have worked together at Horticulture Research International in Warwickshire for twenty years and are all keen members of the Alpine Garden Society. As international experts in the fields of entomology, mycology and virology they have been able to apply their expertise to the specific problems that can occur in the cultivation of alpine plants.

Layout is good, starting with an initial chapter on diagnosis. This is set out in tabular form with different symptoms of specific areas, e.g. flower, leaf, root, and an indication of the various causal possibilities ranging from pests to diseases to other disorders. The three long main chapters give a great deal of individual detail within the areas of pests, fungi and bacterial and viral diseases and how to control them. The final part of the book deals with good cultural practices that may prevent the problems in the first place and short but useful sections on plant health import regulations and procedures for producing virus-free plants by meristem tip culture. It is good to see that considerable emphasis has been placed on cultural and biological controls as the first choice with more drastic chemical methods as a last resort.

The text is complemented by 28 colour plates – most of them with six different small illustrations of pests and symptoms and these give rise to one small quibble. Although reference to the appropriate text will normally give some idea of the scale, it would be useful to also have it given with the photograph, especially with some of the smaller and perhaps unfamiliar insects.

The one lack, although this is of course implicit in the title, is any detail on the various mineral deficiencies and physiological disorders that can also cause problems to the alpine gardener. Perhaps we can hope for a future publication to remedy this omission.

CB

'Chinese' Wilson. A Life of Ernest Wilson 1876-1930

by Roy W. Briggs

Published by HMSO, London

154 pages, numerous monochrome plates, 21 colour plates

Price £19.95

The adventure and romance of E. H. Wilson's expeditions in China are well known from his own writings. His account 'A Naturalist in Western China' was reprinted in 1986 but it gives little indication of the background and character of the man. For anyone interested in the man behind the plants this book by his grand-nephew fills that gap. Roy Briggs' maternal grandfather was E. H. Wilson's brother, and from his original journals, letters to family members and other memorabilia he has written a competent appreciation of his great-uncle's life.

Wilson was a man of remarkable talent. Only ten years after leaving school at the age of thirteen, he was being recommended as a plant collector to Veitch and Sons by the Director of Kew. In that career he excelled. Although his prime interest was in trees and shrubs, over 1000 species of great diversity were introduced into cultivation in the west by his efforts, including the spectacular handkerchief tree, the Chinese gooseberry or Kiwi fruit, *Meconopsis integrifolia* and *Lilium regale*. In quest of this last plant he was caught in a rockfall which left him with a limp, precluding further strenuous physical activity in remote areas. He continued to travel the world in the employment of the Arnold Arboretum, Boston, and made over 1800 herbarium specimens before his early death in a car crash. Wilson was also a prodigious photographer with an eye for a good picture. Many of these are reproduced throughout the book.

In the final chapter, Victoria Matthews, editor of *The Kew Magazine*, briefly describes some of Wilson's more important plant introductions. Her text is complemented by 21 colour plates. Explanatory notes and references to information sources, together with a useful glossary of Chinese place-name changes and maps complete the book.

This volume is the first in a series entitled 'The Great Plant Hunters', to be produced jointly by The Royal Botanic Gardens of Kew and Edinburgh.

AMC/VWMC

Easy Ways to the Plants of the Bernese Oberland

by Philip and Jean Talboys

Published by Sawd Books

112 pages, 16 colour plates, 1 map

Price £6.99

This is an excellent little book designed to give the utmost satisfaction to those plant lovers who unfortunately have some form of physical disability. Full and exact travel details are given for 26 excursions, different modes of transport are detailed and exact timings given for each. In Switzerland, transport does arrive and depart on time and is very reliable.

Lists of plants and their common names are given at each location, as well as maximum altitudes. There are over 60 colour illustrations included.

This paperback is a mine of information for those going to the Bernese Oberland for the first time. Information includes: tourist concession passes, which maps to buy, which books to read, and even some advice on photographing plants.

Included in the book is a chapter on the Alpengarten Schynige Platte, detailing many alpine plants grown there. The Alpengarten is recommended as a starting point for your holiday, but on the two occasions we have been there, the garden was covered with snow well into the second week in July (2000m). Interlaken has been chosen as an excellent travel centre for all excursions, using public transport throughout.

This book could be a basis for many holidays in the region and could easily be used by the more active alpine enthusiast for more demanding expeditions. Take it on holiday with you.

WCM

The Propagation of Hardy Perennials

by Richard Bird

Published by B. T. Batsford Ltd.

192 pages, 34 colour plates and 24 line drawings

Price £19.99

Propagation is one of the fundamental skills of gardening, and Richard Bird's book expounds the various techniques which will allow the inexperienced or indeed the experienced gardener to increase the 'hue' of his or her green fingers.

The book shows the gardener how to propagate a wide range of plants for the flower garden and, although not a specialised book for the alpine gardener, plants suitable for the rock garden receive extensive cover. The propagation of ferns is also dealt with, which is good news for the many who are now taking an interest in pteridology. A large section of the book is devoted to the propagation of individual plants. This A-Z list deals with over 700 genera and contains much useful information for the propagator.

Some minor inaccuracies occur in this section, e.g. Bird states that "Aciphyllas are tap rooted and can only be propagated from seed". He omits to mention that some members of the genus – i.e. *A. pinnatifida* is easily propagated by detaching its numerous suckers and placing them in a peaty compost. I was rather surprised that in the appendix, dealing with sources of seed from societies, the author has omitted the SRGC and the AGS, although both are mentioned in a previous section of the book.

At almost £20 this book might at first sight seem expensive, however, on looking through a recent nurseryman's catalogue, I discovered that I could spend £20 on just two plants, which puts the price of this book firmly into context!

HCAMcB

Obituary: Sir George Taylor, 1904 – 1993

Sir George Taylor, the Honorary President of the Scottish Rock Garden Club, died on November 19th 1993, aged 89.

An Edinburgh boy, Sir George attended Edinburgh University, gained a first in botany and progressed onto postgraduate studies, based at the Royal Botanic Garden, Edinburgh. He met the likes of George Forrest, and became interested in the plants of the Himalaya. His interest continued while Assistant Keeper of Botany at the British Museum (Natural History), where his doctorate, in 1934, revised the genus *Meconopsis*. This formed the basis for his classic book "An Account of the Genus *Meconopsis*".

Sir George met many of the great plant explorers of the thirties, and in 1938 he accompanied Ludlow and Sherriff to the Tsangpo Gorges in south-east Tibet, collecting not only the garden-worthy, but plants of botanical and academic interest. He became Keeper of Botany of the British Museum in 1950, and in 1956, Director of the Royal Botanic Gardens, Kew. His services to botany were recognised by the RHS (a Victoria Medal of Honour in 1956) and the Royal Society (fellowship in 1968), and he was knighted in 1962.

On his retirement in 1970, Sir George returned to Scotland, living at Belhaven House, Dunbar, as Director of the Stanley Smith Horticultural Trust. Here, he developed his interests, building up an excellent collection of troughs, extensive woodland and peat gardens, and unusual, somewhat tender shrubs. Belhaven House was open every year for Scotland's Garden Scheme, and SRGC groups were enthusiastically received by Sir George in person.

In 1969, Sir George was made Honorary Vice-President of the Scottish Rock Garden Club, and in 1979 he became Honorary President. However, many of the club's members will remember Sir George through "Joint Rock", the RHS Joint Rock Garden Plant Committee, which he joined in 1954, and served as Vice-Chairman from 1955 until 1990. In this role he chaired most of the meetings of the committee in Scotland, imparting his wide knowledge, and exerting considerable influence on awards to rock garden plants.

Sir George will undoubtedly be remembered through some of the plants named after him. Perhaps he would choose *Meconopsis taylorii* from central Nepal, but most of us will be reminded by *Cassiope* 'George Taylor', an excellent, free-flowering hybrid of *C. fastigiata* x *wardii*.

Ron McBeath and Ian Bainbridge

The Royal Horticultural Society's Rock Garden Plant Committee

Recommendations made at Scottish Rock Garden Club Shows in 1993.

AWARDS TO PLANTS

Award of Merit

On 3rd April at Edinburgh to *Narcissus bulbocodium obesus* as a hardy flowering plant for exhibition, shown by Mr. F. Hunt, 34 Morris Place, Invergowrie.

On 31st July at Perth to *Scutellaria scordifolia* 'Seoul Sapphire' as a hardy flowering plant for exhibition, shown by Mr. G. Butler, 5 Craighorn, Menstrie, and to *Patrinia triloba* as a hardy flowering and foliage plant for exhibition, shown by Mr. A. Leven, 2 Leighton Court, Dunblane.

On 25th September at St Andrews to *Campanula carpatha* as a flowering plant for exhibition, shown by Dr. J. Cobb, 3 Station Road, Kingsbarns, Fife.

Certificate of Preliminary Commendation

On 3rd April at Edinburgh to *Polemonium viscosum* as a hardy flowering plant for exhibition, shown by Mr. F. Hunt.

On 17th April at Perth to *Primula appenina* and to *Primula auricula* var *albocincta* both as hardy flowering plants for exhibition, shown by Mr. & Mrs. H. Taylor, 32 Morris Place, Invergowrie.

AWARDS TO EXHIBITORS

Certificate of Cultural Commendation

On 3rd April at Edinburgh to Mr. E. G. Watson, 1 Ewesley Gardens, Woodland Park, Newcastle for a plant of *Dionysia microphylla* (GW-H 1302). To Mr. T. G. Sprunt, 17 Claremont Drive, Bridge of Allan, for a plant of *Dionysia aretioides* 'Paul Furse'.

On 17th April at Perth to Mr. & Mrs. J. I. Young, 63 Craigton Road, Aberdeen, for a plant of *Tropaeolum azureum* (P & W 6055).

On 31st July at Perth to Drs. C. & I. Bainbridge, 3 Woodhouselee, Easter Howgate, Midlothian, for a plant of *Chionohebe pulvinaris*.

To Mr. I. Christie, Downfield, Westmuir, Kirriemuir, Angus, for a plant of *Gentiana saxosa*.

Narcissus bulbocodium obesus, *Erigeron aureus* 'Canary Bird' and *Patrinia triloba* were all recommended for further assessment as candidates for the Award of Garden Merit.

Discussion Weekend

ST ANDREWS, 23rd – 25th SEPTEMBER 1994

The comments of many members who attended the Diamond Jubilee Weekend suggest it to have been a success. Because of this, it has been decided to use the same accommodation and lecture facilities this year.

At the time of going to press, the programme has not been finalised, but it is expected that it will be as interesting and varied as last year.

Prices

Residents

Friday dinner – Sunday afternoon tea	£112
Saturday lunch – Sunday afternoon tea	£82
Sunday dinner – Monday breakfast	£28

Non-Residents

Saturday or Sunday: morning coffee, lunch, afternoon tea and all lectures	£20
Saturday evening conference dinner	£23

Bookings should be made on the form which can be found with this issue of 'The Rock Garden'.

The booking, together with the appropriate remittance, payable to the Scottish Rock Garden Club, should be sent to:

Mrs Elizabeth Field
2 Maynard Road
St Andrews
Fife
KY16 8RX

Anyone requiring further information about the weekend should contact Elizabeth at the above address, enclosing a stamped addressed envelope.

Letter to the Editors

Dear Editors,

Please accept this letter as an advert for the beautiful Vienna Alpine and Botanic Garden. In June this year, I had a spare morning, having arrived on an overnight train, before catching my flight home. I looked on my map for something not too energetic to do near the station (Sudbahnhof). The magical words 'Alpine Garden' leapt off the page, so I put my rucksack in a left luggage locker, and crossed the road from the station.

I spent the half hour before its opening enjoying the pleasant surroundings of the Belvedere Palace Gardens as the sun got warmer, and Vienna's residents jogged past or strolled to work. At one minute past nine, I paid my 30ASch (£2) and enjoyed two hours wandering round this lovely, tiny, garden. It is well established, with superb plants all meticulously labelled, and incorporating a roof-top sempervivum display (one of my favourite plants).

The garden is probably smaller than Branklyn, but just as worthwhile a visit. So next time you are in Vienna, sacrifice an art gallery or museum, and enjoy the tranquillity of Vienna's Alpine Garden.

Yours sincerely,

Ms D. Ramanee Peiris

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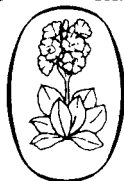
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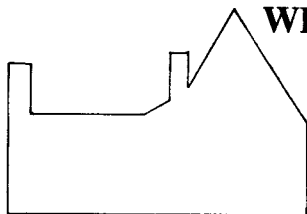
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