THE Alpine Gardener

BULLETIN OF THE ALPINE GARDEN SOCIETY

VOLUME 77 NO. 3 SEPTEMBER 2009

The Alpine Gardener

Bulletin of the Alpine Garden Society

VOLUME 77 No. 3 SEPTEMBER 2009

Contents

This issue of The Alpine Gardener is dedicated to Kath Dryden VMH (1925-2009)

REGULARS

FEATURES

Cover Photographs

Front cover: *Globularia repens* [Photo: Erik Holgersen]
Inside front cover: *Asperula hirta* in the Picos de Europe [Photos: Plant Images/ C.Grey-Wilson]
Back cover: *Aubrieta canescens*, Karagol, Kyrgystan [Photo: Liam McCaughey]

Published by The Alpine Garden Society, AGS Centre, Avon Bank, Pershore, Worcestershire, WR10 3JP, UK.
Tel. 01386 554790; Fax: 01386 554801
E-mail:ags@alpinegardensociety.net

Printed by The Broglia Press, Enterprise House, 52 Holton Road, Poole Dorset, BH16 6LQ UK.

ISSN 0002-6476

The international society for alpine and rock garden plants, small hardy herbaceous plants, hardy and half-hardy bulbs, hardy ferns and small shrubs

The Alpine Garden Society, AGS Centre, Avon Bank, Pershore, Worcestershire, WR10 3JP, UK. Tel: +44(0)1386 554790. Fax: +44(0)1386 554801
Web:www.alpinegardensociety.net
E-mail: ags@alpinegardensociety.net

Contributions: (preferably typed or in electronic form), photographs (labelled) and relevant books for review purposes should be sent to the Editor. The Editor cannot accept responsibility for loss of, or damage to, articles, artwork or photographs sent through the post. The views expressed in this publication do not necessarily reflect those of the Editor or of the Alpine Garden Society.
The Bulletin of the Alpine Garden Society (titled *The Alpine Gardener*) is published four times a year, in March, June, September and December.

Second-class postage paid at Rahway, New Jersey.

Postmaster: send address corrections to AGS Bulletin, c/o Mercury Airfreight International Ltd., Inc., 2323 Randolph Avenue, Avenel, N.J. 07001.
U.S.P.S. 540-210.

ISSN 0002-6476
Price to non-members £6.00

Newsletter contributions: to The Director, AGS Centre, Pershore (address as above).

Subscriptions: payable to 'The Alpine Garden Society', Centre (address above), from whom further information may be obtained.

Home Membership*, single (UK and Ireland) :	£25.00
Home Family Membership* (any two people at the same address):	£29.00
Junior (under 18 years of age)/ student :	£10.00
Overseas Membership (US dollar rate $54.00);	£27.00
Overseas Family Membership (US dollar rate $60.00):	£30.00

For Life Membership and Joint Life Membership details please apply to the Alpine Garden Society at the AGS Centre, Pershore: details above. *£2.00 reduction for direct debit subscribers

Registered Charity No. 207478

Kath Dryden VMH, 1925-2009

Kath Dryden, alpine plant doyenne, died on May 18th 2009, five days before her 84th birthday. Born Kathleen Nora Murray in Rochford, Essex on the 23rd May 1925, she spent most of her young life in Hackney, East London. During the war she was evacuated to Norfolk and, at the age of 16, proudly joined the WAAF, where she was eventually to meet her husband Maurice. During the war years Kath became involved with Radar defences and was the principal operator when the dam-buster raids took place. Hitler seemed to take this as a personal affront because soon after she had to survive a direct hit on the family home when on leave. Kath finished her war service riding a bike around Stanmore, collecting the weekly rents for billets in the area.

She married in 1946, settled in Hackney and not long after, in 1947, their only child John arrived. They later moved to a tenement in Leyton where John can still remember row upon row of flower pots lined up along the fire escape. Kath's grandfather was president of the Auricula Society and it was this group of plants that first got Kath excited about horticulture. During this time she was captain of the 5th Essex Lifeboys, whilst Maurice was captain of the local boy's brigade. She was also involved with the Inner Wheel, the ladies arm of the Rotarians and the

PHOTOS: COURTESY JOHN DRYDEN

Early days: Kath in her first alpine house

Ladies' Masonic Lodge. In the late 1950s the family moved to Loughton where her horticultural career really took off. She joined the Alpine Garden Society in 1959 and with the increasing need for more space for her ever-growing plant collection, moved to Sawbridgeworth, Hertfordshire in 1968. Here she and Maurice developed 'Berries', their home which became a mecca for alpine plant enthusiasts from around the world. Her skills as an exhibitor are legendary and as Director of Shows for the AGS from 1972 until 1981 she was truly in her element — shows meant people and Kath was always at her best with people — giving advice, giving help and usually giving orders, but always giving.

Kath continued her meteoric rise in the AGS, becoming a vice-President in 1981 and President of the Society in the autumn of 1982. Already a member of the RHS Joint Rock Garden Plant Committee, and with a Chelsea Gold Medal for a display of the genus *Lewisia*, her horticultural status peaked with the award of the Victoria Medal of Honour (VMH, the highest award in British horticulture) in 1984 for services to alpine plants, a field in which she had already become peerless.

The loss of Maurice left a big hole in Kath's life; nobody could match his stoic dedication or replace the often calming influence he had upon her. John tells me that it is now much to his regret that he didn't inherit his mum's genius for things horticultural: his interests are more focused on overhead cams than underground corms. He also proudly told me that she was totally devoted to the family, standing by them during all the ups and downs, never judgmental, always with sound advice for every one of them.

For my part, Kath adopted my whole family as if it was part of her own. We would spend countless hours looking at plants and just talking. She was my mentor, valued advisor and an incredible influence on my whole life, as I am sure she was on many of those reading this. Kath Dryden VMH, plantswoman extraordinaire, loving mother, doting grandmother, besotted great-grandmother, irreplaceable friend ..... OUR Kath.

RAY DREW

Memories of Kath

It was at the 1971 AGS Conference that I first met, very briefly, Kath and Maurice. Kath was a tall and slim figure wearing a very smart, fashionable, navy blue suit. She was recovering from a stroke, so used a walking stick and wore a black patch over the eye which had been affected. She was the assistant to Sid Lilley, the Director of Shows, and Kath took over his position shortly afterwards. Maurice was the Publications Manager.

After the first Summer Show, organised by the Woking Group in 1973, she persuaded me to become assistant to the London Show Secretary and later I took over the London Shows, three per year. Kath always came along to help me set up the day before and I remember that, at my first show in London, she was advising me how to set up but had to leave in order to visit her father in hospital. He died a few days later. Roy Elliott also would arrive while we were setting up each show and I greatly enjoyed the banter between them.

PHOTOS: COURTESY JOHN DRYDEN

The Show committee (which I joined in 1975) allowed Kath to have a second assistant (her first one was Bill Tubbs, who was invaluable to her), so I also took that position. Kath and I would travel to the northern shows together. She would leave her car at Toddington Services on the M1 or Maurice would run her there and I would drive the rest of the way. I particularly remember an enjoyable trip we did to set up the first Morecambe Show, staying at the famous Midland Hotel and visiting renowned Lancashire nurseryman Reggie Kaye for tea on the way there.

1976 was the AGS' fiftieth anniversary and a rock garden was built at Chelsea Flower Show to celebrate the occasion. Kath supplied many of the plants and we enjoyed planting them. It was a lovely garden designed by Michael Upward. 1976 was also my first year on the Joint Rock Garden Plant Committee, so I was at the flower show on the Monday when the Queen visited. Kath was wearing pristine white gloves and she had brought a pair for me which she insisted that I wore. She explained that it was in case the Queen shook hands with us. Naturally she did not; in fact she gave our garden a cursory glance and passed on her way.

The 1981 International Conference at Nottingham University was Kath's swansong as Director of Shows. She put on a very successful display of plants during which she proudly introduced us to her two lovely grandchildren, Sarah and Andrew.

When our son died in 1982, Kath was the first friend to arrive the next morning to comfort us. A few days later she was voted in as President of the AGS, in which position she served for the next three years. She was very lucky to have such excellent support from Maurice, which she regularly acknowledged.

Early days: Kath with her first love, auriculas

As friends we had some great times and laughs, especially at the RHS. We were both on the Lily Group Committee and helped them with their RHS Shows which were always on the hottest days of the year (it seemed to us) as we sweated under the glass roof.

Kath was over the moon when she was awarded the Victoria Medal of Honour, a singular honour, and over and over again asked 'Why me?'

She was awarded a Gold Medal from the RHS for her Chelsea exhibit of lewisias. HRH Prince Charles viewed it and seemed very interested. I think he was her favourite Royal ever afterwards. Maurice and I were watching and saw the photographer taking pictures: as

they moved away, I said to Kath that we must ask the photographer for prints. She replied it was not necessary as all of the photographs had to go to the RHS Press Office from where prints could be bought. The next day she examined every photo there and disappointingly none were of her and Prince Charles together.

Kath had a truly dreadful sense of direction. One day a group of us visited one garden in the morning and were due to visit another in the afternoon. None knew where the second garden was but Kath said she did, and instructed us to follow her car. So there was this convoy driving around Cambridgeshire and, as we passed a country pub for the third time, Kath stopped her car and marched in with us all trailing behind. She asked to use the phone which was on the counter. The few locals were astonished as Kath shouted into the phone ' We are at the Brick in the Wall. Where the B...H.. are you?'

The Manavalins bulbs and dormant tubers list proved very popular and when Maurice retired they had a flourishing small business. Maurice told me that he should have gone in for it with Kath years before they did. Kath had learned a lot from her association over the years with various nurserymen: Barry Starling, Bob Potterton, Don Mann, John Amand and Robin White in particular (she also worked for a while with John Amand). They also learned plenty from her! She is widely respected for keeping going with Ray and John's help for so many years, and also for still producing show plants and opening her garden every year.

JOY BISHOP

PHOTOS: COURTESY JOHN DRYDEN

Kath and Maurice Dryden in the 1990s

Kath Dryden: Warts'n'all

'Gentlemen !', said Kath Dryden, 'Could you come to look at the judging in this class again.' The occasion was a Main Spring Show in London, decades ago. The class was for 'bulbs' and there were two entries under consideration. One was from Jack Elliott and included Iranian fritillarias and several pots of superlatively grown, notoriously recalcitrant juno irises from Paul Furse's Afghan collections. The irises were species such as *I. doabensis* and *I. porphyrochrysa,* long since vanished from cultivation. We had never seen them before, far less grown to such a standard and have certainly never seen them since. The other entry was of well-presented but thoroughly mundane 'bulbs'. It was to the latter that the judges had awarded first prize. Jack and I had been wandering round looking at our entries after completing judging another section. On viewing his second prize sticker, he raised an eyebrow and, in the quintessentially English drawl that endeared him to Americans, said 'Mmmm. I thought Patrick Synge was meant to know something about bulbs.'

PHOTO: PLANT IMAGES/ C.GREY-WILSON

Daphne cneorum var. *pygmaea* 'Alba' photographed in Kath's alpine house

Jack himself would have left the matter there. 'We can't let this go,' I said. A succinct question to Kath was enough : 'Have you seen the judging in the bulb classes?' Kath made no comment but looked at the entries and called back the judges. The first and second awards were duly reversed. Even in her earliest days as a show secretary, she was not a person to be intimidated by those most of us might regard as august persons.

The 'gentlemen' recalled by Kath were the most distinguished trio one could imagine : Patrick Synge, a travelling companion of Paul Furse, author of several books, including 'Collins Guide to Bulbs' and, at that time, editor of the Royal Horticultural Society's Journal; Will Ingwersen, doyen of alpine nurseryman, writer and a future president of the AGS; the Earl of Morton, like the others, a stalwart of the Royal Horticultural Society (though none of us was quite sure how much he knew about alpine plants). Of course, Kath did not always manage to convert judges, eminent or otherwise, to her thinking, especially when it came to awarding Farrer Medals. Her technique was none too subtle. She always claimed that when you looked over the entries in any Show, the Farrer Medal plant 'should jump out at you'. For those of us lacking her ability to discern acrobatic alpines, she often presaged consideration of the award with 'Now, you all know what I think.' The cultivation of objectivity in her roles as a show secretary or director was not a quality on which she placed great emphasis.

She was as definite in her opinions about people as she was about plants. For some reason she took a dislike to my friend Lyn Weeks. Certainly Lyn had

PHOTO: COURTESY JOHN DRYDEN

Kath Dryden (centre) at the Chelsea Flower Show 2007 in the company of (left to right) Brian Mathew, John Amand, Nesta Joliffe, Joy Bishop and John Fielding.

the capacity of perceiving someone's weakpoint and making a facetious, though never malicious, remark that let the subject know that the weakness had been spotted. The 'falling-out' occurred after Kath had suffered a slight stroke and took to wearing a black eye-patch, giving herself a distinctly piratical appearance. It may have been something to do with this but what Lyn had said or done I never knew, nor did he. Sadly, she would sometimes project her disapproval of a person on to his or her plants. When a fine pan of *Viola cazorlensis*, which had gained a Farrer Medal for Lyn, cropped up in a conversation, her first remark was 'Of course, the wrong plant got the Farrer.' It was sometimes best to change the subject. The cue for discretion at such times was often Kath's gambit, 'I know he's a friend of yours but I always say...'

Her inspired competence as a grower and the breadth of her knowledge and experience, quite apart from the kindness, generosity and support she showed to me, among many others, always made me feel slightly guilty about criticising her in any way. Though I never told her so, I did not approve of the profligate way in which she dispensed cultivar names, especially when they were applied to plants with which I was associated. I had already selected and

named a couple of what I considered to be the best clones of *Primula allionii* gathered many years ago, but Kath wanted to name the discards. I rather hope. 'Perkie' in particular has vanished from cultivation. She also named several clones from my collection of *Narcissus romieuxii*, whereas I felt only the most distinct, 'Julia Jane', merited a name. This was an inconsequential difference of opinion and I think it stemmed from Kath's unfamiliarity with the amount of variation which occurs among wild plants.

Kath had no experience of plants in their natural habitats, though one might have thought otherwise, such was her knowledge of many localities, built up vicariously through the advice of her many correspondents. I remember a long telephone conversation in which she talked with seeming authority and an impressive amount of accuracy about the populations of *Erythronium* around Gasquet and Patrick Creek in northern California, running over the Klamath Ranges to around O'Brien in Oregon. At times it did get somewhat garbled and she consistently referred to the old stagecoach road, Patrick's Creek Road, as St Patrick's Road. I did not have the heart to correct her. Did it matter?

Whatever her minor foibles, I shall always be indebted to Kath for instantly restoring my respect in the cognoscenti of English alpine gardening. It was long ago at an AGS Bristol Show, the first at which I judged and one of the first in which I had exhibited after moving south from Scotland. Being a beginner, I felt it prudent to listen to my peers before expressing an opinion. When it came to the six pan AGS Medal class, there was a fine exhibit by Peter Edwards. One of my fellow judges pronounced, 'It's a nice entry but that pansy really lets it down.' 'That's no pansy, I said, 'That's a yellow, Austrian form of *Viola zoysii*, grown from wild-collected seed. I doubt if you'll see a more solidly-flowered, 12 inch pan in such peak condition ever again.' What have I landed among, I thought, but, after judging, within minutes Kath Dryden touched my elbow. 'I know what my Farrer Medal would go to. It won't get it, of course', she said. She did not need to mention the name of the plant. It was not the

Fritillaria verticillata, one of a number of Chinese frits which Kath successfully cultivated in recent years

PHOTO: PLANT IMAGES/ C.GREY-WILSON

V. zoysii. We both knew she was talking about my modestly-sized but well-grown and well-flowered *Viola flettii*. How reassuring it was to find someone who not only knew this little endemic of Washington's Olympic Peninsula but had also tried to grow it. I am sure we were the only two in the hall who knew anything about the plant and the challenge it presented. Kath immediately gained my everlasting respect. I cannot remember what the Farrer Medal plant was at that long-distant Show. Certainly it was not my *V. flettii*. It might have been the yellow *V. zoysii* but, even if it was not, as Kath might have said, it should have been. JIM ARCHIBALD

On a personal note

As Kylie is to the world of pop music, or Richard & Judy to that of television, so in any informed British gardening circles, and beyond, referring to 'Kath' was in itself sufficient. Adding her surname was superfluous. She was very widely respected, and more importantly was repeatedly kindness itself, especially when someone was down on their luck, whereupon she was unfailingly supportive, encouraging, and wrote to them at length, often staying up well past midnight to do so, and offering the best of advice. After the 1981 International Conference, she sought out the local helpers and presented them with plants of *Trillium grandiflorum* – a typical act, and one repeated many, many times over with other plants and involving other recipients, whose particular plant interests she kept on file, sending out meticulously wrapped parcels as their wants came her way. She never overlooked such matters.

But equally, anyone who knew her well probably came to blows from time to time, for her unhesitating,

PHOTO: ROBERT ROLFE

Trillium nivale, one of Kath's favourite plants, but far from easy to cultivate

uncompromising, shoot-from-the-hip, whole-hearted approach was at times challenging. As one of her many friends once observed, after a fairly typical set-to: 'I love her dearly, but at the moment I just want to throttle her'.

It was this unaffected, forthright approach that enabled her to mix very happily, unfazedly, and directly with every rank of gardener, from the novice member at the local horticultural society to gentleman nurserymen such as her good friend Joe Elliott, the undoubtedly great but sometimes curmudgeonly and crusty Bertram (E.B.) Anderson, and a succession of RHS presidents (Lord Aberconway once came up to her at a Chelsea Flower Show, and as they surveyed a display of stupendously expensive statuary, said 'What d'you make of these?', to which she replied, without missing a beat, 'Rich men's gnomes'.) Her letters were notoriously, uproariously, almost industriously indiscreet, and as such a breath of fresh air. Written as often as not on lined A4, they had an immediacy that was always stimulating, and plants, together with the people who grew them, always figured chiefly. When she didn't care much what anyone else thought, she would add the aside 'You may quote me'. When providing strictly unrepeatable entertainment, she would write 'Confidential', often underlined, and always with the two or three exclamation marks per sentence with which she sprinkled her frankest correspondence. She could be infuriating, but she was never dull.

There was the noted *Primula allionii* specialist, apoplectic when what was supposed to be one of his plants was named by a recipient and then received an award. 'When 'X' found out he was livid. He said that it should be disregarded, and couldn't possibly be a good form as he had never given away anything worthwhile – well at least he was being honest for once.' And of those who made the collecting of the various clones something approaching a mania: 'Why are some *P. allionii* fanatics so difficult to deal with? They are driving me mad. Another pain in the neck due this morning to get his ration because he heard that I had let some go at the last open day' [After the death of noted breeder Kenneth Wooster, in 1992, she took on his collection, often taking cuttings from the ailing plants, throwing away the roots and remains, then distributing the well-rooted, single rosettes.] She was often roped into helping out friends and acquaintances when they got stuck, but didn't always suffer in silence: 'A bit of a to-do today, planting up 16 window boxes for … [Ed. Name of the gardening magazine withheld!] Another shower who couldn't

PHOTO: COURTESY JOHN DRYDEN

Kath and Maurice Dryden at the 2001 AGS International Conference

organize a booze-up in a brewery'. And after a lecture by a noted *Trillium* expert: '*Technically* the offering was excellent. But I didn't take much to the person delivering it (think that the feeling was mutual). Supposedly nobody in Britain can grow North American orchids!!!' [Kath grew a number with conspicuous success, winning a Farrer Medal with *Cypripedium kentuckiense*, and cultivating *C. californicum* especially to a very high standard for many years: as long ago as 1968, her plant of *C. reginae* gained a First Class Certificate and its transport home caused a traffic jam in Westminster.]

While she was a tireless lecturer, deliberately provocative but always amusing, she was a sometimes reluctant participant, 'Roped into giving a lecture tonight, mainly because I have my name in the local papers. A grim bunch of veg growers; they aren't going to get much'. And she often viewed those who went on flower holiday jaunts bemusedly: 'Why all the moans from the luxury party going to New Zealand in late December? Nobody could persuade me to leave my plants for three months at any time, let alone mid-winter.' This devotion to her garden doubtless in part explains her rapid decline once incarcerated in a Harlow hospital; it's a letting go that one witnesses time and again, and one which she recognised, as a letter in the wake of the Great Storm of 1987 attests: 'Sadly old Frank Waley (who gave me so many nice little daffs) has died. His garden at Sevenoaks, which he built from scratch over 60 years, was wrecked in the storms, and at 94 he just couldn't face life without it, and lost the will to live. So now I just have to grow his plants. The garden was a sight to behold in spring: thousands upon thousands of *Narcissus asturiensis* and *N. cyclamineus*, and lots of little bastards.'

Staunch monarchist that she was, the news that HRH the Prince of Wales was to be awarded the Victoria Medal of Honour (she had been a holder of this singular horticultural accolade for 25 years), which became common knowledge on the day that she died, would have provoked one of her many trenchant comments, followed by much laughter. (The presence at the above Show this year of something billed 'The Modern Rock Garden', consisting of interconnecting squares on several levels, with a stark grey surround, and severely symmetrical plantings of small sempervivums, clipped conifers and the like, nine to each box, arranged like the markings on a dice, with synthetic topdressings and outbursts of garish hybrid azaleas to complete the statement, would also have caused her to squawk, and conjure up a few choice words.) Her

PHOTO: HARRY JANS

Cypripedium kentuckiense

own garden was the antithesis of such impractical, unsympathetic displays.

I knew her for 30 years (she was a member of the AGS for 50, and one of its most stalwart supporters), our correspondence initiated after I admired a pan of *Anemone* x *lipsiensis* (*nemorosa* x *ranunculoides*), which she exhibited at an April 'Main Spring' Vincent Square Show. She was a consistent, generous exhibitor, here in particular over many years, and its onetime Show Secretary. She was also a key figure at the Early Spring Show, held in several parts of Essex after its exodus from central London, but now settled at Harlow ('If it travels any further, we might as well hold it in her back garden', one exhibitor wryly noted). Certainly her Sawbridgeworth home, 'Berries', was almost within walking distance, and parties of showgoers would travel in convoy to admire her plantsman-style garden and its collection of well-organised alpine houses, in which you could expect to find any number of rarities in an ever-changing cast, all grown to the highest of standards. *Primula allionii*, trilliums (a stylised image adorned the order of service at her funeral), *Daphne*, pleiones and hardy orchids of every persuasion from cypripediums to dactylorhizas, erythroniums, lewisias, fritillarias, *Corydalis*, *Viola pedata* (on one visit, a small greenhouse was full to bursting with 3 in. pots of these, both on the staging and on the floor), *Cyclamen* (the cross *C.* x *drydeniae*, between *C. coum* subsp. *coum* and *alpinum*, is particularly associated with her, and dates back some 40 years), hepaticas, *Narcissus*, *Ranunculus asiaticus* (a mainstay of her non-competitive display at the Alpines

PHOTO: PLANT IMAGES/ C.GREY-WILSON

Anemone x *lipsiensis*

81 Conference, where she was awarded the Farrer and Forrest Medals for *Rhododendron keiskii* 'Yaku Fairy'), *Paris* and lilies: her enthusiasms were legion.

Starting in 1982, she distributed many of these plants via a limited circulation list, Manavlins, which would drop through the letter box in late winter, and again at the end of summer. The range of plants offered over the years is impressive, and in many cases their provenance was meticulously recorded; a 1985 example has *Crocus banaticus* 'Rosamund' ex E. A Bowles, *Crocus vallicola* from a Paul Furse introduction, *Fritillaria elwesii* courtesy of Peter Davis, *F. messanensis* from Vic Horton, *Merendera sobolifera* from E.B. Anderson… and *Erythronium dens-canis*, with the po-faced comment, 'Pedigree stock – Woolworths 1950'. As with all the best catalogues, the descriptions aside, there was often a great deal of information to be gleaned on how to grow the listings, whether she was tackling the new wave of Chinese fritillaries (whose cultivation she helped

PHOTOS: PLANT IMAGES/ C.GREY-WILSON

Cyclamen x *drydeniae*, a hybrid identified in Kath's garden and named in her honour

to pioneer), dwarf trilliums such as *T. undulatum* ('Not easy, needs deep planting in very acid, open soil (it likes bark). Late into growth and the last to flower here, at the end of May.'), *Calochortus* ('Keep dry from flower-fall until the following February or March. The flower power from such small bulbs is phenomenal. A bulb lasts about 5-7 years here. They must have full light and hate being under glass while in spring growth.') or cypripediums, which she patiently grew on from divisions, and recommended feeding with half-strength Phostrogen or Chempak orchid food.

Many Members will have benefited directly from her incessant generosity, and many more, even if they never met her, will have been spurred by her example, for she sought at every turn to encourage others to grow the plants which gave her such pleasure throughout her long and busy life.

ROBERT ROLFE

Crocus vallicola

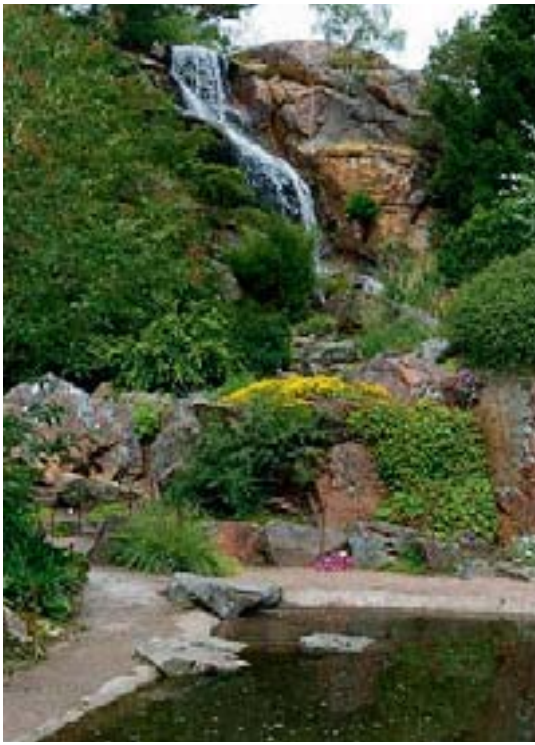
ALPINE ANTHOLOGY

by Castilleja

Scandinavia 2008: Gothenburg Botanic Garden

It is not easy to select a route to Norway if travelling by campervan. A sea crossing seems the obvious answer, the journey taking about 16 hours, but it is also an expensive option and the time taken to reach the ferry port must be taken into account. The direct service from Newcastle leaves early in the day, so this adds a night stop in the UK to the journey. As we wanted to visit the Botanic Garden in Gothenburg it seemed as easy to go via the Channel Tunnel, with the added bonus of a visit to relatives in Belgium on the way. It took three days to reach Gothenburg, though faster drivers and those prepared to drive for longer hours could easily make it in two days. This allowed us to spend a full day in the Botanic Garden. Early arrival meant that we were able to find a space in the limited parking area outside the garden (not too expensive!). Admission to the garden is free but a donation is suggested and it is very cheap at the recommended rate. There is also a small charge for entry to the glasshouses: these are mostly quite similar to those found in other botanic gardens except for the alpine area with its tufa walls full of saxifrages, campanulas, dionysias and various other 'difficult' plants. All the glasshouse areas were very well kept and the plants looked extremely healthy. A particularly striking area was that devoted to insectivorous plants which seemed to be something of a speciality. Sarracenias were also planted outside, including one area in the rock garden.

The first thing you are likely to see as you enter the garden is a display garden that was created for the Chelsea Flower Show and commemorating the life of Carl Linné (Linnaeus). It was interesting, if rather modern for our tastes. To the left of the gate there was the shop and sales area: the latter



The waterfall on the rock garden at Gothenburg

PHOTO: RICHARD HORSWOOD

would have been a real temptation if seen at the end of the holiday but the time span involved and the possibility of having the plants confiscated in Norway (which seems to have strict rules) kept hands in pockets. Some small, apparently insignificant borders next to a house beside the sales area proved anything but insignificant to a lover of alpines. Plants here included dwarf penstemons, oxalis, dianthus, campanulas and even junellias and a cactus, *Maihuenia poeppigii,* that reminded us of Patagonia.

There are formal gardens, some only just planted in June, but pictures showed that the plants were likely to grow as much as two metres in the next month, no doubt the effect of almost continuous light. There were also play areas for children, an impressive vegetable garden and formal borders (including one devoted to dahlias). The garden, however, has more than its share of areas devoted to alpines. These included a covered but open-sided area devoted to bulbs, most well past flowering during our visit. Some raised beds contained familiar plants such as *Saxifraga* 'Southside Seedling', all doing very well. On our way up to the rock garden we passed through extensive woodland gardens with a wide range of understorey plants. Fern lovers would feel at home, as would those who like bamboos and shade-loving shrubs. These included a substantial collection of rhododendrons which, once again, were past their best. A stream provided damp areas where rodgersias were in full bloom and there were some good stands of lilies.

PHOTO: RICHARD HORSWOOD

Part of a tufa bed at Gothenburg Botanic Garden, with *Verbascum dumulosum*

The rock garden is immensely impressive; as good as any we have seen, including those at Wisley and Edinburgh. It has the advantage of a natural setting as it was built around an existing rock outcrop, although the waterfall coming over it is artificial. The fact that *Gentiana lutea* and *Digitalis grandiflora* in full bloom did not look out of place gives an idea of the scale. There were too many good and unusual plants to mention, or remember. Unusual plants included *Delphinium oreophilum*, *Dicentra peregrina* and *Centaurea* x *rogerae*, while *Lamium armenum* is a plant I struggle with in the alpine house so perhaps I should try it outside, as they have. *Dianthus amurensis* and *Allium narcissiflorum* were other plants that caught our attention. An area towards the top of the garden featured a collection of xerophytic plants, including a number of cacti, growing quite happily outside.

Descending into the more shaded area adjacent to the woodland we saw masses of *Cypripedium reginae*, while in another area shortias seemed to be acting as ground cover. The woodland areas contained a mixture of native and exotic trees and shrubs and gradually merged into a nature reserve which, unfortunately, we did not have time to explore. As has been indicated we did not see the garden at its best, which we think would be during the spring when the primulas, trilliums, shortias and,of course, rhododendrons would have been blooming, together with most of the large collection of bulbous plants.

RICHARD HORSWOOD

Bee Orchids

The Bee Orchid, *Ophrys apifera*, is one of our most delightful British natives, being locally frequent as far north as Cumbria and Durham, with scattered localities in Ireland. It is found in meadows and other grassy places, in open scrub and on sand dunes, occasionally in open woodland, preferring base-rich or calcareous soils and flowering generally in June and the first part of July. Many find it frequently appearing in lawns and the diligent gardener will spot the fleshy rosettes of leaves, which appear in the late autumn, and carefully mow round them. Yet, at the same time, the Bee Orchid has a reputation for fickleness, appearing in considerable numbers in some seasons, but few or none in others. Even when it does make an appearance, it may not keep to the same part of the garden, and the same happens in the wild.

In my own garden I counted more than 50 specimens in flower two years ago. There were rather fewer last year while, during the current season, I can only find three, and that after a prolonged search. In longer grass, as in my meadow, plants remain hidden until they come into bloom, then the bright pink sepals and the intricate reddish brown 'bee' lip, with its pattern in blue, gold and yellow, are clearly visible. The British plant is rather uniform over its range but in other parts of Europe *O. apifera* varies considerably in flower size and in colour; the sepals can be white, greenish white, pale to deep pink or purplish pink, while the base colour of the lip can vary from greenish

The Bee Orchid, *Ophrys apifera*, in a newly-planted wood in Norfolk

A white form of *Ophrys apifera* photographed in Norfolk

PHOTO: PLANT IMAGES/C.GREY-WILSON

to various shades of brown to deep chestnut-black.

A short five minute walk from my house, villagers in Kenninghall, Norfolk, planted (as part of a community project) a substantial wood of native species some eight years ago on what was formerly arable land. Two thirds of the plot (some eight acres in extent) was planted with trees, the remainder laid with paths and meadow. Three years later bee orchids started to appear in small numbers, all with the typical pink sepals. Then two years ago a few appeared in a different spot, with white sepals and a contrasting pale greenish yellow lip. Last year, to my astonishment, I counted more than three hundred bee orchids in a fairly confined area, but more astonishing still the majority (I estimated some 85%) were of the white-flowered variant.

I view orchids rather like the cuckoo, swallows and martins that appear in the spring; it is a joy to have them around and I feel that something is missing until they arrive. In Japan and other countries the arrival of the swallows is considered great good fortune, a symbol of good luck and prosperity. Perhaps we should view bee orchids in the same light. C.G-W.

Oxalis perdicaria – an update

Following my note on *Oxalis perdicaria* in last June's 'Alpine Anthology' (*The Alpine Gardener* 76: 158-9), I received an email from that doyen of daffodil

growers, John Blanchard. He was able to throw more light on the subject.

He wrote: 'At the Dorset AGS Group we have a monthly raffle of plants donated by Members. In 1991 I won a small packet labelled *Oxalis mallobolba*. I suspected it had been contributed by my long-standing friend Tom Norman."
He went on to say he had subsequently exhibited the plant at an AGS Show and that it had been awarded a Preliminary Commendation (PC). Checking the relevant RHS minutes revealed that on 10th October 1992, the Joint Rock Garden Plant Committee awarded a Preliminary Commendation to an *Oxalis* sp. exhibited by J. W. Blanchard at the AGS Horsham Show. John was asked to give it a cultivar name and proposed 'Cetrino', the Spanish for 'lemon coloured'. Unfortunately, there was no subsequent write-up in the *Bulletin* but undoubtedly John's plant and the one I received in August 1996 from Tom are one and the same.

So what is the plant's true identity? We fast-forward to 19 September 2007, when the RHS Advisory Panel on Nomenclature & Taxonomy deliberated on South American *Oxalis* and ratified an earlier recommendation that plants grown as *Oxalis lobata* and *O. perdicaria* be considered one species. As the latter was an earlier name (according to the committee) it has priority.

The committee then went on to say:
'*Oxalis lobata* is a synonym of *O. perdicaria* but is a distinct clone and so would be worth recognising with a cultivar name.'

As there is thought to be only one clone of the deep yellow form of *O. perdicaria* in cultivation the committee thought it worth giving '*O. lobata*' a clonal name [*Ed.* A modern Latinised clonal name such as 'Lobata' is invalid under

PHOTO: PLANT IMAGES/ C.GREY-WILSON

Narcissus 'Emcys', a fine hybrid with *N. cyclamineus* in its genes

the current Code of Nomenclature].

So, we seem to have two distinct plants here, *Oxalis perdicaria* "Lobata" and *Oxalis perdicaria* 'Cetrino'. Not, nurserymen & exhibitors please note, 'Citrino' or (*vide* caption to the illustration in the June 2008 *Bulletin*) 'Citrina'. The epithet *perdicaria*, incidentally, means pertaining to, or resembling, a partridge. Perhaps in Chile the oxalis forms part of its diet?

One further thought. Where does this leave *Oxalis mallobolba*, the name on the packet John won at his local group's raffle? TONY RYMER

The joy of cross-pollination

There must be many Members who have a good collection of bulbs. Often a particular genus is favoured by a devotee, so we have 'galanthophiles' and 'croconuts'. I'm not sure there is a collective noun for narcissus fanciers, although I have often been referred to as 'dafft'!

So, have those of you with collections considered a bit of hybridising of your own? It is great fun and simple to do, requiring only the patience to wait the three or four years for the first ones to flower. After that you should have new ones flowering each year and there is nothing like the excitement of seeing the first bud opening on a new hybrid.

As a collector of narcissus species and hybrids, my pleasure is in looking at two different daffodils and trying to guess what the result of their union would be, then doing the cross and waiting four years to find out whether I was right!

My method is to select the female parent and carefully remove the stamens and the coloured parts of the flower. This will, I hope, render the flower unattractive to pollinating insects and do away with the requirement of placing a bag over the flower. The male parent is selected and a ripe (with loose pollen) anther removed with forceps and brushed against the stigma of the female flower so that the pollen is transferred onto it. The flower is labelled with the names of the parents and it is hoped, in due course, that seeds will be produced. Many different narcissi will successfully cross with each other but I have only once had success with a trumpet type crossed with a hoop petticoat. This produced my little *N. hedraeanthus* x *asturiensis* hybrid, which only its mother could love and I do.

PHOTO: PLANT IMAGES/C.GREY-WILSON

Narcissus cyclamineus

Narcissus triandrus, an important parent of many small hybrid daffodils

A variation in the technique is needed if using species like *N. rupicola* and *N. watieri*, which have the anthers attached to the tube above the stigma, as female parents. These will self-pollinate very easily, which I learned after six or seven years of wondering why my hoped-for hybrids all looked like their parents. The trick is to wait until the bud is almost open, then grasp the two sides of the flower gently and pull them apart, leaving the stigma isolated in the middle and the unripe anthers attached to the two halves of the tube, which is left attached to the ovary. In this way the stigma can be artificially pollinated and the pollen used later on, when it ripens.

Narcissus cyclamineus is a good parent and produces some charming hybrids which are very popular at the moment, and *N. triandrus* invariably passes on its beautiful hanging head.

There are some well-known examples of hoop petticoat hybrids such as 'Comoro', 'Nylon' etc and anyone who has seen the *N.* x *susannae* types between *N. cantabricus* and *N. triandrus* will surely be inspired to try to recreate these.

The majority of your crosses will probably turn out to be not worth keeping, or identical to the seed parent, but occasionally you will be honoured with the gift of something unique and beautiful. ANNE WRIGHT

Miniature narcissus clones

In the last Anthology I wondered about the naming of miniature *Narcissus* clones. John Blanchard answers:

'There is a slight problem regarding what is a miniature daffodil, since there

Two fine miniature daffodils: *Narcissus* 'Cedric Morris' and *N.* Bowles's Early Sulphur'

is no generally accepted definition. Schedule-makers for shows have to make their own or leave it to the judges' discretion. The RHS require the flower to be no more than 50 mm diameter with no stem height limit (RHS competitions are nearly always for cut flowers). The Daffodil Society (UK) and the American Daffodil Society rely on an 'approved list' but that does not cater for numbered seedlings. I am not sure what the rules are in the southern hemisphere. The AGS (perhaps wisely) does not attempt a definition, but I am glad that they no longer use the term 'dwarf'.

'Anyone can name a cultivar but the International Daffodil Register (compiled by the RHS as International Registration Authority for Daffodils) classifies more than 27,000 cultivars and daffodil breeders all over the world are encouraged to register the names of their flowers before they are distributed so as to avoid duplication of names. It has worked well for over a century. Incidentally the Register also includes a list of species and intersectional hybrids with Latin names, showing botanical names which are accepted as valid by the RHS (and by RBG Kew), which is of great benefit to those who want to get the names right.

'Registration is dealt with by the International Registrar, Sharon Macdonald at Wisley. It is not a complicated process and costs nothing. No committee is involved in the actual registration. I am not familiar with most of the Australian cultivars mentioned in the March Anthology, but 'Angel's Whisper' is a fine flower and one of my favourites.'

PHOTOS: PLANT IMAGES/C.GREY-WILSON

Wisley in April

During April I paid a brief visit to the RHS Garden at Wisley for a special Joint Rock Garden Plant Committee meeting. We were very warmly hosted by the staff of the alpine department and had time for a quick look around the alpine houses which were bursting with colour and full of interest. Because of the meeting, time was rather limited so plant viewing was necessarily a speedy affair. It was good to see the rock garden at last reclaiming its glory of days gone by: all those involved who work in the alpine houses and in the rock garden should be commended for all the effort that has gone on in the past two years especially. The results are self-evident and highly encouraging; hearty congratulations!

Perhaps I was most pleased to see the alpine meadow at its pristine best. Indeed it looked every bit as good as I remember it more than forty years ago. The drifts of *Narcissus bulbocodium* were a great delight, while here and there there were also patches of *N. cyclamineus* and *N. triandrus*, as well as other bulbs. One heartily wishes that there were more alpine meadows in the country but the Wisley one is exceptional in every way. Of course the sloping site with its damp meadow is the key to success. At the same time finding the right selection of *N. bulbocodium* is important, for most, in my experience at least, do not take kindly to naturalising as they have done at Wisley. C.G-W.

Lysichiton americanus on the fringe of the rock garden and alpine meadow at RHS Wisley

PHOTO: PLANT IMAGES/C.GREY-WILSON

Another view of the alpine meadow at RHS Wisley

Moonwort, a native alpine fern

Moonwort (*Botrychium lunaria*) is a fascinating and elusive native fern found from sea level up to 1020 m in Perthshire. However, it is most often found at altitudes greater than 300 m. This species is unusual and differs from a 'classic' fern in that its preferred habitat is short-turf grassland, generally well-drained and often base-rich to strongly calcareous. It also favours mountain ledges and areas free from grazing animals such as sheep, deer and rabbits. This is one of the reasons why it is regarded as elusive

It emerges from early May in most parts of this country, and this timing coincides with the 'turning out' of sheep and the start of the breeding cycle of rabbits, both of which take a heavy toll on the newly emerging fronds of this delicate little plant. Moonwort is a rhizomatous species that begins life as an underground prothallus, nurtured by a mycorrhizal association. Eventually the small green spikes of the fern emerge above ground, comprising a single stem on which is a sterile blade to one side and a cluster of fertile sporangia extending vertically. According to the literature, plants can reach up to 25 cm although, in general, they rarely exceed 10 cm. The sterile frond has a number of near-opposite half-moon-shaped leaflets that give rise to its common name of Moonwort. This plant has associations with myth and legend and the shape of the sterile

PHOTO: BARRY WRIGHT

Moonwort, *Botrichium lunaria*, a small British native, difficult to spot but nonetheless delightful

blade has been linked with the plant's legendary ability to open locks and to cause horses to shed their shoes.

The early mycorrhizal association seems to persist into adult life, for a healthy colony generally needs to grow within a turf containing organic matter that is constantly being broken down by the soil fungi associated with the adult Moonwort. Hence, this is probably a species best observed in the wild rather than cultivated in gardens.

The optimum time to attempt to find this plant is from mid-May onwards. One of the best places to see Moonwort without exerting too much effort scrambling up to alpine ledges is to visit the higher moorland of the Pennine Dales and the North York Moors and other similar habitats. In these areas it is quite likely that Moonwort will be found along the roadside verges on unenclosed high sections. At 300 m and above, the roads are generally unfenced with a narrow band of short, grazed turf along the verges before the heather moorland begins. In this narrow belt the conditions are often ideal for Moonwort and it can often be found, if you are there at the right time. Unfortunately, in this situation it rarely gets to its published height of 10 cm or more and in some cases is restricted to 3 cm or less, as growing any taller than this it is likely to attract the attentions of sheep or rabbits.

Ever since the foot and mouth outbreak of 2001 (when restrictions to access countryside meant that walking along roads was one of the few opportunities available for field meetings), the Yorkshire Group of the British Pteridological Society has been undertaking surveys both in the Pennine Dales and North York Moors to map the distribution of Moonwort, trying to discover the optimum time for conducting surveys and investigating its emergence and dynamics in short-turf habitats.

So, depending upon your ability, energy and enthusiasm, this rare little fern can be located during May and into June in its favoured habitat of upland moorland roadside verges and alpine ledges. The challenge is to find it, but once discovered, this little treasure is an attractive member of our own native alpine flora, well worth taking time to locate and admire.

BARRY WRIGHT

A part of the AGS West Yorkshire exhibit at Harrogate 2009

PHOTO: RICHARD HORSWOOD

Roofing tiles wall

A major talking point at this year's Harrogate Spring Flower Show was the crevice wall in the Alpine Garden Society's display garden, designed and built by the West Yorkshire Group. Constructed using old roof tiles, it proved to be the most photographed element of the exhibit.

The brief was to create an interesting and innovative feature, easily achievable by all, built from readily available materials (either reclaimed or newly purchased from a builders merchant) and requiring a minimal amount of space. It is amazing how many visitors had a stack of old tiles awaiting disposal and how many, after a brief chat, seemed inspired and determined to reprieve and recycle them in their gardens.

For show purposes the wall was supported with a 9 mm plywood back, set at an angle so that the wall had a 'batter', the outward-facing side on a slope, receding from bottom to top. To combat drying out during the show period, (some nine days from build to dismantlement), strips of capillary matting, half the width of the tiles, were soaked in a bucket of water and laid on top of the tiles; the planting medium, two parts John Innes Potting Compost No. 2 to one part fine grit, rested on top of this. Plants were then inserted in both the horizontal and vertical seams, ideally made at least 2.5 cm wide, as the wall was built. The 'batter' allowed for a lip of 12 mm so that the gritty planting mixture was retained. If it were to be constructed in the garden, over time these seams and

indeed the tiles would become covered in mosses and lichens, this living mortar binding it all together. Ideally, it would be built either against a wall or into an earth bank. However, it would still be necessary to incorporate capillary matting, possibly extending this into the bank to absorb moisture from the soil, or into a gravel backfill against a wall, to facilitate ease of watering by hand. No dry stone walling expertise is necessary, as the more random and higgledy-piggledy the courses are, the more attractive the end result. The tiles can be laid horizontally or vertically, or in a combination of both, offering perhaps the option of a diagonal seam at some point: the possibilities are endless.

The wall was planted with subjects suited to a vertical position. Sempervivums in all their shapes, sizes and colour variants were an obvious choice: *S. arachnoideum* in variety is especially attractive, as are saxifrages, in this particular instance *Saxifraga cochlearis* and *S. longifolia* were used to good effect. *Lewisia cotyledon* is a good sculptural plant and gave a striking and vibrant show of colour. Three splendid ferns were also used, *Asplenium trichomanes*, *Woodsia intermedia* and *Polystichum lonchitis*.

PAUL WADE

One year on

The first year in the life of my pile of sand has been fascinating. It has been a joy to wander round the 'mountain' each day, scanning around to find the most recently emerged shoot and try to guess what it might be. My brother planted most things, so I had little idea what was where. I now have several plans, one showing the the locations of my snowdrops. I found them all, though *Galanthus* 'Lady Elphinstone' and *G. nivalis* 'Sandersii' didn't flower.

Another plan is a labelled aerial view from the bedroom, with the early bulbs all 'mapped'. There are so many that there wasn't room for all the labels, so there is now a third! Fortunately, serendipity has worked well, with bulbs planted over others by accident flowering in different seasons (e.g. *Brimeura amethystina* flowering in late May as the leaves of *Anemone pavonina* and *Sternbergia lutea* die down).

A few plants were clearly unhappy, principally a small group of Asiatic *Fritillaria monantha*. Yet *F. walujewii* and *F. yuminensis* flowered well and formed seedpods amongst the dwarf rhododendrons, again in raised sand but shaded and surrounded by the Swedish peat blocks. Some plants have been so happy in the 'mountain' that I have removed them already: *Sisyrinchium*

The 'mountain' from the south side

PHOTO: ROSEMARY COX

Fritillaria davisii with *Tulipa stellata* var. *chrysantha* and other plantings in Rosemary Cox's young garden

striatum and *Asphodelus acaulis* both grew huge! The first I split into four chunks (I can't throw healthy plants away) and tried them in other places, two succeeding and flowering in the front garden where I am trying to establish a 'dry' garden. *Asphodelus acaulis* has a pretty, palest pink, star-like flower but the space that the plant filled was much larger than the short-lived flowers, hiding amongst the dark green foliage, warranted. Instead I am growing *Oenothera acaulis* in its place, with *Lilium formosanum* var. *pricei* replacing the *Sisyrinchium*.

Bulbs are recovering from two year's neglect in pots. *Crocus mathewii* in both pale and dark purple-centred forms has excelled, setting lots of seed, whilst all the narcissi flowered well, creating a sequence from January right through to late April with autumn and spring crocuses extending the season. An increasing clump of *Trillium nivale* added to the earlier narcissi.

Pink dandelions (*Crepis incana*) have settled in to give summer colour, but I've had to move one out to another sandy area by the wall, and *Phlox sibirica*, with its beautiful low pink flowers, will need constant trimming to prevent it from taking over. *Daphne petraea* 'Grandiflora' looks healthy but has not flowered and neither has *Serapias lingua*. Presumably last summer wasn't warm or dry enough.

The star performers have been *Erigeron* 'Canary Bird' (flowering constantly throughout last year until late October; this year its large mat has been golden since early April), with *Rhodohypoxis* in a variety of colours now flowering, creating a summer display. The greatest thrill was to see a small pink 'frit' flowering at the top of the 'mountain' in early March: I had forgotten that I'd put in some young bulbs of *Fritillaria alburyana* in last summer, from seed sown a number of years ago. After surviving the winter well, two flowers were produced. I might now risk one of the mature bulbs, at present in a pot, and see what happens! ROSEMARY COX

Axe Vale Festival

Most counties have County Shows, usually rather smart affairs involving crafts, agricultural competitions and displays, flower shows and nursery sales, cookery demonstrations, and a myriad of other events to stimulate public interest.

As well as these highly organised events, there are often smaller shows dotted around the county catering for local interests, from village shows to area festivals, in a similar vein to the county show but on a much reduced scale.

In Devon, one such event is the Axe Vale Festival, based just outside Axminster; a show which stresses country crafts and skills, and which is spread over several fields, with marquees and tradesmens' tents advertising plants, art displays, antiques, floral displays, catering, machinery and countryside activities.

The AGS Exeter Group has for many years been involved with putting on a display of an alpine-related activity at this festival, almost always being awarded a Gold or Large Gold for its efforts, despite the July date. Getting a large number of suitable alpine plants has sometimes been a problem. These displays have usually involved building some form of alpine garden, the object being to show the public how rock plants can be grown in a garden setting and at the same time aiming to stimulate recruitment to both the local and national bodies. Members of the Exeter Group are on hand to talk to visitors, hand out leaflets and sell plants from the members' plant table, and the response from the public has always been most gratifying for those involved in the construction.

2008 was no exception and the Exeter Group put on a display which again was awarded a Large Gold. The display was the brainchild of Bob Dark, who is the mastermind behind all the annual displays and who always comes up with different ideas, so that

PHOTOS: ROGER STUCKEY

Beneath the staging; Axe Vale Festival exhibit

the same theme is not repeated each year. Ably assisted by his wife Diana (the two are joint show secretaries for the South West AGS Show), he came up with the idea of an alpine house showing the techniques involved.

The site was in the floral marquee, surrounded by other displays from commercial sources, such as sweet peas, sempervivums, orchids, cacti and carnivorous plants, as well as show gardens. The Exeter Group site was three metres square, and Bob, with a little help from some friends, had built a mock alpine house to fit this space. This was made out of 5 x 5 cm pieces of timber, with 2.5 x 5 cm wood for the windows. No glass was involved and the whole construction was nailed together. This was erected at his home, then taken to the Festival in sections and re-erected there. The roof was 3.2 m high with windows running both sides for the length of the house, windows similarly arranged along both sides at bench level and more at ground level. There were doors at each end and a concrete slab path ran from door to door, with members of the public encouraged to walk in to one entrance and out of the other. On one side of the alpine house was a sand bench with plants in clay pots sunk into the sand, while the other side was slatted, with a potting area at one end. Underneath the benches, sand plunge beds contained shade-loving plants and 'resting' bulb pots, while on the benches sat typical rock plants, varying from bulbs to cushions to dwarf shrubs. A fan was suspended from the roof to stimulate air movement. ROGER STUCKEY

The alpine house at the Axe Vale Festival

PHOTO: RICHARD HORSWOOD

Oops times Two!

Your editor is occasionally slapped over the knuckles for his misdemeanors. While some emails (rarely a letter nowadays) are polite and constructive and even complimentary, others are abrupt, sometimes even rude. Several have been received lately: into which category they fall I leave to you, the reader, to guess. Both those listed below concern the June 2009 issue.

The photograph of a Scottish mountain (on p. 140), 'as anyone could have told you', is not Suilven to 'which it does not bear a passing resemblance', but Cul Mor. It is still a very fine mountain, whatever its name.

The glorious photo of a Turkish *Scilla* (on p. 186), captioned as *S. sibirica* subsp. *armena*, is incorrect. It is, apparently, more likely to be *S. sibirica* subsp. *caucasica,* or even an undescribed subspecies. Still at least the species was correct!

ALPINE GARDENING

Compiled by Vic Aspland

Seed cleaning made easy

I have always been very enthusiastic about the annual Seed Distribution. Indeed, it was the sight of an AGS Seed List that first introduced my wife and I to the Society, and persuaded us that it would be worth joining. For the first few years, a list of 'wants' was compiled through the year. The presence of the eagerly anticipated envelope on the doormat when we arrived home from work was the cause of a hastily-bolted meal, and an evening spent combing through the thousands of entries. We never had any problems with making 'alternative' choices: all the numbers on our list represented 'first choices', although as Janet's taste in plants differed from mine, a certain amount of negotiation was necessary! Quite soon, of course, we wanted to support the Distribution in other ways; we volunteered to packet seed, and began to harvest what little seed we could, in order to donate it. In those days, the former process involved a hermit-like existence from December 26th to almost New Year's Day, in which we packeted from breakfast to bedtime; visitors were not encouraged. My urge to donate clean and viable seed

PHOTOS: VIC ASPLAND

The seed cleaner's toolkit

is partly driven by memories of some of the horrors perpetrated by donors in the 70s and 80s: the A4 envelope bulging like a pillow, and labelled *Dryas octopetala*. Careful combing through the mass of hairy fluff would occasionally yield enough seed to fill a packet or two. In some donations of primulas, there would be so much crushed seed pod, that it was difficult to tell whether or not there was any good seed present. But much, much worse were the wet, sticky packets containing berries, by this time decomposing and fermenting. Most seed packeters from this period will have similar tales of such horrors. All of these had to be dealt with for the benefit of the order-picking team and the recipients. These days, such sendings are dealt with more firmly! My procedures for collecting and cleaning seed have gradually evolved over the years, so I now have a few standard methods which I find easy and convenient to use. The photos accompanying this article follow the text in sequence.

The seed-cleaners toolkit

The permanent kit includes a range of tea strainers and flour sieves having different hole sizes, which can be obtained very cheaply by shopping around in chain stores, and a straight-bladed knife. These are supplemented with at least two sheets of newspaper turned up at the edges to stop seeds rolling off, two sheets of white A4 paper ditto (perhaps gleaned from the junk mail input, but not too shiny), paper bags and disposable gloves, of which more later.

A promising crop of *Tulipa tarda*

Tulipa tarda seeds are neatly stacked in three rows

Seed extraction

Seed extraction continues

Seed collecting

Ideally, I like to collect seed pods in the evening following a dry day, either on the day that they first open, or even better, on the day *before* they open. (This choice is based on observations of how seed pods mature.) If space permits, the pods can be spread out on paper to dry further and open. This stage can be informative: the flat seeds of *Lilium, Nomocharis, Fritillaria* and many *Tulipa* are neatly stacked in three ranks. In the case of *T. tarda*, the seeds are also separated by hair-like appendages within the pods. I usually put the capsules into a paper bag, and store them in a dry, shady place. After drying for a few days, the seeds can be released by tapping the bag. I hold the bag by the neck in my right hand and swing it against the palm of my left. The degree of vigour is the minimum needed to release the seeds, whilst breaking up the seed pods as little as possible. **This is very important**; the more the seed pods are broken up, the harder you will have to work at removing the dross!

Tulipa tarda capsules, chaff and cleaned seeds

Iris reichenbachii; separating the dross

The large, the flat and the knobbly

There are several ways to deal with larger seeds. The flat ones (e.g. *Lilium* etc) often contain a proportion of sterile seeds; just skin with no embryo. One of my correspondents uses the swirl and blow method: the seed is swirled around in a large soup plate and she then gently blows across the top. A German member uses a dustpan and gently tosses the seed upwards whilst also blowing across the top. In each case the light, sterile seed is blown away. I have not got the skill to use either of these methods; either I do not remove all of the sterile seed, or half of the good stuff ends up on the floor. In addition, it makes an amazing mess; I was recommended to use the procedure in the garage only! The easiest method for me is to tip the seed into one corner of an A4 sheet of paper and move the good/bad seed into two separate piles with my fingertip. This sounds incredibly laborious, but can be done while listening to a radio programme, and only takes a few minutes per batch. Pictures show the procedure with knobbly iris seed and cleaned tulip seed.

Gladiolus italicus seed capsules

Gladiolus italicus, the first stage

Seed rolling

The final polish to remove dust

Rock and roll for round seeds

A very large proportion of seeds are, if not spherical, at least round enough to use the rock and roll method. These include *Androsace, Crocus, Chionodoxa, Dodecatheon,* many *Primula* species and many other popular genera. I release the seed from the pods in a paper bag as above, then tip everything onto an A4 sheet of paper. *Gladiolus italicus* is a typical example. I pick out the empty pods and large fragments if they have broken up. I then hold the sheet above the second sheet, tip it cautiously towards me, and slowly rock it to left then right. The round seeds roll down the sheet following a zig-zag route and onto the second one, while the flatter, sterile seeds and finer particles remain on the sheet. If necessary, the process is repeated several times, the seed becoming cleaner at each pass. Sometimes 'rollable dross' accompanies the seed; this can be removed using a tea strainer. This method is applicable to all round seeds, but the larger the seeds, the shallower the angle needed to get them rolling.

Sifting for smaller seeds

With seeds in the small to minute size range, the assorted tea strainers

Ramonda myconi 'Rosea' harvested capsules

Ramonda myconi 'Rosea' plonking

Ramonda myconi 'Rosea', first sieving

Ramonda myconi 'Rosea', tap, tap

Ramonda myconi, job done

(and sieves) come into their own. The whole contents of the paper drying bag are tipped onto a sheet of paper first and the pods and large fragments are removed. The rest is poured into the strainer with the largest holes first, which is gently tapped over a sheet of paper. What passes through goes into the next finest, and so on. At some stage in this progression, I usually find that one of the strainers contains good, clean seed.

Berries and pulpy fruits

These are not welcomed by the Distribution Seed receivers in their raw state (the fruits, that is), and need to be cleaned. If you intend to sow your own seed, it can also be better to clean it first, as the flesh may contain germination inhibitors. I illustrate *Daphne* berries as an example, as skill and judgment are needed here too. I aim to pick them on the day *before* the blackbirds decide that they are ripe enough to be edible, then store them in a cool, dry place, where they remain until they become soft. I then don disposable gloves and operate the squidge method. This highly technical term describes the process of placing each berry in turn onto a double layer of soft toilet tissue and gently pressing on one end. If the berry is at the right stage of maturity, the seed will pop out of the other end, free of pulp and skin. A brief roll on the paper completes the process. [Note: the disposable gloves are **essential,** as *Daphne* berries contain very toxic materials, readily absorbed through the skin. I did this without gloves just once; it is difficult to understand how the fingertips can be at the same time both

Daphne tangutica, the squidge method

*Daphne tan*gutica, the growing seed crop

Daphne tangutica, cleaned seed

numb and intensely painful. **Do not do this job in the kitchen!** Other fruits and berries, while not toxic, may dye the fingertips in an interesting range of quite persistent colours.] The squidge method is adaptable to a wide variety of fruits and berries. If you are in a hurry, fruits can be soaked in water to speed up the softening process. If the seeds are small in proportion to the fruits (as in the strawberry, for example), I have heard that some members whizz them briefly in a kitchen liquidiser (beware toxicity and/or irate spouse!) and then separate them using a sieve or tea strainer. Fortunately (for me) I process very little seed in this category.

All stuck up!

The problem of seed cleaning may be made more difficult by the fact that some have a sticky coating or appendage (*Cyclamen* and some *Galanthus* are examples). Handling can be made easier if the seeds are first washed in tepid water – I find a stir around in an empty yoghurt tub ideal for this – separated in a tea strainer, and dried on toilet tissue.

The procedures described might at first sight seem to be too much trouble for you, but really they are very quick and easy, and the rewards are great: the pleasure of a job well done, the ability to share your own carefully selected plants with other Members through the Seed Distribution, the extra financial input to the Society (very important in these difficult financial times) and last but not least: donor's applications for seed are dealt with first!

I hope that you will have a go at donating seed to the Distribution this year and add to its continuing success. If you have your own favourite seed cleaning methods, then do write them up for me, so that I can pass on the good news to everyone else.

SUCCESS WITH SEED

Tim Ingram grows a wide range of exciting and unusual plants including numerous orchids. Here he reviews his ideas of growing plants from seed, gleaned from the pioneering work of others in the field and from a lifelong experience and experimentation.

Everyone who has collected and sown their own seed from the garden will know that it nearly always germinates with much greater freedom and consistency than seed from seed exchanges, or that bought from seed suppliers. This in no way criticises these latter sources, which give us all the chance to try so many new and exciting plants. It simply emphasises the complex and subtle environmental, and sometimes developmental, requirements that many seeds undergo to germinate successfully. The best way of providing these in many cases is by sowing seed as freshly as possible and allowing them to experience conditions of temperature and moisture following seed shed as close as possible to those in nature. A statement of common sense. In fact sowing in this way will often greatly improve on nature herself by preventing seed predation and maintaining more consistent levels of moisture. A good example in my own garden comes from snowdrops which, although happily self-sowing, can be encouraged to germinate even better by burying the ripe seed pods in the soil wherever new plants are wanted. Almost every seed will germinate the following spring, with no losses resulting from herbivores or intermittent spells of dry weather following natural seed shed.

If this is often the ideal, then what do we do when seed is not available immediately from the plant? In other words the situation most of us are faced with when trying new seed from exchanges or collectors, or when we have delayed sowing seed obtained earlier in the year? Herein lies the dilemma that many of us who are excited, but very often frustrated, encounter when sowing seed every year. The simplest strategy is to treat all seed the same way, sowing it in winter and leaving it outside in a cold frame exposed to all the vagaries of the weather, hoping that germination will occur the following spring. In many cases, of course, this is effective but in a great many others it is not. A hard-headed look at the number of pots with no germinated seed, even after leaving them for another season or more, makes one wish for a more reliable system. Commentators in the AGS *Bulletin* from E. B. Anderson and R. Ginns in the 1950s to, more recently, Peter Erskine (1997) and a summary of germination results in Vol. 66: 406-408 (1998), have highlighted this problem and estimated that between 60-90% of home-saved seed may germinate, whereas the figure for late-sown seed can be as low as 50% or less. Clearly such results are heavily dependant on the types of seed sown but the general conclusion is unequivocal.

Of course there is no simple answer to improving the germination of many seeds, especially when they may be new to the grower. But one logical approach is to look first at the ecological niche occupied by each species and, secondly, at their family, structural and physiological characteristics. There is much published information to draw on and, although this may seem at times rather confusing and conflicting, some patterns emerge as one begins to study plants more closely. In the *Bulletin* the excellent series on 'Rock Garden Plants from Seed' by John Good (42: 135, 239, 319; 43: 69, 153, 246) emphasised how variable germination requirements and success rates can be even within the same genus. However, these generally relate to the ecological conditions faced by different species. In some cases plants produce seed that varies in its germination requirements to 'spread the risk' in uncertain environments; I have found very erratic germination of certain penstemons for example, which may relate to their rather polymorphic seed. Part 6 of the series summarises germination results from a wide range of alpine species and provides a good starting-off point for those uncertain as to which conditions to provide for any given plant. Other parts of the series give valuable guidance on the nitty gritty (no pun intended!) of sowing, composts, protection and so forth.

In recent years the most significant work of reference has been the exhaustive and wide-ranging studies of Norman Deno in the USA. Here germination has been tested under laboratory conditions using generally three month periods at 40ºC or 70ºC and alternating cycles at these temperatures. The influence of after-ripening (i.e. seed being kept dry and warm for a period after dispersal), light, gibberellic acid and diurnal (oscillating) temperatures on germination were also studied. The message from this work, even more so than from earlier studies, is the importance of considering plants on an individual basis. Seed can then be grouped according to a small range of different sowing conditions that are most suitable. In this regard the guidance given in recent years by a number of seed suppliers is valuable.

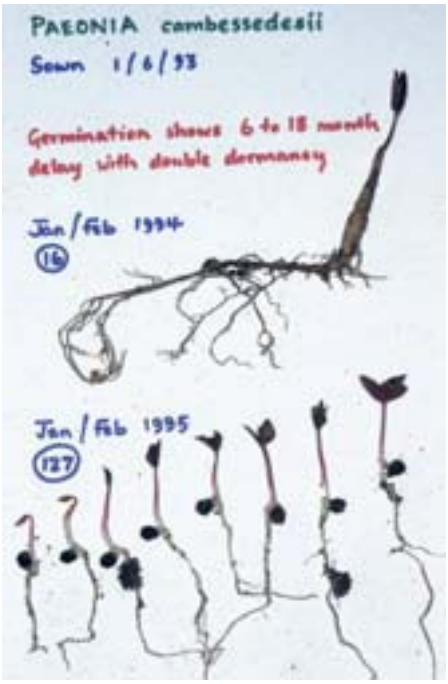
For seed of more commercial value, such as many trees and shrubs, the precise regimes to obtain optimum germination have been determined by research. Such seed can be given carefully measured warm and cold pretreatments, as appropriate, before germination will occur, usually under ideal warm and moist conditions (see Young and Young 1994, which gives very comprehensive coverage for a wide range of genera). Often, as in the case with some alpines, just a period of prechilling (cold stratification) is

PHOTO: TIM INGRAM

Trillium chloropetalum fruit

Paeonia mascula fruit and seeds

required, lasting between one and three months, depending on the species. Alpine and herbaceous examples include many species of *Amsonia*, *Aquilegia*, a number of *Campanula* and *Edraianthus*, *Fritillaria*, *Geranium*, *Jurinea*, *Penstemon*, *Scabiosa* and *Viola*. Sometimes a preliminary warm period is also required, corresponding to autumn in the natural environment, which is often necessary to enable full progression of an under-developed embryo (see below) or to help soften and break down the seed coat. This warm moist stratification is a common requirement for a lot of alpine plants, woodland perennials and some bulbs whose seed is shed early in the year in summer, and is probably the one most important feature lacking when seed is obtained from the exchanges and sown in the winter. Indeed one of the best guides to germinating herbaceous and alpine species, the catalogue of the respected German seed supplier Jelitto, recommends giving seed of many such plants several weeks at temperatures around 20ºC after sowing, before maintaining them at lower temperatures around freezing. There are many examples of such seed including *Alchemilla*, *Allium*, *Androsace*, *Crocus*, *Epilobium*, *Erythronium*, *Gentiana*, *Iris*, *Lewisia*, *Onosma*, many species of *Primula*, *Pulsatilla*, *Saxifraga*, *Tiarella*, *Tulipa* and some *Viola* species. Certain plant families, including the Amaryllidaceae, Araceae, Berberidaceae, Fumariaceae, Iridaceae, Liliaceae (*sensu lato*), Paeoniaceae, Ranunculaceae and Umbelliferae (Apiaceae), have members whose seed has only a



Paeonia cambessedesii; seedling progression

PHOTO: TIM INGRAM

relatively underdeveloped embryo at maturity. After seed is shed, warm and moist conditions are required to enable the embryo to achieve full maturity. Germination, however, will often not proceed until after a subsequent cold period. Seed obtained late can easily be given a warm stratification, either by using a bottom heat propagator in the greenhouse or mixing with moist sand or Vermiculite in polythene food bags and keeping them in the house. I routinely treat late-sown seed in this way unless there is evidence (rare) that a warm pretreatment is deleterious. The seed can then be sown and transferred to the cold frame outside for a period of lower temperatures. In the south and west of Britain our often mild and stop-start winters may not maintain sufficiently low temperatures for long enough to provide the required period of cold stratification, certainly for plants from higher elevations, and it may prove better to give this artificially, too, in the domestic fridge. Germination sometimes takes place at low temperatures and in the absence of light any such seed should be checked regularly after the first few weeks. For example I have had seed of various umbellifers and a number of *Eriogonum* species germinate at 4ºC after several weeks in the fridge, and moist stored seed of rosulate violas has germinated more successfully after such treatment. The ideal is a constant blanket of snow outside for several weeks, something few of us are lucky to have! However, when such conditions are prevalent (even for only relatively short spells) it is noticeable how seed of certain species will germinate more reliably. I have found this with, for example, *Sanguinaria canadensis* and *Tropaeolum speciosum*, both of which can be shy and slow to germinate normally.

Surprisingly many high alpines and arctic species, such as *Dryas octopetala* and *Silene acaulis,* do not have an absolute chilling requirement for germination (see Good and Millward 2007, and Baskin and Baskin, 2001). In nature these plants have a very short growing season and seed is shed as conditions become uniformly inimical to germination for a long period. As the temperature rises in spring germination can proceed. There is evidence that a chilling period will often lower the temperature required for germination and enable it to occur more quickly

as temperatures rise in the spring. In cultivation, however, such seed may be best sown at relatively high temperatures (ca. 20ºC) in the greenhouse to obtain the most uniform results (ideally in spring when light levels are increasing). Nevertheless, sowing in the autumn or early winter, as normally practised, will usually give fair results.

The seeds of many bulbs are shed especially early (at least in cultivation) and will often germinate well in autumn and early winter if sown fresh in the summer, the ideal recommendation being by early September. Late-sown seed cannot be expected to germinate so readily and may deteriorate during the winter in the absence of a previous warm stratification. The best strategy may therefore be to store such seed unsown in the fridge or deep freeze and wait until the following summer before sowing. Many summer growing bulbs, notably those from the milder climate of South Africa, are generally best sown in the warming days of spring when germination is usually rapid and reliable. However, others such as many *Allium*, *Alstroemeria*, *Calochortus, Rhodophiala* and *Triteleia* from colder climates mostly germinate only after a period of cold (viz 'winter' conditions), in the first two cases preceded by an extended warm spell. Jim Almond has good success with *Alstroemeria* seeds which have been chipped to facilitate imbibition of water and then given a warm/cold/warm cycle.

A lot of alpine and bulbous seed maintains its viability well after collection, especially if stored at low temperatures. However, one group of plants of great interest to alpine gardeners, woodlanders, includes many species where viability is limited and compromised by dry storage for any length of time. These, like bulbs, are generally early flowering and set seed in the summer. Classic examples are hellebores, hepaticas and the many

Alstroemeria hookeri

interesting and varied herbaceous members of the berberis family. The first two will germinate from dry-stored seed but only after soaking in luke-warm water to re-hydrate them and invariably much less successfully and much later than from fresh seed. The latter, and many other woodland species, lose viability quite quickly after dispersal unless maintained in a moist and turgid state. The ideal way to distribute such seed is moist-packed in damp Vermiculite or Perlite through the summer, although clearly this is rather more involved and difficult to organise. Nevertheless there is a strong arguement for an early seed exchange for bulbous and woodland genera. A few enterprising suppliers of seed do collect and distribute early and limited viability seed in the summer and autumn: they are well worth supporting.

Thalictrum orientale

Anemonella thalictrifolia

The most well-known examples of such seed are drawn from the diverse and much loved buttercup family, Ranunculaceae. It is uncommon to find seeds of this group which retain their viability for an extended period and this seems true even of species that grow in relatively arid environments, as do many of the anemones. *Anemone coronaria*, for example, requires a long warm period to overcome a physiological dormancy (i.e. summer conditions; Baskin and Baskin 2001) before the moister and cooler conditions of autumn allow maturation of the embryo and subsequent germination. Although the summer conditions will be very dry on average, sufficient moisture is presumably available for the dormancy-breaking process to take place (for example early morning dew can be significant when there are large diurnal fluctuations in temperature). Dry-stored seed sown in the winter does not germinate well. With pulsatillas I find that late-sown seed, if initially soaked in water to plump up, will germinate reasonably well, if slowly. However, fresh seed from your own plants can germinate very quickly and uniformly, and with no requirement for a period of cold. The woodland anemones and hepaticas [*Ed.* As mentioned above, pre-soaking for 24 hours often 'revives' dried seed) really must be sown fresh, so too genera like *Anemonella*, *Callianthemum*, *Eranthis*, *Ranunculus*, *Thalictrum* and

PHOTOS: JON EVANS

Jeffersonia dubia

Jeffersonia dubia seedlings

PHOTOS: TIM INGRAM

Jeffersonia dubia fruit and seeds

PHOTO: TIM INGRAM

Trollius. I have found that the very late flowering *Cimicifuga* (now included in *Actaea*) often does not germinate until the second spring after sowing, though most genera which mature their seed earlier in the autumn germinate well the following spring from freshly sown seed (e.g. *Aquilegia*, *Cimicifuga, Clematis*, *Delphinium* and *Isopyrum*).

The Berberis family (Berberidaceae) is closely related to Ranunculaceae and shows even more dependence on fresh seed amongst most of its herbaceous and evergreen, woodland genera. The lovely *Jeffersonia dubia* sets its seed in mid-June and, if sown then, will germinate well the following spring. Similar results are found with *Caulophyllum*, *Epimedium* and the rare but beautiful *Ranzania japonica*. In 'The Genus Epimedium' (Stearn 2002) a detailed discussion of *Podophyllum hexandrum* indicates that its fleshy fruit contains a germination inhibitor and that cleaned seed still requires a period of after-ripening (of about 30 days) before germination. This concurs with results given by Deno (1994) who found better germination from dry-stored seed (though seed stored for extended periods at room temperature is likely to lose viability quite quickly). This genus, therefore, behaves in a different way from most of its relatives and, in any event, is morphologically very distinct.

Other families which have a requirement for freshly-sown seed in many, if not most, cases include the Umbelliferae (or Apiaceae), though I have had good germination of late-sown seed of a number of eryngiums, Fumariaceae (notably *Corydalis* and *Dicentra*), some Primulaceae (particularly the early flowering species such as section *Petiolaris*), many woodland Liliaceae and related families, and plants like *Glaucidium, Shortia* and the early flowering species of *Cardamine*. Viability of these is probably limited to weeks or months, unless the seed is stored moist, though there are probably afew examples of seed which must be sown virtually immediately upon collection, as found with the fine seed of willows. (The seed of Petiolarid primulas is often sown 'in the green', even before maturing on the plant. In other cases it has been found that sowing similar immature seed can overcome dormancy that is acquired as the seed matures and dries out; I have had this occur with *Acer capillipes*. There is scope for more extensive investigation of sowing immature seed of otherwise recalcitrant species).

It may be thought that very fine seed or spores like those of orchids or ferns would lose viability relatively quickly but this does not seem to be

Dicentra eximea flower and fruits

the case. The green spores of the Royal Fern must be sown within a week or two of collection but most can survive for several years if carefully stored. In general, seeds which are shed into an environment which is moist and humid, without significant drying out effects of the sun, or significant periods of drought, are likely to show the limited viability described above. Although some woodlands can become significantly drier through the summer and autumn, it is usually only those with large, surface-rooting trees like beech which will restrict understorey growth in their environs. In the garden good germination of woodlanders often occurs in areas well-mulched with compost or leafmould and the high water absorbancy of this material must be an important factor, even when ambient conditions seem dry.

There are, of course, plants that come from much drier environments where the pressures on seed survival are quite different. In many such cases seed has a requirement for a warm and dry after-ripening, following which germination will occur in uniformly warm and moist conditions. The classic examples of such plants are many of the annuals from seasonally very dry landscapes, which give our gardens such colour and vitality in the summer. These species are easiest to sow in spring with some bottom heat (about 20°C), when they will germinate and grow away without a check. Regions with very dry summer environments, such as the Mediterranean, and nearby mountain ranges, are only conducive to good seedling growth and establishment with the onset of autumn rains and possibly at higher altitudes not until

PHOTO: TIM INGRAM

Degenia velebitica, a Slovenian alpine member of the Cruciferae (Brassicaceae)

the warming days of the succeeding spring. Again there are a number of distinct plant families which follow this protocol, including amongst them many good perennial rock plants as well as the annuals mentioned above. Examples include numerous Compositae or Asteraceae (although there are exceptions like *Celmisia* which are best sown fresh and generally require a period of cold temperatures before germination), Cruciferae (Brassicaceae), Campanulaceae, Caryophyllaceae, Gesneriaceae, Labiatae (Lamiaceae), Plumbaginaceae and many members of the Scrophulariaceae. Seed of these families is best not sown until the warming days of spring, and then ideally with some bottom heat to encourage optimum results. With such large and diverse groups, however, there will be individual exceptions (for example many penstemons are shy and slow to germinate), which may need stratification or other environmental factors such as light. Seeds from extreme habitats, like semi-deserts, often show very slow and erratic germination, presumably linked to the uncertainty of their environment and their successful establishment. Deno (1996) has studied Cactaceae extensively and found significant enhancement of germination of seed by gibberellic acid. In some cases this requirement decreased after extended periods (several years) of dry storage. There are reports too that some penstemon seed germinates more successfully after long dry storage, though it is hard to imagine what physiological processes occur under these conditions.

In most cases we routinely cover seed with a layer of fine grit (chick

grit is excellent, of uniform size and free of fines). However, it is well known that light can strongly influence germination (viz. poppies in disturbed ground and foxgloves in woodland clearings). Deno (1993) describes a requirement for light in many woodland plants and in the two families Ericaceae and Solanaceae especially. However, there are many other seeds, those that are very small in size (such as Gesneriaceae, Saxifragaceae, many Campanulaceae, many Gentianaceae, and Diapensiaceae) which, whether they require light or not, are best sown with the barest of coverings, or none at all, and ideally in a propagating box or frame where humidity and temperature (in some cases) is kept high. A good method with the slightly larger categories of such seed is to sow on the surface of fine grit and settle it into the pot with a fine spray of water to lodge the seed just under the surface. Fine grade Vermiculite (widely used commercially to aid germination) can be helpful to maintain moist surface conditions, though over extended periods it may encourage the growth of mosses and liverworts. Sterilising with boiling water, as done when sowing fern spores, can overcome this problem and I have found this method excellent for germinating *Ramonda* and dwarf rhododendrons in covered propagation boxes.

The simplest way seeds have of delaying germination is to form a thick impermeable seed coat, as is found in many legumes (Leguminosae). Such seed, not surprisingly, often has very extended viability and sown without any treatment is likely to display very erratic germination. Chipping the seed coat with a sharp knife, or in some cases a small file, usually allows quick and uniform germination. However, problems can arise if seed imbibes water too quickly and if the seed compost is too moist. The latter should not be watered until seeds have germinated and are growing away strongly. For the

Degenia velebitica fruits

PHOTO: TIM INGRAM

Mouse-proof framed designed by the author

often beautiful, but all too rarely seen genera *Astragalus* and *Oxytropis,* the best advice is given by Graham Nicholls (2002) who sows in late autumn and winter in cool conditions. In my limited experience I have found seedlings very vulnerable to damping-off fungi: good light and air movement is therefore essential. Although these two genera would seem ideally suited to growing in deep sand beds or the poorest of screes, there are few reports of success and they possibly require inoculation with nitrogen-fixing bacteria.

There are a number of other plants with impermeable seed coats, for example *Alstroemeria* mentioned earlier. Many of the mallow family (Malvaceae) and some *Geranium* and *Convolvulus* will also germinate more effectively after chipping. Although not in most cases alpine, many plants from fire-prone habitats have, unsurprisingly, impervious seedcoats which are split by heat. The fascinating *Arctostaphylos* and *Ceanothus* from California seem to require a long cold stratification, even after this treatment, before germination can proceed.

For most plants, germination is a one step process in the sense that the radicle and embryonic shoot grow away together. However, some of the most choice and sought after plants, such as peonies, trilliums and many lilies, have a double dormancy which can lead to very delayed and extended germination. Here, development of the radicle will occur after the first cold period, and of the shoot after the second (or sometimes further cycles). It can be disconcerting to find roots of peonies appearing through the base of the seed pot with nary a sign of shoot growth! Keen growers can circumvent these requirements by giving artificial periods of cold and warm to mimic natural conditions. However, for most of us it is simpler to sow fresh seed (if possible) and allow it to experience normal temperature cycles in a cold

frame. Late-sown seed will benefit from an initial warm stratification for several weeks before being placed outside. Inevitably many of these plants take a considerable time to mature and flower, but are all the more exciting when they do!

Growing plants from seed has to be one of the most satisfying and exciting aspects of gardening. Taking more account of the individual nature of plants and of their seed can often lead to greater success & the chance to grow some very special plants in the garden.

References

Baskin, C. C. and Baskin, J. M. (2002). *Seeds*.

Deno, N. C. (1963). *Seed Germination Theory and Practice* ; Supplements 1996 and 1998.

Good, J. E. G. and Millward, D. (2007). *Alpine Plants - Ecology for Gardeners*.

Hills, L. D. (1976). *The Propagation of Alpines*. Theophrastus reprint.

Lloyd, C. and Rice, G. (1991). *Garden Flowers from Seed* .

Nicholls, G. (2002). *Alpine Plants of North America*.

Salisbury, E.J. (1946). Seeds and their Germination in *The Living Garden* (Chapter XII).

Thompson, P. (1989). *Creative Propagation*.

Young, J. A. and Young, C. G. (1994). *Seeds of Woody Plants in North America*.

Articles in the AGS Bulletin [The Alpine Gardener]. These, of course, are an excellent source of information. A range of articles from the 1950s onwards are listed below and often give more detailed advice on specific groups, or even genera, which is of immense practical use. Inevitably, there is a tendency to generalise, which has its advantages and disadvantages. However, many of us like to grow a wide range of plants and the present article has been geared to this audience.

Almond, J. (2004). *Sowing, Growing, Showing* (*An Alpine Triathlon*). 72:168-186.

Anderson, E.B. (1953). *Plants from seed*. 21:318-319.

Anon (1998). 66:406-409.

Balls, E.K. *Seed Storage*, Vol. 20, pp. 34-39 (1952).

Berry, G.H. (1951). *Seed Storage*. 19:177-181.

Blaxland, K. (1996). *Violet Germination*. 64:322-325.

Boyce, C. (1996). Some Initial Results (ACE Seed). 64:264-266.

Cobb, J. (1997). *Seeds and Conservation*. 65:453-459.

Dourado, A., Hong, T., Ellis, R. and Erskine, P.; *Daphne* Seed (1999). 67:81-86.

Erskine, P. (1997). *Alpines from Seed*. 65:298-304.

H. and J. Hancox; *A Shortia Story*, Vol. 60, pp. 218-223 (1992).

R. Ginns; Seeds and seed raising, Vol 22, pp. 245-248 (1954).

J. E. Good; (series of six articles on all aspects of seed sowing), Vols. 42 and 43
(1974 and 1975).

Good, J.E.G. (1991). *Rock Garden Plants from Seed*. 59:425-438.

King, R. (1986). *Propagation of Fern Spores*. 54:147-149.

Leeds, J. & R. (1986). Growing Bulbs from Seed. 54:225-227.

PERSHORE IN COLOUR

The AGS Garden at its centre in Pershore has come on in leaps and bounds over the last three years and is now a feature that every Member can be proud of. All Members are encouraged to visit in order to see the results for themselves, and to encourage others to explore the delights that alpines have to offer and tempt them to grow some in their own gardens. Alpines (rock garden plants if you prefer) really are for every gardener. Here Ann Thomas and Peter Sheasby reveal some of the exciting plants that are flourishing in the AGS Garden.

This photo essay is designed to illustrate a range of plants that have done well in the various beds in the garden at Pershore over the last two or three years. As you may know, the garden is divided into various sections with different soils to suit a wide variety of plants. These include areas for predominantly European and Mediterranean plants, scree, woodland and tufa and, more recently, a crevice garden and an "easy bed". There are also numerous troughs and an alpine house. The photographs have been selected to give an idea of the variety of plants grown in this relatively small garden.

The European Bed is the long-established and largest of the sections and contains many plants raised from seed collected by the MESE expedition to Greece in 1999. The pulsatillas have done particularly well in this area latterly and bulbs such as *Fritillaria meleagri*s and *Scilla peruviana* and many others have settled in well, providing colour over many weeks.

The European Bed
This bed is devoted to plants from the European mountains and the Mediterranean region. *Pulsatilla vulgaris* (topleft) purple form; *P. vulgaris* (top right) red form; *Scilla peruviana* (middle left); *Arum creticum* (middle right); *Convolvulus cneorum* (bottom left); *Arum italicum* in fruit (bottom middle) *Digitalis ferru-ginea* (bottom right)

ALL PHOTOS: ANN THOMAS

The Scree Bed is also well established. It comprises a gently sloping area with large rocks towards the higher part. The plantings here have had mixed success in this area but the ones that thrive have formed substantial clumps in many instances.

General views of scree bed (top left & right); *Pulsatilla grandis* 'Budapest Blue' (second row left); *Saxifraga oppositifolia* 'Splendens' (third row left); *Phlox douglasii* 'Red Admiral' (bottom right); *Daphne* x *susannae* 'Tichborne' (centre); *Armeria juniperifolia* (bottom left).

The Scree Bed (cont.) *Phlox nivalis* (top left); *Potentilla neumanniana* 'Nana' (top middle); *Edraianthus pumilio* (top right).

The Mediterranean Bed is another well-established area and is situated alongside the office building occupying a warm, sun-drenched position and comparative shelter. It is dominated by large plants of *Paeonia cambessedesii* and *Erinacea anthyllis*.

Paeonia cambessedesii (middle left); *Corydalis solida* 'Phyllis Carter' (middle right); *Muscari macrocarpum* (bottom left); *Tulipa aucheriana* (bottom middle); *T. clusiana* var. *chrysantha* (bottom right).

The Crevice Garden is a recent and most welcome addition to the garden. Purpose-built it has successfully provided niches for a wide range of plants while, at the same time, functioning as an attractive focal point. Many plants love the narrow crevices that have been created, especially *Daphne, Phlox* and *Dianthus* species and cultivars.

General views of the Crevice Garden (top left & right); *Saxifraga* x *eudoxiana* 'Gold Dust' (middle left); *Saxifraga cochlearis* 'Probynii' (middle right); *Daphne arbuscula* (bottom left); *Asperula sintenisii* (bottom right)

The Crevice Garden (contd.)
Globularia incanescens (top left); *Moltkia petraea* (top centre); *Clematis tenuiloba* 'Ylva' (top right); *Dianthus* 'Whatfield Magenta' (middle right); *Campanula aucheri* (bottom left); *Saxifraga marginata* var. *coriophylla* (bottom right)

Troughs. In the last few years quite a number of new troughs (many through the generosity of the estate of the late Valerie Finnis) have been added to the garden. The one-time tufa mound has been redistributed at a lower level.

Gentiana verna 'Angulosa' (top left); *Sempervivum kosaninii* (top right); *Jancaea heldreichii* (centre left); *Physoplexis comosa* (centre middle); *Campanula* 'Joe Elliott' (centre right); *Sempervivum* 'Jet Stream' (bottom left).

The Easy Bed, constructed in 2006 in the area formerly used for experiments with soils and plants, has been very well received. It is designed to display commonly-available alpines which can be readily grown by the average gardener. This bed, constructed primarily from old sleepers, has already become well-established.

General view of the Easy Bed (top left); *Narcissus bulbocodium* (middle left); *Thymus serpyllum* 'Minor' (top right); *Aubrieta* 'Bressingham Red' (middle right); *Narcissus* 'Tête-à-tête' (bottom left); *Tulipa linifolia* Batalinii Group (bottom centre); *Phlox* 'McDaniel's Cushion' (bottom right).

Woodland Beds. Beneath the trees at the far end of the garden there is an area where woodland plants such as *Helleborus* x *hybridus* (*H. orientalis* hybrids) and various *Galanthus* and *Colchicum* species and cultivars thrive. Next to this is a herbaceous area with a few typical border perennials such as salvias, rudbeckias and irises.

General view of herbaceous area (top left); *Narcissus* 'Minnow' (top right); *Helleborus* x *hybridus* (middle left); *Tulipa* 'Red Riding Hood' (bottom left); *Fritillaria acmopetala* (bottom centre); *Dactylorhiza elata* (bottom right).

KIND HEARTS AND CORONAS

Caryl Baron takes a look back in time

When I married a keen member of the AGS 52 years ago, I didn't know a saxifrage from a saponaria. I did know what a daffodil was but had no idea from where they originated or of the fascinating diversity of species.

Joyce and Lionel Bacon took me under their various wings. They obviously thought it would be kind to Michael, my husband, to do so. I had several trips out with Joyce and I remember a fascinating visit to 'The Plantsmen' in Dorset (the one-time nursery of Jim Archibald and Eric Smith). I thought it was a long way to go for one small cyclamen, but Joyce was very happy. We went in her new Renault 5 and I couldn't understand why she was very upset by the numberplate which had the letters SOW. I said she should think of it as seed sowing but she didn't agree and got it changed (at the time ours was POT which, living at a boys' school, could mean many things.....).

Another of their kind acts was to take me to the London AGS Shows. Before going to the Spring Show in 1977, Joyce looked around Michael's alpine house and swept up a large plant of *Daphne arbuscula*, insisting that I nurse it carefully up to the show. It won the Farrer Medal, something I had hardly heard of. In those days the Show was reported in 'TheTimes' the next day. I wonder when that ceased to

PHOTOS: CARYL BARON

Narcissus 'Snipe'

Narcissus mesatlanticus in the author's collection

Narcissus elegans

be? Years later Christopher Lloyd told us that he had read about the daphne winning and wondered who Michael was. At that London Show I met Alec Gray and admired his collection of dwarf narcissi ..... I was hooked. One of the bulbs I bought was *Narcissus* 'Snipe' and I agree with the late Kath Dryden that it was definitely pure white then; none of this fading to white that it seems to do now. Unfortunately, my original bulbs have gone the way of all flesh.

It wasn't until we moved here to Brandy Mount in Alresford 25 years ago that Michael became fixated with *Galanthus* and we got to know the galanthophiles. Not only are they very keen indeed on snowdrops but many of them grow *Narcissus* as well and I began to experience the kindness of plants people. Richard Nutt was a great one for hosting a famous 'Snowdrop Lunch' and he had the knack of getting together people of all ages and botanical interests. It was at this time that we went regularly to the shows and here friendships were also formed. I became the Speakers' Organiser for our local group and thoroughly enjoyed choosing the people I wanted to meet and to hear.

Ruby Baker has been the most influential person in my botanical progress. She really got me started with primulas and then miniature daffodils took over in a big way. I was coming to grips with them when Tom Norman showered me with kindness and bulbs, of some of which I had never heard. That is the great joy of getting obsessed with a species or group ..... discovering and learning their names, likes and dislikes.

To begin with I had a problem flowering *N.elegans*. Penny Watt had told me that they always put their *Cyclamen graecum* in the airing cupboard while they are dormant. That was another plant I couldn't flower but success followed and I tried the same treatment with *N. elegans*. This has also been successful and each year the flower spikes increase. I think Mary Ridley (Randall) thought I

was slightly mad to get so excited about so few flowers.

Since then the collection has grown. Rod Leed's advice is to leave the seed pods on the plants. He feels that if you remove the capsule then the plant thinks that it is done for the year and dies down. By leaving the pods on, the leaves will go on growing and the bulb will benefit. I have done this for several years now and it seems to work. In consequence I have an enormous amount of seed, which I have been sending to our seed exchange. This is unsatisfactory as they do like to be sown as soon as they are ripe: the seeds that I have got from such exchanges either come up very late, very spasmodically or not at all. I am very happy to give seed away to anyone who wants it. Just contact me.

On our holidays abroad we have seen several narcissi, but the highlight was in 2007 when we went with the AGS and Greentours to Portugal and Spain specifically to find them. Tom Norman gave me a lot of advice about sites which I passed on to the organisers, as they had not done that tour before, and we had a really fantastic time, finding 16 or 17 species and two hybrids. Having very good weather helped as well.

Early in 2008, we went on a snowdrop trip to Holland, organised by Joe Sharman. That also was a great success, but for me the highlight was meeting Mark Fonds who loves his narcissi and hybridising *N. cyclamineus* which has naturalised in his wood. They are quite a sight growing with *N. pseudonarcissus* from the Auvergne (also grown from seed) and, of course, snowdrops. I came back clutching an enormous pot of his seedlings, some of which were in flower. I'm looking forward to seeing them all next spring.

I can't name the many people who have been so generous with their advice, time and bulbs, but it is through the AGS that I have met the majority. I have so much to be grateful for and I thank every one of them.

Narcissus pseudonarcisus together with snowdrops and snowflakes in Mark Fond's garden

Narcissus cyclamineus photographed in Mark's garden

PHOTOS: CARYL BARON

MECONOPSIS – THE PLANTS YOU CAN'T IGNORE

Harold McBride, who gardens in Lisburn, County Antrim, has been a successful and devoted grower of *Meconopsis* for many years. Here he discusses some of his favourites, especially those with an Irish connection.

The Himalayan poppies are amongst the most highly esteemed and impressive of garden plants. Our changing climate means that the parts of Britain and Ireland where they can be grown with ease has already declined considerably over the past two decades.

The most commonly grown and available is the relatively smaller-flowered *M. baileyi* (*M. betonicifolia* of gardens); this blue-flowered, sometime white or violet, poppy is perhaps easiest to please and among the most tolerant of adverse growing conditions.

Most species of *Meconopsis* will not tolerate high temperatures or long periods of drought and some are subject to damage from spring frosts when growth commences, especially in late spring. The large perennial blue poppies should be provided with garden conditions which include a deep fertile soil rich in humus, and adequate moisture and humidity during the growing season. They will reward the grower with flowers of impressive size and colour. To keep plants in good heart divide the clumps every few years in early spring by lifting and

Meconopsis 'Slieve Donard'

PHOTOS: HAROLD MCBRIDE

Meconopsis 'Lingholm', fertile and widely available

prising them carefully apart. The new divisions are then re-planted as soon as possible in fresh soil with added rich compost and watered well until they become established.

The formation of a Meconopsis Group in 1998 was an attempt to clarify the identities and nomenclature of the various forms of the big perennial blue poppies found in cultivation. Additional topics for study have included methods of cultivation and propagation. The group's seed exchange and plant sales for members has led to the increased availability of several species and a good number of cultivars.

The Irish Connection

Meconopsis 'Slieve Donard' was raised in Scotland in about 1935 but was later named and distributed by the Slieve Donard Nursery in Newcastle, Co. Down. I have 'never to be forgotten' memories of visiting this now badly-missed nursery as a teenager and seeing large groupings of this classic blue poppy growing in the light shade of beech trees with the mountains of Mourne (Mt Slieve Donard) as a backdrop. During this visit my late father obtained several potfuls and, indeed, divisions of these same plants still have pride of place in my "mec-beds".

I also grow several other blue poppies from the infertile blue group including 'Crewdson Hybrid' and 'Mrs Jebb', both excellent additions to the garden.

Later, renowned Irish gardeners including the late Dr Molly Sanderson

Meconopsis a 'Lingholm' seedling, one of a number of fine large blue poppy cultivars in the author's garden

and David Shackleton advised me that *M.* 'Slieve Donard' was the best of all blue poppies. This indeed may have been the case until the late 1970s when some viable seed was obtained from this normally sterile hybrid, which of course meant that we no longer needed to rely on divisions to increase our stock. It also meant that this *M.* x *sheldonii* fertile form, later named *M.* 'Lingholm', became readily available from many nurseries and at reasonable prices.

Meconopsis integrifolia

It has been my experience that young seedlings should be grown on in rich composts and encouraged to become multi-rosetted prior to flowering. This helps to ensure that they are indeed truly perennial, otherwise they run the risk of flowering once, setting seed then dying. I now sow seed from these plants annually, selecting the somewhat variable progeny for flower size and colour.

Another *Meconopsis* with Irish connections is *M* x *beamishii,* a hybrid between the yellow-flowered *M. integrifolia* and the blue *M. grandis*. This cross was first made in the garden of R. H. Beamish in Co. Cork over a century ago. It is a pale cream hybrid and is also, perhaps surprisingly, fertile. The offspring are quite variable and in some forms the flower stems have difficulty supporting the rather large flowers, giving an ungainly appearance.

Meconopsis x *beamishii*, *M. grandis* x *M. integrifolia*

Meconopsis x *finlayorum*, a hybrid between *M. integrifolia* and *M. quintuplinervia*, in the author's garden

PHOTOS: HAROLD MCBRIDE

On several occasions I have crossed *M. integrifolia* with the lilac-blue Harebell Poppy, *M. quintuplinervia,* and produced an attractive dwarf ivory-flowered hybrid of great charm which, unlike its seed parent, is soundly perennial. This plant is named *M.* x *finlayorum* after the gardener who first made the cross.

For over 40 years I have grown many species of *Meconopsis* from seed collections and exchanges including *M. sherriffi, M. bella, M. lancifolia, M. punicea* and *M. delavayi*, but of these challenging beauties only the latter two remain with me, and are well-established by diligently collecting and sowing seed annually.

Over many years lots of plant genera have competed for my attention with, at one stage, over 40 species of *Celmisia* predominating. However, my garden has never been without a good selection of 'Mecs' – the plants you cannot ignore.

SCHACHEN PHOTOALBUM

The Schachen Garden in the Bavarian Alps is a unique garden and a place of pilgrimage for lovers of alpine plants. Jenny Wainwright-Klein, Supervisor of the Alpine Garden on the Schachen and the alpine Reserve Collection in the Munich Botanic Garden, gives an insight into this famous altitude garden.

In the summer of 1901 the Alpine Garden was opened on the Schachen. Now, 108 years later, it is still an insider tip among alpine plant lovers. After a three hour hike along the forestry service road, gaining 850 m in altitude in the 10 km from the 'Wanderparkplatz' near Schloss Elmau, one stands in alpine meadows surrounded by the fantastic mountain panorama of the limestone Wetterstein Mountains. Situated on a north-facing slope at 1860 m, the garden experiences spring thaw usually around the end of May. Winter returns any time from the end of September. Pockets of 'Raibler', a slightly acidic shale, are found among the limestone soils and screes, creating a mosaic of lime-loving and acid-loving plants side by side. A little under one hectare was fenced off to create the alpine garden and within this small area of 8300 sq.m. up to 1000 plants from mountain ranges around the world are grown. Geographically arranged, the 42 plant beds include the Alps, the Pyrenees and Carpathians, the Balkan Peninsula, the Himalaya, Rocky Mountains, the Arctic and two relatively newly-planted beds for the Southern Hemisphere.

PHOTOS: J WAINWRIGHT-KLEIN

Clockwise from above: *Lilium martagon, Gymnadenia conopsea, Silene acaulis, Gentiana verna. Petrocallis pyrenaica.*

The Alpine Garden lies in a Nature Protection Area encompassing an area of approximately 4000 hectares, stretching along the German/Austrian border from the Hochwanner in the south-west and including the complete northern aspect of the Wetterstein Mountains in the north-east. A small selection of plants found near the Alpine Garden is shown in the accompanying photographs:

Anti-clockwise from top left: *Gentiana frigida*, only found in the Steiermark, the Carpathians and Bulgaria; *Lilium bulbiferum*; *Dianthus pavonius*. *Senecio halleri* from the Ligurian Alps

From the opening in 1901 until the present, the alpine garden's purpose has been to give visitors the opportunity to recognise and enjoy the splendid flora of the Alps and other mountain ranges, gathered together at one place.

The European Alps are well represented with 13 plant beds devoted to their flora. In such a small area it is only possible to display a fraction of the plants, so emphasis is placed on growing endemics and attractive, showy plants.

Meconopsis grow particularly well on the Schachen, looking their best in a cool misty season. Middle left: *Meconopsis* x *sheldonii,* with *Meconopsis paniculata* below. Top right: *Lilium monadelphum* and top left: *Campanula aucheri* from the Caucasus; bottom right: *Megacarpaea polyandra*, a monocarpic plant of the Cruciferae (Brassicaceae) from Central Asia, which takes up to ten years to flower.

PHOTOS: J WAINWRIGHT-KLEIN

The cool, moist weather experienced on the Schachen provides ideal conditions for the cultivation of plants from the central Himalayas.

Clockwise from top right: *Cremanthodium arnicoides, Cyananthus microphyllus, Primula involucrata, Corydalis cashmeriana.*






PHOTOS: J WAINWRIGHT-KLEIN

Clockwise from top right: *Saponaria pumilio, Eryngium spinalba,* an endemic of the south western Alps*, Clematis alpina* flowering on the Schachen at the end of June*, Androsace wulfeniana* coming into flower as soon as the snow melts*, Aster farreri*, from the Himalaya*, Papaver lapponicum* subsp. *occidentale*, small in stature but with large flowers.

Top left, *Myosotis colensoi* from New Zealand, flowers for up to six weeks and seeding itself discreetly in the surrounding soil, while *Haplocarpha rueppellii*, bottom left, an afro-montane plant from Mt Kenya, has rather an aggressive habit, doubling its size every season and smothering everything in its path. Right: *Senecio macrospermus*, from the Drakensberg Mountains, was introduced ten years ago and flowers towards the end of August, a time when not a lot else is in flower and the senecio and the kniphofias are at their best.

The Alpine Garden is an outlier of the Munich Botanic Garden. Descriptions of the various hiking trails leading to the Schachen and more photos of plants from the Schachen can be found on the Botanic Gardens website, www.botmuc.de/alpen/alpen0.html; English translations follow the German text.

The hunting lodge of King Ludwig II looks down onto the Alpine Garden and a hiking hut offering board and lodging is five minutes from the garden. For the adventurous, there is another hiking hut one and a half hours up the mountain, the Meiler Hut, directly on the German/Austrian border at an altitude of 2366 m.

The Alpine Garden on the Schachen is open seven days a week from 8 a.m. until 5 p.m., from the last week of June until the middle of September.

AGS PHOTOGRAPHIC COMPETITION 2008

Doug Joyce presents the results of the competition, together with details of the winning photographs in each of the five classes.

Welcome to the fifteenth year of the annual AGS Photographic Competition. Although the competition has mainly displayed the photographic skills of a few dedicated photographers within the Society, I hope that all camera users (and there are very many of you out there), can take away some knowledge and inspiration from the pages of this report, and indeed enter the competition next time around. I make no apology for writing about recent advances in technology, if for no other reason than that it introduces a platform for fresh ideas of which the casual camera-user might otherwise be unaware. This is perhaps more relevant at present than ever, now that the digital image has almost completely replaced the long-cherished film. Doubts as to whether such a new technology can be embraced quite painlessly can be confidently dispelled when the range of options to view one's work is considered.

You may even be inspired to grow the plants displayed or visit places where other enthusiasts have gone before.

Dendrosenecio keniensis; first prize in Class One awarded to Harry Jans

The AGS together with Greentours organizes many trips abroad, some of which may appeal to the heart and pocket and fulfil a lifelong ambition or merely an impulsive desire. You may prefer to stay at home and satisfy an alpine addiction with a trip to an AGS Show or a fellow enthusiast's garden. Whatever the motivation you may wish to record the event and enjoy it later. Help is at hand to all, but more of that later.

From a judging perspective, this year's photographic competition proved to be better than ever and certainly more challenging for the judges. The overall quality of the images submitted was outstanding, particularly so in Classes Two and Three, for plant portraits and close-ups, respectively. In the past much of the judging debate has revolved around technical aspects and general composition. These elements have been mastered by and large; decisions often centre on that somewhat indefinable component, 'artistry'. Such artistry is more than composition *per se*, and introduces the 'wow' factor into the equation. In a matter of only two years, digital imagery has not only become the dominant technique in photography but the intellectual challenge has been conquered. In short, our competition entrants have clearly got to grips with both their cameras and software and are well able to produce polished, professional-style photographic images. This has meant that the traditional supporters of film have been increasingly disadvantaged as the standards of 'digital competence' have risen. Sadly, only a small handful of steadfast film users now enter the competition, but their participation is nevertheless most welcome.

Class One Winners

Unsurprisingly then, all the prize-winning photographs in this year's competition from the ranks of digital camera users. In Class One [*An alpine or rock plant in a natural (wild) landscape*], the first prize was awarded to Harry Jans for his study of two rather bizarre species of giant groundsel, *Dendrosenecio keniensis* (photo-front) and *Dendrosenecio keniodendron* (photo-rear). Whilst these plants are unfamiliar to most of us as growers and certainly unsuitable for cultivation by the majority due to their extreme size, they are well-known mountain plants and very characteristic of the landscape of Africa's Mount Kenya. Why evolution should have favoured such monstrous adaptation is perhaps something of a mystery, but Harry's photograph certainly captures the spirit of the region and widens the horizons of the mind. The combination of a skilful execution of composition with all the elements of surprise makes this photograph truly memorable. For more inspiration visit www.jansalpines.com where a plethora of more modest alpine treasures await on his recently updated website.

In second place Tony Hughes returns us to more familiar territory, the European Alps. Here the Fragrant Orchid, *Gymnadenia conopsea*, is displayed in all its glory, the rich pink spikes set on a summer canvas of lush alpine meadow and against a fierce, unforgiving grey mountain backdrop. All the warmth of the summer sun is captured in the foreground and the

Gymnadenia conopsea in the Bernese Oberland; second prize Class One awarded to Tony Hughes

sweet fragrance of the orchids is almost tangible. With a little more imagination even the sound of cow bells can be heard from across the steeply sloping pasture. Tony's photograph certainly has that beckoning and beguiling quality: visit the Bernese Oberland in July! If you are not so easily seduced, the Fragrant Orchid is still locally common throughout the British Isles. There are described variants within the species, one of which favours calcareous dry grassland and another which is found in more marshy conditions. Like many other orchids it can be grown in a pot but is by no means easy. I would therefore encourage any novice to seek specialist advice at the outset.

If surprise can be described as but one component of 'artistic quality' then Jack Muzatko's photograph of a meadow of *Lewisia triphylla* certainly fulfils the brief and earns him a well-deserved third place in the landscape category. The scene is almost reminiscent of bluebells or wild garlic growing in a British Woodland. Of all the *Lewisia* species available to the grower, *L. triphylla* ranks as one of the more difficult in cultivation, so to see this plant in such profusion and dominating the landscape, is extraordinary. I know

Lewisia triphylla in the California Sierra; third prize Class One awarded to Jack Muzatko

that the concept of 'cloning' can be interpreted in a number of ways, including image manipulation, but here Nature has shown what she can do without interference from man.

Class Two Winners

As mentioned above, the winners in Class Two [*Portrait of an alpine or rock plant in the wild*] were faced with very stiff competition from within their ranks and can be well pleased with their performances. In first place, Bob Gibbons treats us to a stunning portrait of a very familiar Mediterranean plant, *Anemone coronaria*, photographed on the Omalos Plateau in Crete, below the rim of the White Mountains. When projected onto the large screen, Bob's photograph was adjudged to possess that all important 'wow factor' which identifies the elite, and for this he was additionally awarded the prize of 'best photograph in competition'. It is not so easy to muster all the elements of a great photograph, namely composition, technical expertise and artistry, but Bob has succeeded admirably.

The concepts of composition have been discussed in previous competition reports. But briefly, the choices to be made include a principal subject matter, which must be visually dominant and interesting (colour, texture, shape); a suitable format for its display (portrait or landscape); careful consideration of the supporting scenery; and for a pleasing balance the rule of thirds should be applied to each principal element. Likewise, technical expertise has been discussed before and includes factors such as lighting, contrast, focus, exposure and depth of field. The definition of artistry is much less precise but contributes much to that elusive 'wow-factor'. It is multi-faceted and demands more of an emotional response, the creation of a mood, an arousal of interest or fascination.

Bob's photograph succeeds on every level. The principal subject matter, the purple flowers with their subtending ruffs of leaves, is held in sharp relief against a background of indeterminate pasture, giving the photograph a clean, three-dimensional appearance. The foreground (which occupies about one third of the frame) has sufficient detail to illustrate the nature of the environment without being intrusive, and beyond dissolves seamlessly away. The whole scene has a peaceful ethereal quality, which is enhanced by the slightly ragged posture of the flowers and their attendant stalks, bringing a charming naturalness to the composition.

In second place, Hilary Birks has travelled much further afield to capture her portrait of a quintessential alpine, *Paraquilegia caespitosa*, in characteristic documentary pose nestling high in a remote crevice in the Tien Shan. Here colours and textures combine to elicit a more profound appreciation of nature: that such beauty should exist even under the harshest of regimes. Without the bosses of yellow stamens, the soft blue flowers and fresh green tracery of the leaves seem somewhat unsettled against the ochreous colour of the rock. But nature does not always respect the colour wheel. For those wishing to recreate such an illusion at home the chances are not good. Whilst *Paraquilegia* species are in cultivation they resent the damp winter conditions experienced in the UK, and so the alpine house is a better bet than the open garden.

However, it is not always necessary to travel abroad to appreciate alpine flowers as Peter Maguire's third prize

entry illustrates: you just have to choose a suitable subject and location. One of the most abundant of British spring flowers, the humble primrose, *Primula vulgaris,* is well able to hold its own against more exotic aliens. Peter's portrait of a true icon of spring reflects just this, with a style and mood reminiscent of Bob Gibbon's portrait of *Anemone coronaria* above. The clever use of lighting and focus serves to highlight the soft yellow flowers of the primrose which would otherwise be lost in a sea of similarly toned vegetation: an inspirational photograph of a common native plant and perhaps an inspiration to all supporters of the AGS Photographic Competition.

Class Three Winners

In Class Three [*Close-up detail of an alpine or rock plant in the wild or in cultivation*] the challenge changes from portrait to close-up, which brings with it a whole new set of judgements. Foremost is the choice of lens, as both quality and suitability strongly influence the final image. Many SLR users, whether film or digital, opt for a prime lens with an optical focal length of between 50 and 105 mm. These are generally the most suitable for flower photography. Longer lenses are available, at a price, but are usually heavier to carry, optically slower and not nearly so practical. Zoom lenses which offer a close-up facility are an option for the

Anemone coronaria photographed on the Omalos Plateau, Crete; first prize Class Two awarded to Bob Gibbons

Paraquilegia caespitosa photographed in the Tien Shan, Kazakhstan; second prize Class Two awarded to Hilary Birks

budget-conscious and can perform quite well. Owners of compact digital cameras will find that their zoom lenses may well be capable of close focussing, down to just a few centimetres or so. At these short distances precise focussing, lighting and shutter speed all come into play, particularly when a great depth of field is sought. If a tripod and cable release are used this need not be an issue, but otherwise the obvious solution (particularly for digital users) is to increase the ISO setting on the camera. Just be aware that as you increase the ISO speed, you will similarly increase the amount of 'noise' in the final image — somewhat equivalent to the increased graininess of higher speed film. Try to work at ISO 400 or lower unless you are using a high-spec camera.

When it comes to close-up photography, Tony Duffey is no stranger as a prize-winner in this competition. Last year he triumphed with a photograph of *Sanguinaria canadensis* 'Plena' and this year entered a close-up portrait of *Pulsatilla rubra*. He mostly takes these photographs in his studio, which doubles up as a kitchen in his wife's spare time. Tony's style is one of crisp clean images, set on an unobtrusive canvas. He chooses small lens apertures to maximize the depth of field and overall sharpness of the principal subject, and sets this against either a neutral plain or stylized, coloured background. In this manner the subject is thrown into sharp relief and all the intimate details of shape and

texture are displayed. The consequence of using small apertures is that shutter speeds are longer and use of a tripod and remote shutter release essential. Lighting has to be good but direct sunlight is best avoided: a bright, evenly lit source is much the best. Flash can be used with care but sometimes leads to unnatural-looking images. The majority of *Pulsatilla* species are good garden plants, particularly in the drier parts of the country and on calcareous soils. They grow well in raised beds and can seed around gently when happy. In fact they are my personal favourites and if only I could grow the American *P. occidentalis* one ambition would be complete.

If anyone is in doubt about such beguiling beauties then Celia Sawyer's remarkable photograph of *Pulsatilla vernalis* emerging from under the snow will dispel their uncertainties. For this entry, which was taken in her Oxford garden, Celia was awarded second prize. Every picture is said to tell a story and in this instance any further written description would be superfluous. Technically, one could argue that the icy tableau of snow was a little too dominant in the composition and could have benefited from some cropping but otherwise all is well executed. Even the brush of fine white hairs, so characteristic of *P. vernalis,* is clearly visible within the scene. For those unused to such icy conditions, be prepared to set the camera to manual and compensate for any underexposure in the main subject. On most cameras you will find an exposure compensation option: set this to the plus side of the mid-point: and remember that if you over-compensate, any detail in the snow itself may be burned out. The advantage of the digital camera is that you can experiment and view the results without wasting precious film. You may also wish to experiment with the cultivation of *P. vernalis*, in the open garden. Whilst not the easiest candidate, nor always long-lived, it will 'flourish' if not subjected to winter wet. Try a crevice in tufa, but avoid giving the plant a summer roasting by setting the tufa rock deeply into the soil.

Pattern and colour were the principal components that prompted the judges to award Hilary Birks third prize for a close-up of *Allium caeruleum* as found in its native habitat. It is not always easy to photograph in close-up when out in the open due to the difficulty of keeping the subject perfectly still. The slightest breath of wind can cause unwanted movement in the more delicate structures and spoil the image. Hand-holding the subject is not really an option except for the bionically immobile: better to build a scaffold of small sticks and twigs or simply wait patiently for calm. Hilary chose a fast shutter speed to freeze any motion but shortened the depth of field as a consequence. She could have chosen to increase the ISO setting on the camera and allow for a smaller aperture, but in the event this was unnecessary. There was sufficient of the foreground in focus to please the eye and transform any distracting background into a mere palette of colour. Much depends upon whether the photographer's objective is to create an artistic or documentary

Primula vulgaris photographed in Stirlingshire, Scotland; third prize Class Two awarded to Peter Maguire

style of image. Hilary chose the former with great success and faded the focus gently into infinity. Although alliums are not a universally popular group of bulbs quite a few have merit and are reasonably well-behaved. *Allium caeruleum* falls into this category on account of its splendid blue flowers and more modest stature. It is fairly undemanding in cultivation, preferring an open site with good drainage.

Class Four Winners

Whilst Class Four [*Alpine fauna in the wild*] has always been the least popular section of the competition when it comes to entry numbers, it is fun for the judges and offers a measure of spontaneity that plant photography often lacks. What naturalist could refuse the chance to photograph some elusive creature in the wild? The challenge is to capture a clear, sharp image and with luck a modicum of character and animation.

With this said, Harry Jan's portrait of a Bald Eagle (*Haliaeetus leucocephalus*) in an Alaskan landscape certainly makes a bold character statement, and earns him first prize for his efforts. He was undoubtedly helped by the use of a 200 mm lens which allowed him to keep his distance, but judging from the modest amount of cropping of the image submitted, he was still plenty

close enough to make a tasty breakfast for a hungry raptor. As for animation, I guess that Harry was only too pleased that the creature was in fact tethered to its perch.

Also perching, but in a less menacing manner, was a Spotted Fritillary (*Melitaea didyma* subsp. *meridionalis*), stalked by Willem van Kruijsbergen. For his elegantly sharp image Willem was awarded second prize. Butterflies generally make suitable candidates for wildlife photography as they are usually brightly coloured and intimately patterned. However, their skittish behaviour can cause the photographer much anguish except when the prize is perfectly at rest. There are two solutions to the problem: either keep your distance by using a long lens, say 100-200 mm, or get up early, before your subject has had time to become warm and active. I am not certain which strategy Willem adopted here except to say that his photograph appears to have been taken in the late afternoon.

Each year the Ibex (*Capra ibex*) seems to feature in the pages of this competition report and this year is no exception. Steve Clayton was awarded third prize for his interpretation of this noble and handsome beast which seems so well adapted to the photographic environment. It would be uncharitable of me to think we are seeing the same narcissistic exhibitionist each season; he does look remarkably familiar. But seriously, Steve's photograph is very well crafted with the principal subject bold and sharp and well-framed by mountain scenery. Just one tip, in any portrait it is always good practice to ensure that the eye(s) are sharply in focus, as this can markedly affect the overall quality and impact of the subject.

Class 5 Winners

The new Class 5 [*'The Art Gallery': A photographic work of alpine artistry*] was introduced to appeal to those photographers wishing to extend their skills, particularly in the field of digital photography, into the realms of creative image manipulation. It was envisaged as a venture with minority appeal both to the practitioner and the viewing audience, and so far this seems to have been the case.

However, such artistry does fulfil a legitimate role in a **photographic competition** in conjunction with our more usual 'botanical' images, and will therefore be continued. The brief is as wide as the photographer's imagination, but image-constructs are judged according to the quality of the artistry achieved, not the degree of manipulative complexity involved. In current parlance we are not seeking out 'computer nerds' although any subtle alterations to a composition should be immediately obvious to the judges.

For the second year in succession, first prize was awarded to an interpretation of *Arisaema candidissimum*, albeit in an altogether different guise. For the basis of his abstract, Tony Duffey has used the somewhat bizarre quality of

Pictured left: Studio portrait of *Pulsatilla vulgaris* 'Rubra; first prize Class Three awarded to Tony Duffey

Allium caeruleum photographed in the Tien Shan, Kazakhstan; third prize Class Three awarded to Hilary Birks

flower shape and enriched this with exaggerated colour and texture. The portrait of the species still remains quite recognizable but now its visual impact has been greatly enhanced. Further manipulations have reduced the background even more into a series of indeterminate, deeply-saturated coloured shapes, but within these the outline of a second flower is still visible. Such attention to detail ensures an overall curious but pleasing effect and one which the judges much admired. For the technically-minded, Tony made his adjustments in Photoshop Elements, and from memory he used mainly the filters menu, applying the posterise option lightly followed by the water-colour filter to create the overall effect. He then completed the task of colour adjustment in levels and saturation.

Sam Larsson adopted a somewhat similar style to express his vision of *Trillium sessile*, and was awarded the runner-up prize. Like Tony Duffey, he has used colour, shape and texture to emphasize the richness of the

floral parts and to reveal the intricate veining pattern in the corolla. He has also created a diffuse wash effect as an abstract background, against which the flower can be isolated and admired without distraction. Within this wash appear the bold shapes of leaves, just sufficient to attract the attention but only as a foil against which the central character can be displayed.

For the non-photographers, both the *Arisaema* and the *Trillium* are excellent garden plants in their own right with an abundance of charm, and a top priority on any shopping list. Both are woodland plants that will thrive in a fertile but well-drained soil.

The third and final prize in the 'Art Gallery' section was won by Steve Clayton for his close-up of a Military Orchid, *Orchis militaris*. In this example, Steve has taken the abstract concept a stage further by removing colour from all but the essential element of his composition, the symbolic military figures wearing unwieldy large helmets. He achieved this in Photoshop by creating a desaturated image layer (allowing only the grey tones to be expressed) above his original photograph and then 'painting' this layer carefully with a brush to reveal the underlying colours beneath. This technique is particularly useful for isolating subjects from their backgrounds but needs to be done with care. *Orchis militaris* is a very rare British native that is seldom seen in gardens or on the show-bench. In the wild (in Britain; East Anglia, though it occurs wild as far as China) it flowers in early summer, and its stout, bold spikes can attain a height of up to 50 cm.

Digital Review

Reviewing this year's photographic competition, I have no doubt that the digital age of photography is now well and truly established. Not only are digital cameras capable of all the sophistications one can imagine, or at least reasonably be expected to understand, but they are becoming cheaper than ever. Image quality is more than equal to that of film, particularly in the pricier models, and technology is advancing apace.

However, it is not only the camera that has changed: the means by which images are viewed has also undergone a revolution during the past few years. This has allowed the man in the street to enjoy the fruits of digital imagery without the need to become computer-literate. For example, print-making can be achieved cheaply and efficiently by purchasing an all-in-one photo printer. These are inexpensive and sometimes come as a free gift package when you purchase a camera (look out for offers!). This does away with the computer altogether as well as any accompanying printer paraphernalia. All that is required is some printing paper of a suitable size and quality together with your memory card, which you transfer from the camera to the slot on the printer. However, if this option is not tempting, most retail photographic shops have similar equipment in store for use by their customers. They are no more difficult to use than say the self-service checkout in the supermarket and someone is usually on hand to help out the untutored.

A Spotted Fritillary photographed in Wallisellen, Switzerland by Willem van Kruijsbergen; second prize Class Four

If prints are not to your taste, consider a digital photo-frame. These have only arrived on the scene in the last year or so and for many were a popular Christmas gift in 2008. For those unaware of such technology, a photo-frame is simply a viewer in the form of a small flat screen monitor (say up to 25 cm across). Plug it into the electricity supply, place your memory card in the slot, and view your photographs either individually or in the form of a 'slide show'. Great for a small family audience and less painful than a game of pass the parcel with the family photo album: and again no need for computer skills. The one word of advice I would offer is not to buy too cheaply: consider screen size and quality, and the memory options available (camera memory card/USB stick/direct computer link).

Should you wish to be a little more adventurous, consider a digital projector. In line with most digital equipment, prices have tumbled over the past twelve months or so and such projectors are now well within reach of the amateur enthusiast. For now, you will probably require an external computer input to operate the system,

Pictured left: Bald Eagle photographed in Homer Alaska by Harry Jans; first prize Class Four

An Ibex caught on camera near Chamonix, France by Steve Clayton; third prize Class Four

but already appearing are 'plug in and play' projectors, which I guess operate in much the same way as photo-frames.

Finally, for the more advanced who are at ease with computers, CD/DVD players and recorders, you can always display your images on a standard TV screen. You will need to burn a disk of your images in a file format the CD/DVD player can recognize (JPEG is compatible), but thereafter all is simple. Image quality can be a little variable depending upon your TV but is generally quite acceptable for casual viewing and you can entertain a family audience.

It is not surprising that such mainstream advances in photographic technology have led to a further diminution in the use of traditional film. Staunch enthusiasts of film will prevail for some time to come: good luck to them as film has served us well for a century or more, but its days are sadly numbered. The AGS Photographic Competition will continue to welcome entries from film users, as it presents no special difficulties. For the record, a 35 mm slide film has a digital equivalent of

Pictured right: 'An abstract of *Arisaema candidissimum*' by Tony Duffey; first prize Class Five

'An abstract of *Trillium sessile*' by Sam Larsson; second prize Class Five

16-20 megapixels of resolution, which roughly equates to the performance of a top quality digital SLR camera. But if you are ready for a new challenge and not too burdened by self-doubt or prejudice, the time has come to make that leap of faith and go digital. A top of the range compact digital camera will only set you back a few hundred pounds/dollars/euros and will weigh considerably less than a traditional SLR camera, something to embrace as seniority advances. However, you are not purchasing a miracle product and must still be prepared to use a tripod as circumstances dictate. Personally, I carry a walking pole which can quickly transform into a monopod for the camera. This dual function allows me (and more importantly the camera) a little extra stability in times of need.

For the first time in writing these reports, I am confident that digital photography can now be enjoyed by all, even those who lack a computer or the skills to operate it. Your film has become a small memory card, which can be 'viewed' in a variety of ways in the comfort of your own home. You will need a little more equipment and

Pictured right: 'An abstract of *Orchis militaris*' by Steve Clayton; third prize Class Five

expertise to enter this photographic competition but a start has to be made somewhere.

I find that many people, as beginners, are almost traumatized by the outward complexity of their new digital camera. Accompanying my own compact camera is a handbook running to 271 pages, hardly a user-friendly guide. You can start to rationalise the plethora of menus and options on offer by thinking less digital and more traditional. Try to undergo the same mental processes as you would for a film camera and apply the decisions to your digital acquisition. Firstly, choose the film you prefer (black&white/ natural colour/ strongly saturated colour/ graininess) and emulate this digitally; select the film for the quality of light expected (natural daylight/ tungsten/ fluorescent etc) and repeat the process; rate the speed of your film to correspond to the brightness expected (ISO 100/ 200/ 400 etc) and set the digital camera accordingly; and finally choose the shutter speed and aperture to suit the subject matter and depth of field required, making any compensation for burn-out or backlighting. All you need to do now is set the zoom, focus either manually or automatically and press the shutter button. If this is still far too perplexing, just set the camera to fully automatic and trust in technology.

For those who have made the commitment and entered into the spirit of competition, I reiterate that this year's entries have been better than ever and a real challenge for the judges. It has been said, rather unkindly I feel, that good digital photography lies more in the editing than the taking of pictures. Certainly the ability to edit is a great advantage that film largely lacks. The excitement in taking receipt of one's film images only to be disappointed by the results is a reality shared by all. And for many, the same is also true of digital, when viewing 'virgin' photographs for the first time on a large screen.

Perhaps the scene appears too flat and washed out, the colour not quite right, the main subject too 'burned out' and so on. With film, and especially transparencies, you are more or less stuck with what you've got, but not so with digital. Even if the results from your camera look as though a cataract operation is required, it is often possible to apply corrective surgery to restore a treasured memory. You may even exaggerate the memory if you wish, and whilst the results may be a little unnatural they can be pleasing nonetheless.

If you are in the habit of employing corrective or enhancing measures I would recommend, however, the taking of photographs in a RAW file format. Editing is possible either during or after the file conversion process and will ensure no loss of image data. When satisfied with the edited image, it can then be saved in a variety of ways including a JPEG format if file size is a problem with regard to re-storage, viewing or internet sharing. In this competition, with the exception of Class Five, the judges are by and large seeking high quality, natural compositions. Consequently the degree of editing or image manipulation needs to be at least sympathetic to this ideal

rather than adventurous, and file size should not be too restrictive. Cropping or trimming a scene is an obvious way to improve composition without affecting reality and thereby inviting criticism. But remember that image quality may be adversely affected as pixels are discarded. This is not usually a problem unless taken to the extreme, and if you have plenty of pixels (camera resolution) to start with. For commercial printing, as in the *The Alpine Gardener*, you will need a minimum of 300 dpi for a good, clean photograph. One further word of advice when cropping: choose a suitable aspect ratio. For example, a full page spread in the *The Alpine Gardener* would need to be in portrait format with a 3:4 aspect ratio, so just pause before you crop.

Aside from simple cropping, there are numerous other ways to improve the quality of an image. Many of these lie in the camera settings and can be accessed through various menus and options, but you will have to consult the handbook. Further refinements can be made in the computer using either the software supplied with the camera or by a specialist third party. The adjustments that are possible are far too numerous to discuss here, but range from the subtle to the bizarre. Of course all these possible refinements are available to the film user once the image has been transformed into a digital format. I know that I have said something of this before, but as there are so many in the Society who would like to transfer at least some of their film images into a digital format for the purposes of lectures, and even for this competition, I repeat my message. There is a range of scanning equipment on the market which will effect a transformation, but scanners dedicated to 35 mm film alone are undoubtedly the best and need not be too costly. However, the secret of success lies not only in the choice of equipment but the overall cleanliness of the operation. The scanning process is by design very sensitive. Every water-mark, scratch, particle of dust or errant finger-print will be reproduced with remarkable accuracy and saved to the computer file. All can be subsequently corrected with time, patience and the appropriate photographic software, but the effort involved can be excruciatingly tedious. The scanning process just takes seconds but the subsequent cleaning and polishing of the final digital image can take from minutes to hours.

By now, whether you are a champion of film or digital, I hope that you will have been so inspired by this photographic competition as to be motivated to enter it yourself in 2009. The rules remain unchanged and can be accessed through the AGS website or by contacting me, Doug Joyce, through the head office at Pershore.

Competition Winners (Technical details)

Class One

First Prize. G. A. (Harry) Jans, Al Loenen, Netherlands. *Dendrosenecio keniensis* (front) *Dendrosenecio keniodendron* (rear): photograph taken on Mount Kenya, 3800-4400 m, Kenya, October 2007. Camera: Nikon D50 at a focal length of 22 mm digital; exposure $1/80^{th}$ sec. at f20; ISO speed 210.

Second Prize. Tony Hughes, Malvern, Worcestershire, UK. *Gymnadenia conopsea*: photograph taken in the Bernese Oberland, Switzerland, July 2008. Camera: Pentax K10D; exposure 1/60th sec at f13; ISO speed 100.

Third Prize. Jack Muzatko, Pinole, California, USA. *Lewisia triphylla*: photograph taken in the California Sierra, USA, June 2005. Camera: Sony DSC F828; exposure 1/250th sec at f8; ISO speed 64.

Class Two

First Prize. Bob Gibbons, Wimborne, Dorset, UK. *Anemone coronaria*: photograph taken on the Omalos plateau at approx 1000 m, Crete, April 2007. Camera: Canon 1Ds MkII with a Sigma 150 mm macro-lens; exposure 1/250th sec at f8; ISO speed 100.

Second Prize. Hilary Birks, Ravnestølen, Loddefjord, Norway. *Paraquilegia caespitosa*: photograph taken in the Aksu-Dzhabagly Reserve, Tien Shan Mountains, Kazakhstan, June 2008. Camera: Pentax *ist DL2 at focal length of 60 mm digital; exposure 1/125 sec. at f11; ISO speed 800.

Third Prize. Peter Maguire, Newcastle upon Tyne, UK. *Primula vulgaris*: photograph taken at the Bracklinn Falls, Stirlingshire, Scotland, April 2008. Camera: Nikon D70 with a Sigma 70-300 mm zoom lens; exposure 1/1000sec. at f5.6; ISO speed 400.

Class Three

First Prize. Tony Duffey, Southport, Merseyside, UK. *Pulsatilla vulgaris* 'Rubra': Studio photograph, April 2008. Camera: Pentax K10D; exposure 1/3sec. at f22; ISO speed 400.

Second Prize. Celia Sawyer, Oxford, UK. *Pulsatilla vernalis*: photograph taken in the owner's garden, April 2008. Camera: Nikon D80 with a 60 mm macro lens; exposure 1/100 at f22; ISO speed 200.

Third Prize. Hilary Birks, Ravnestølen, Loddefjord, Norway. *Allium caeruleum*: photograph taken in the Aksu-Dzhabagly Reserve, Tien Shan, Kazakhstan, June 2008. Camera: Sony DSC-T100 at focal length of 5.8 mm digital; exposure 1/250 sec. at 4.5; ISO speed 100.

Class Four

First Prize. G. A. (Harry) Jans, Al Loenen, Netherlands. Bald Eagle (*Haliaeetus leucocephalus*): photograph taken in Homer, Alaska, USA, April 2008. Camera: Nikon D50 at a focal length of 200 mm digital; exposure 1/125 sec. at f9; ISO speed 210.

Second Prize. Willem van Kruijsbergen, Alphen, Netherlands. Spotted Fritillary (*Melitaea didyma* subsp. *meridionalis*): photograph taken in Wallisellen, Switzerland, July 2008. Camera: Nikon D200; exposure 1/100 sec. at f10; ISO speed 250.

Third Prize. Steve Clayton, Halifax, West Yorks, UK. Ibex (*Capra ibex*): photograph taken at Chamonix, France, July 2004. Camera: Nikon D100 with a 28-105 mm zoom lens at 75 mm digital; exposure 1/200 sec. at f8; ISO speed 400.

Class Five

First Prize. Tony Duffey, Southport, Merseyside, UK. 'An abstract of *Arisaema candidissimum*'. Original image taken with a Pentax K10D camera in the photographer's studio, June 2008: exposure 1sec. at f22: ISO speed 200. Image manipulated in Photoshop using mainly the filters menu: the postulise filter lightly, followed by the watercolour filter, and finally adjustments made by the levels and saturation tools.

Second Prize. Sam Larsson, Möindal, Sweden.

'An abstract of **Trillium sessile**'. Original image taken with a Canon EOS 400D camera, May 2007: exposure 1/160 sec. at f5; ISO speed 200. Image created by digital manipulation.

Third Prize. Steve Clayton, Halifax, West Yorks, UK. *'An abstract of Orchis militaris'*. Original image taken with a Canon Powershot S3 IS camera in the Ecrin National Park area of France, June 2008: exposure 1/40 sec. at f8. Image manipulated in Photoshop using the history brush.

Overall winner 2008

Overall 2008 AGS Photographic Competition Winner (The best photograph from all classes): Bob Gibbons, Wimborne, Dorset, for *Anemone coronaria.*

PLANT AWARDS 2007-2008

This article incorporates those plants given awards when shown to the RHS Joint Rock Garden Plant Committee at meetings up and down the country. Because of the unusually large number of awards given during the 2007-2008 season, this article has had to be presented in two parts; part one appeared in the March 2009 issue, taking the awards up to April 2008. Compiled by Robert Rolfe, with considerable help from the Committee's secretaries, the plants' owners and others, it aims to inform Members on developments and firm favourites grown in the British Isles. Most of the accompanying images are of the actual award plants; those few illustrated by a 'stock' image are indicated with an asterisk (*).

AWARDS OF MERIT

Podophyllum delavayi **Franch. A.M. Berberidaceae**

Shown at Malvern on 10th May 2008 by Mrs C. Coller, Loke House, Sutton, Norwich, Norfolk NR12 9RG.

Podophyllum peltatum, the NE American Mayapple, has been grown in European gardens since the 1660s; several flower colour forms are known, and at least one has bronzed foliage. Much more recently, within the last 15 years, a number of Chinese species have entered Western cultivation, and of these arguably the most dramatic of all, certainly as a foliage plant, is *P. delavayi*. A full description of this plant has been published in 'The Alpine Gardener', so this follow-up note concerns itself with comments not included therein. Sometimes one sees separate listings for *P. veitchii*, but this

PHOTO: PLANTIMAGES/ C.GREY-WILSON

Podophyllum delavayi, A.M.*

is a synonym; *P. delavayi* has also been described as a *Dysosma* (but from 1999 onwards has been treated as a member of Section *Dysosma*) and even as a *Begonia*, on account of its intricately patterned leaves. These emerge in early spring, and are at first vulnerable to heavy frosts; a deep mulch, a shaded position, and cold glass protection will all help to prevent damage until the foliage has expanded). The individual shoots develop somewhat like an opening umbrella, and have a span of 30 cm or more at maturity (though rather less in the example shown, which was especially well-flowered, for all that the floral performance is subordinate to the exotic display provided by the reddish-stained leaves. Divided into between five and eight lobes, these with much smaller sublobes, they have the texture of crushed velvet on their upper surface, and persist in prime condition for up to five months, providing a canopy under which the mid to purplish (very rarely white), fleshy flowers shelter in late spring. Most podophyllums are reported as requiring cross-fertilisation in order to set seed. But Dan Hinkley, who introduced material from Sichuan in 1996, which has since been micropropagated, reports 'some degree of self-compatability'. His introduction was made at c. 2500 m, which is higher than the majority of records, though the note that the species was locally common accords with other reports.

In recent years, selected cultivars of several species, and hybrids too, have become popular; 'Kaleidoscope' and 'Spotty Dotty' are the best-known of these. *P. delavayi*, which has the appearance of some improbably exotic, condensed rhubarb, and is radially mottled in a unique manner, is presently cultivated from a variety of sources. Although needing careful cultivation in some gardens, it is a long-lived species, increasing by means of spreading rhizomes (though nowhere near as vigorously as *P. peltatum*), the outer portions of which can be divided as the plants come into growth. Young offsets can take several years to establish, and may go dormant earlier in the summer than their parent stock. The crowns should be planted 3-5 cm deep, either in the autumn or in early spring, in a neutral, humus-rich compost, which must be kept moist while growth is apparent, then slightly on the dry side during the winter months.

Celmisia 'Eggleston Silver', A.M.
Compositae (Asteraceae)

Shown at Gardening Scotland , Ingliston on 30th May 2008 by Prof. & Mrs D. Rankin, 16, Kevock Road, Lasswade, Midlothian, Scotland EH18 1HT.

This is an outstandingly vigorous clone, which can produce truly spectacular plants quite quickly. It is grown in remarkable quantity at Eggleston Hall, in County Durham, just to the west of the picturesquely-sited town of Barnard Castle . Here they reckon that a single division will double every year, so that after three years they can lift plants, split them off and pot seven to sell, putting the remaining one back for future clonal propagation (seed-grown plants are apparently not available).

In our experience, and despite coming within the broad area of northernmost England and Scotland where the

genus has traditionally met with most success, it is a little more complicated than that. Good drainage is essential, and plants dislike remaining in pots for a long time, even when provided with an open compost. We have also found that planting them on a level site on our nursery has not been successful. So we constructed a small hill and planted them all over it, whereupon we soon had a wonderful colony. The really wet weather of summer 2008 set them back, so even better drainage may be called for.

Each flowering stem has a single terminal bloom (there can be many branches to the stem, each terminating in a huge flower, 6.5 cm in diameter, comprising around 100 pure white ray florets measuring 22 x 3 mm, centred by a 25 mm, rich yellow disc). A very welcome consequence of this successional development is that the season is long, typically from late May through until July. The older, faded flowers detract somewhat from the overall appearance, but these can be snipped off if they offend. They are borne on stems just over a foot (30 cm) tall, springing from large, fairly lax, silvery rosettes of lanceolate leaves up to 28 cm long, greyish-silver and thinly tomentose on the upper surface, white tomentose on their undersides.

In our display at Gardening Scotland we included about 10 single-crown plants, and one that was a couple of years older, crammed into a five-litre pot.

The award was at first given under the suggested name *Celmisia spectabilis* 'Eggleston Silver', and indeed the nursery, which dates back to the 1970s, advertises itself as 'the home of *C spectabilis*' in the northern hemisphere. Certainly Eggleston excels in the cultivation of a first-rate *Celmisia*, which they are able to grow by the thousand, sometimes in allotments (apparently with potatoes occasionally intercropping from previous years when the land was given over to other uses), and always increased by the simple means of shearing off the pseudostems at the base and plunging them into the soil. Added humus is reportedly not required to encourage rooting and establishment, for all that it is an orthodox means of prompting such offsets to thrive in most gardens.

No doubting the sterling worth of the plant, but its yoking with *Celmisia spectabilis* is another matter altogether. Alan Furness, onetime National Collection holder for the genus, has visited the nursery, and reports that the exact provenance of the stock is unknown to those currently in charge (though material was sent to RBG Kew for determination, with inconclusive results). He has raised *C. spectabilis* from wild-collected seed repeatedly, and finds that it is invariably more or less green-leaved on the upper surface, with a far thicker indumentum on the reverse than is the case with 'Eggleston Silver'. The likelihood is that *C. semicordata* (with a long-term track-record in gardens, and a variety of personae well-established) plays a predominant role in the make-up of this remarkable, long-lived selection. Time and again, supposedly pure species have been shown to involve *C. semicordata* in varying degrees, and of course the 'Inshriach Hybrids', pioneered by the Highland nursery of

the same name, derive from it, involving also (the brown hairs are a give-away*) C. traversii,* and maybe others too.

Primula japonica **A. Gray 'Apple Blossom', A.M. Primulaceae**
Shown at Gardening Scotland, Ingliston on 30th May 2008 by Prof. & Mrs D. Rankin.

To our surprise, no named varieties of *Primula japonica* had received awards. We entered four (the two that received Awards of Merit, plus 'Miller's Crimson' and 'Carminea'). It was 'Apple Blossom' and 'Postford White' that impressed the committee, but a couple of days earlier it could equally well have been the other two. At Kevock Garden Plants we grow another three or four distinctive varieties, all of them excellent, vigorous plants, long-lived and as far as we can tell invariably coming true from seed.

In fact, we would rate 'Postford White' as perhaps the least vigorous, plants in the garden eventually dying off (albeit after many years), whereas the others seem to go on for ever. The whites also usually have rather shorter flowering scapes, with about four whorls of flowers, instead of five or six. (The plants of 'Apple Blossom' displayed were 40 cm tall, and represented a mixture of first-season plants, which would have a single flowering scape, and some that had been planted out for a year and then lifted again, by which time they would typically have four or five scapes. Given another year, they would need to be have been planted in buckets!) However, they all yield masses of seed, and there is never a shortage of replacement seedlings available. It is the first to flower with us, typically in late April or early May, although last year it was somewhat later.

PHOTO: PLANT IMAGES/ C.GREY-WILSON

Primula japonia 'Miller's Crimson' and 'Apple Blossom' in a mixed border in a Suffolk garden

Primula japonica 'Apple Blossom', A.M.

Primula japonica 'Postford White', A.M.

PHOTOS: IAN & CAROLE BAINBRIDGE

'Apple Blossom' is a great favourite, typically producing five whorls, each comprising 8-10 delightful light pink flowers, to 25 mm across, thrum as shown, with a deeper pink eye. It remains looking good for an exceptionally long time, for all that the flower colour very gradually bleaches (they should be sited in part-shade on this account). At least eight named forms of this species are currently in wide circulation; this is among the very best.

Primula japonica and most others in the Proliferae section, thrive in a standard open, humus-rich compost, with a 12 month slow-release fertiliser. Seed sown in midwinter germinates in the spring, providing flowering plants after a further year. This Japanese endemic (reports from Taiwan are said to be mistaken) is one of the most reliable of the genus if grown in dampish but not waterlogged conditions, where it can form substantial colonies, as the next, allied account underlines.

Primula japonica **A. Gray 'Postford White', A.M. Primulaceae**
Shown at Gardening Scotland, Ingliston on 31st May 2008 by Prof. & Mrs D. Rankin.

This long-loved, true-breeding candelabra has been very little-mentioned in these pages down the years; the only reference one can find is from over 40 years ago, when the redoubtable Marjorie Brough recommended 'it for blocking-off from one another drifts of other candelabras which might otherwise create somewhat violent colour-clashes. This plant [she continued] is of course beautiful in its own right, and if planted in large groups, looks like drifts of snow in the dusk'.

The oversight, or virtual exclusion, is doubtless on grounds of height; even the roots can spread a yard across.

Since its origins are so seldom mentioned, the following passage from *Gardening Illustrated*, dated January 27th

1940, has been unearthed. The writer signs him or herself only as B. 'I was asked the other day how the various colour forms of *Primula japonica* originated. I could not answer the question. The type plant was a vivid magenta shade, but how did the other colours come ….. for instance, the wonderfully pure white as shown by Mr G.H. Dalrymple at Chelsea called 'Postford White'. He told me that all he knew about it was that the previous owner or tenant of Postford House had told him of it, given him some seed of it, and that he himself had given it this name.' This puts the probable origin back at least to the 1930s, or perhaps the 1920s. In the early years of the century, a number of related (Section Proliferae) primulas were sent to Britain , and hybrids were raised, or else occurred spontaneously. *P. japonica* came earliest of all, in 1870, long before the popular name "candelabra" was proposed for these primulas, by Balfour in 1913 at a Primula Conference. An early description has 'Postford White' as 'a very robust plant with tall stout scapes, tinged with purple often, and bearing several tiers of large, pure white flowers with a yellow eye. Seedlings of this variety come perfectly true from seed.' The plant shown at Ingliston was 58 cm tall, with broadly ovate, irregularly toothed leaves, and efarinose scapes bearing up to four whorls of between 7-10 (15) flowers, pin-eyed in examples seen, and up to 33 mm across.

Meconopsis **(Infertile Blue Group) 'Crewdson Hybrid', A.M.**

Papaveraceae

Shown at Gardening Scotland, Ingliston on 31st May 2008 by Dr E. Stevens, The Linns, Sheriffmuir, Dunblane, Scotland FK15 0LP.

Although placed in the Infertile Blue Group because it has been in cultivation for a long time, this long-standing selection is sterile, not producing fertile seeds, and is clearly not a member of the other long-standing sterile big blue poppy hybrid Group (i.e. the George Sherriff Group). 'Crewdson Hybrid' and another cultivar, 'Mrs Jebb', stand apart from others placed in the Infertile Blue Group, such as 'Slieve Donard'. It is important to note that 'Crewdson Hybrid' is sterile, because seed is sometimes incorrectly offered under this name. If so, it will undoubtedly be *M. baileyi* (*M. betonicifolia* of gardens).

Unlike many clones, we have information on the origin of this cultivar. A note was published by the much-respected plantswoman, Cicely Crewdson, in the *RHS Journal* of 1950. She reported that, in 1938, a natural hybrid had occurred in her garden in Kendal in the Lake District between 'what I call the Sikkim (true blue) *Meconopsis grandis* and *M. betonicifolia* (now correctly *M. baileyi*). In 1950 the colour was a very clear brilliant blue and the plant itself reaches up to about 5 feet [1.5m]'. There is no mention in this article of it setting seed, but Jack Drake's Inshriach Nursery catalogue of 1957/8 has the following entry: *Meconopsis* 'Crewdson Hybrid'; raised from seed given us many years ago by that fine gardener, the late Mrs Crewdson of Kendal, producing good sized flowers of an exceptionally vivid peacock blue; a good perennial. 3 ft [90cm].

PHOTO: EVELYN STEVENS

Meconopsis 'Crewdson Hybrid', A.M..*

It is difficult to compare one persons 'very clear brilliant blue' with anothers 'vivid peacock blue', but the difference in heights is striking and could be accounted for by differences in growing conditions. In my garden, with many cultivars for comparison, it is always one of the shorter forms, with a maximum height of around 1m. This endorses the height given for Inshriach. John Lawson, retired proprietor of Inshriach Nursery, says that their seed-sowing records show that plants were raised from seed until 1959, by which date it became sterile and was thereafter propagated by division only. Important diagnostic features include not only the flowers, but the appearance of the young emerging leaves, the mature leaves and the fruiting capsules. The leaves are neat, smaller than in some other cultivars, firm-textured, oblong-lanceolate in outline (such that the sides tend to be parallel), and then taper gradually to a bluntish tip. They are margined by evenly-spaced, well-defined, but not very deep, crenate teeth. When they first appear, the leaves tend to adopt an ascending stance, subsequently arching over a little. They clearly possess the red-purple pigment often seen in the big perennial blue poppies, but in this cultivar there is a readily-discernible brownish tinge. The whitish mid-rib is also very noticeable. The basal leaf-blades merge gradually with the fairly slender and long petiole. With increasing maturity, the pigmentation, as is always the case, fades: the other features remain, although in less marked degree. This applies also to the lower petiolate cauline leaves and the upper, sessile ones. The leaves of the false whorl are rather neatly triangular; the three or four pediculate flower buds which develop within are smoothly ovate. These open to reveal flowers which are always a deep, clear blue (my description compares well with Mrs Crewdson's). They never show any purplish tones, unlike some cultivars. A little smaller than in most others, they may be described as deep-open cup, or cup-funnel shaped, the obovate petals being longer than wide (c. 6 x 4.5cm). The seed-capsule has a very distinctive appearance. Emerging a short distance from the boss of golden stamens, it forms a short oblong cylinder, clothed with a dense pile of short bristles. The style is unusually short and is surmounted by a prominent, rounded stigma. EVELYN STEVENS

Roscoea humeana **Balf. f. & W.W. Sm. forma *tyria* 'Inkling', A.M. Zingiberaceae**

Shown at Wimborne on 7th June 2008 by Mrs C. Coller.

Unless grown in relatively cool conditions, and even allowing for the successional pattern of their blooming, it can be difficult to keep roscoeas in tip-top flowering condition. One recalls an AGS Chelsea Flower Show exhibit where the plants responded magnificently to the warm, rather humid conditions; but did so two or three days before the visitors arrived, making deadheading an onerous, nerve-racking business: would there be a decent number of flowers left by judging time? (There were!) This dramatically dark selection of the western Chinese *Roscoea humeana* represents the holotype of forma *tyria* (which Jill Cowley described in 2000), and has been shown by the exhibitor more or less annually since 1997. In this time she has given offsets away, doggedly propagating her own stock substantially, and won a Farrer Medal with an especially fine clump shown at the AGS Summer Show North in 2006. The colour is much more intense than the photograph of that clump published in these pages the following year, and much closer to that of a much earlier image, published in AGS *Bulletin* 66:66 (see also the Preliminary Commendation account on pages 473-74 of the same volume). Given the choice, it is a species to buy in flower, or from named stocks such as this; some white seedlings have unappealingly streaked flowers, for example. At the risk of sending readers into a cross-referencing spin, it is worth mentioning that also given an award at the 2008 Show was *R. humeana* forma *alba* (p. 383 of this issue), and that much more information on this genus can be found by consulting *The Alpine Gardener* (June 2008), where Gary Dunlop discusses these ginger relatives in depth.

PRELIMINARY COMMENDATIONS

Saxifraga aretioides **Lapeyr., P.C. Saxifragaceae**

Shown at Glasgow on 3rd May 2008 by Drs I. and C. Bainbridge.

This is the most westerly-occurring of the European 'kabschias'; it is also arguably the slowest-growing of them all, forming a hard, densely imbricated, green rather than greyish-silver, flattish mat, very rarely more than c.18 cm in diameter. Described just over 200 years ago, it has never enjoyed the same popularity as, say, *S. burseriana*, in part due to its slow rate of progress, in part because the flowers are, in truth, often rather narrow-petalled, and almost never produced in quantities sufficient to form a cushion-obscuring dome of bloom.

Nevertheless, it has always been valued by discerning gardeners, both for its subtle appeal, and (from the 1870s at least) its value as breeding stock in the development of many hybrids, predicated on its relatively unusual yellow coloration. These date back to c. 1880, when John Boyd by chance raised a seedling determined as *S. aretioides* × *burseriana*, which was later named *S.* × *boydii* in his honour. Since then, in excess of 50 primary and more complicated crosses have been

described, a very few of them natural (*S.* × *patens* = *caesia* x *aizoides*, *S.* × *luteo-purpurea* = *aretioides* × *media*) but most of them artificially conceived, and including such landmark annexations as *S.* × *anglica* (*aretioides* × *lilacina* × *media*), *S.* × *megaseaeflora* (*aretioides* x *lilacina* x *media* × *burseriana*) and *S.* × *poluanglica* (*aretioides* × *lilacina* × *media* × *poluniniana*).

For many years it was considered that *S. aretioides* had two centres of distribution, the first in the French and Spanish Pyrenees, and the second further to the west in the Picos de Europa, where the plants were typically described as larger-flowered and deeper yellow. Lionel Bacon, who 40 years ago made a wide-ranging tour of Spain, described it (*AGS Bulletin* 39:155) as one of the finest kabschia saxifrages he had ever seen, presciently noting that although it was 'presumably' *S. aretioides*, it was 'a totally different plant, in its style of growth, from *S. aretioides* as we had known it in the Pyrenees, where we had found its lax branches creeping among rocky turf, with a few pleasant-enough soft yellow flowers at its tips. This was a rock hard cushion, up to 30 cm across, solidly covered-over with large, brilliant buttercup-yellow flowers, several to each 6 cm stem.' Different indeed: it has latterly been separated and given the name *S. felineri*.

Dr Bacon's evaluation of *S. aretioides* is too dismissive; it has a distinct appeal, and is always a pleasure to come across, sometimes in relative abundance, though always rather localized, in various parts of the Pyrenees (0°25´W

PHOTO: IAN & CAROLE BAINBRIDGE

Saxifraga aretioides P.C.

to 1°30´W according to one source). Your reviewer came upon a small colony just west of Gavarnie, growing on a vertical rock face, and forming small mounds 5-10 cm across, in peak flower at the beginning of June. The tiny, obtuse, glaucous green leaves are densely aggregated in rosettes 6-10 mm across, closely-packed to form a smooth, obdurate cushion. This takes several years to reach any size, whether plants are raised from seldom-offered seed, or represent cuttings (taken, for preference, from the post-flowering flush of new growth in early summer, though it has been shown that even those taken in autumn and overwintered will eventually root). If treated well (not too much shade, never left dry at the root but equally given glass protection in the winter months, even if grown in a trough, and for preference a degree of root restriction, as for example a tufa crevice or slight underpotting), it will produce (a month earlier than in the wild) a respectable display of short-stemmed flowers in late April or very early May. Those of the award plant, borne on pale, yellowish-green stems to 4 cm, and numbering 1-4 per flat-topped cyme, were typical of cultivated material in their non-overlapping, spathulate petals, forming a rather starry corolla up to 12 mm across, and opening in succession. Invariably found on limestone, it sometimes occurs at comparatively low altitudes, but on occasion ascends to 2700 m. Infrequently reported as a scree-dweller, it is far more likely to be found on cliffs and escarpments, sometimes springing from hairline cracks.

***Ledum palustre* L. subsp. *diversipilosum* Nakai, P.C.**

Ericaceae

Shown at Malvern on 10th May 2008 by Mrs M.D. Clement, 194, Compton Road, Wolverhampton. West Midlands. WV3 9JX.

Depending on whether you are a traditionalist, or prefer to adopt the results of genetic research in almost every case, you may prefer to keep this easily-recognised plant as a *Ledum*, or follow the conclusions of Harmaja, and rebrand it as *Rhododendron diversipilosum* (Nakai) Harmaja. If you adopt the latter view, there are various other names to learn; *Ledum decumbens*, for example, becomes *Rhododendron subarcticum*, and *L. palustre* converts to *R. tomentosum*.

These changes were suggested in 1991 (see Harmaja, H. (1991): 'Taxonomic notes on *Rhododendron* subsection *Ledum*.' in *Ann. Bot. Fennici* 28: 171-173), the year before a Preliminary Commendation was awarded to a clone of *L. p.* subsp. *diversipilosum* named 'Teshio'. Barry Starling, who raised this from a seed collection he made as a member of the 1988 AGS Expedition to Japan, provides much useful information in the award description (see *AGS Bulletin* 60: 421-2), pointing out that plants benefit from selective pruning, pinching the shoots back to induce breaking, in their early years especially. In the wild, it is repeatedly noted, plants can be decidedly straggly.

Such advice had obviously been heeded by the exhibitor of this dwarf, compact selection, which made a mound 20 cm tall and 30 cm across, the spreading branches clad with alternate, glossy, dark green, ovate-elliptic leaves

c. 3.5 x 1.8 cm. Both the young stems and the undersides of the leaves were thickly covered with rusty hairs. The inflorescence is made up of small but densely-clustered white flowers 8-10 mm across; these formed rounded umbels almost 8 cm across, and were liberally supplied – a hallmark of good cultivation. (The 'petals' of the saucer-shaped corollas are free almost to the base, whereas in *Rhododendron* they are united and typically form a bell or funnel.)

Ledum palustre has been split into a number of subspecies, varieties and formas, all of the Japanese taxa except var. *decumbens* 'lumped' in Ohwi's 'Flora of Japan' (1965) under var. *diversipilosum*, whose haunts are given as 'wet boggy slopes and high moors' in Hokkaido and Honshu, with further occurrences on Sakhalin, the Kuril Islands, Korea and eastern Siberia. As a rule, plants are better grown in the open ground, then lifted for exhibition; if grown in a pot the year round, they should be given good light, kept well-watered (with weak doses of a liquid ericaceous feed after flowering), and lightly pruned to prevent them from becoming woody.

Mazus radicans **(Hook. f.) Cheesem., P.C. ***

Scrophulariaceae

Shown at Chelsea Flower Show on 19th May 2008 by The Director, RBG Kew.

Mazus radicans is a ground-hugging, creeping plant from New Zealand. It was first described as *Mimulus radicans* by Joseph Hooker in the account of his journey on the Antarctic Voyage between 1839 and 1843. This voyage was captained by James Clark Ross and its main aim was to explore the southern oceans and search for the continent of Antarctica. Joseph Hooker was assistant surgeon and botanist for the expedition. On his return he wrote *The Botany of the Antarctic Voyage*, in three parts. The first, *Flora Antarctica*, was completed in 1847 and covered the flora of the islands of the southern oceans, such as the Falklands, Kerguelen and the Auckland and Campbell Islands. This was followed by *Flora Novae Zelandiae*, completed in 1855, and finally *Flora Tasmaniae*, completed in 1859. All three parts are beautifully illustrated by Walter Hood Fitch and contain many new species. In 1865 Hooker succeeded his father, William, as Director of the Royal Botanic Gardens, Kew

Thomas Cheeseman transferred *Mimulus radicans* to *Mazus* in 1906, in his *Manual of the New Zealand Flora*. *Mazus* contains about 30 species from Asia, Australia and New Zealand and *M. radicans* is one of four species in the genus found in New Zealand. It occurs in lowland and montane river beds from 150-1200 m, in South Island and the southern part of North Island. Flowering takes place from November to March.

The rounded ovate leaves of this mat-forming, underused plant are about 1 cm wide, 1.5-2 cm long, and covered with short bristly hairs on the upper surface. They are mid to dark green with purplish-brown mottling. The flowers are relatively large in comparison, with a three-lobed lower lip and a smaller, bifurcated upper lip. They are held close to the leaves, so the whole plant barely rises 2 cm above the soil surface. The petals are mainly white but the upper

PHOTO: RICHARD WILFORD

Mazus radicans P.C.

lip in particular is stained with purple, especially towards the mouth of the flower. The lower lip has some purple staining but more prominent is the yellow 'landing strip', sometimes with a few brownish spots, leading into the mouth of the flower. The flower can reach up to 2.5 cm across but around 1.5 cm is more usual.

Kew's plant was received from Gothenburg Botanic Garden, and is said by those familiar with cultivated material to be markedly superior to the general run; a clonal name may be appropriate. Its running, mat-forming habit, rooting down as it spreads, dictates that it is grown in a shallow clay pan, plunged in an open sand bed in the nursery. The compost is well-drained but moisture-retentive, with plenty of coir to retain water and replicate the damp conditions this plant continuously experiences in the wild. At the same time, it requires full sun in order to flower really well.

RICHARD WILFORD

Cypripedium Hank Small grex, P.C. Orchidaceae

Shown at SRGC Gardening Scotland, Ingliston on 31st May 2008 by I. Christie, Downfield, Westmuir, Kirriemuir. DD8 5LP. Scotland.

The name of German hybridist Werner Frosch looms very large whenever the subject of the nowadays numerous man-made *Cypripedium* hybrids is discussed. (In contrast, naturally-occurring examples are few, with *C.* × *andrewsii* (*parviflorum* var. *parviflorum* × *candidum*) and *C.* × *barbii* (*calceolus* × *macranthos*) the best-known of these.) This said, several other enthusiasts have raised, and continue to raise, very worthwhile crosses: Peter Corkhill is the foremost British exponent, with *C.* Florence (Gisela × *fasciolatum*, for example, registered as recently as 2007) to his credit, while in the United States, Iowa nurseryman Carson Whitlow was in the frame from the first, his tellingly-named raising *C.* Genesis (*reginae* × *pubescens*) the first of them all, in 1987.

His nursery, Cyp Haven, (www.c-we.com/cyp.haven/) has made available this and other hybrids. The proprietor was first involved in breeding cattleyas, over 30 years ago, but more recently has turned his attentions to hardy terrestrial orchids, especially *Calopogon* and *Cypripedium*.

Cypripedium Hank Small is a vigorous Sino-American miscegenation representing *C. parviflorum* var. *parviflorum* × *henryi*, registered by Whitlow in 1991, and offered by a number of orchid nurseries of late, but only now achieving its deserved recognition as one of the finest among the many experimental crosses. The name Hank Small doesn't refer to a particular individual (as might be imagined). Instead it combines the argot among *Cypripedium* growers for *C. henryi* (such examples abound in all fields of horticulture, with 'Molly the Witch' common shorthand when referring to *Paeonia mlokosewitschii*, for example), cobbled together with a translation of *parviflorum* (the Latin for small-flowered). In fact it is the more or less concolorous *C. henryi* that has the smaller flowers, with a lip 15-27 mm long; its most important contribution is in bestowing a multi-flowered inheritance, so that *C.* Hank Small reliably produces two or three flowers per stem, though unlike its western Chinese parent these have mahogany-purple, decidedly spiralled petals, contrasting with the 22 mm, yellowish lip, which takes the form of a deep pouch, held more or less horizontally, and lightly spotted red within, and on the greenish-yellow staminodes.

Cypripedium Hank Small grex, P.C.

PHOTO: IAN & CAROLE BAINBRIDGE

Some versions of the grex reach as much as 60 cm; the plant seen attained 30 cm, each stem clad on its lower half with three to five ovate, mid-green leaves, 11 × 5.5 cm, scored on their upper surfaces with deeply-incised parallel veins. *C. henryi* takes some considerable time to form a respectable clump, and *C. parviflorum* is almost as slow to increase, whichever manifestation you care to cite. By comparison, some of the hybrids outstrip these efforts dramatically: *C.* Emil *(calceolus* × *parviflorum* var. *parviflorum*) can produce over 20 flowers in its third year, which neither parent could possibly muster by this relatively early stage.

Cypripedium henryi can be found in grassland and mixed woodland; *C. parviflorum* occurs anywhere from virtual tundra to swamp, depending on where you hunt. Hank Small appreciates light shade, achieved either by siting plants in a woodland setting, or by swathing them in summer with shade netting, planting them in a well-drained, humus-rich soil, feeding modestly at a

reduced rate every other watering, and disturbing in the autumn or earliest spring, spreading the roots out into the friable compost, and only pressing their tips into the main body.

Calceolaria corymbosa subsp. *floccosa* Phil., P.C.*

Calceolariaceae (Scrophulariaceae)

Shown at Gardening Scotland, Ingliston on 30th May 2008 by the Regius Keeper, Royal Botanic Garden, 21A, Inverleith Row, Edinburgh. EH3 5LR. Scotland.

PHOTO: JON EVANS

While the majority of calceolarias are yellow, this is not always the case, as even the greenhouse biennial *Calceolaria* × *multiflora* of old (nowadays often referred to as the Herbeohybrida Group, and involving *C. crenatiflora*, *C. corymbosa* and *C. cana*) signifies. The last-named, Chilean species, with purple- or rose-pink flowers, injects much of the colour variation exhibited by this hybrid, and although seen far less often than was the case 30 or 40 years ago, its respectably alpine close relative *C. arachnoidea* has bubble-like blooms of similar, or occasionally much darker hue.

The latter varies from lightly to (as is generally true of cultivated plants) densely white-wooly-leaved, frequently c. 20-25 cm tall in flower, though lankier versions also exist. Far more recently, and probably for the first time, another Chilean species, *C. lanigera*, has been introduced, with plants reaching early maturity in under two years from the date of sowing, over the past couple of years. Some of these have produced yellow flowers, and Dr Martin Sheader (who has a particular interest in the genus, and whose accounts of two

Calceolaria corymbosa subsp. *floccosa P.C.*

Argentinian species can be found a few pages further on) suggests that these in all likelihood represent *C. corymbosa* Ruiz & Pav subsp. *floccosa* (Witasek) C. Ehrhart, from both Chile (Talca) and Argentina (Mendoza) at 2250-2700 m. You would be happy with either, and out of flower the 'flat, felty, silvery' basal rosettes are rather similar, but if it's *C. lanigera* that you want, then unvaryingly the species produces airy formations of up to 60 flowers, memorably described by one observer as 'knicker pink' – makes you wonder where his wife buys her underwear – but more soberly, in the committee Minutes, as red-purple (64C).

The real McCoy has a partly overlapping but very limited distribution. It was first recorded from the Cordillera de San Fernanda, presumably directly to the south or to the south-west of Santiago, for its distribution is given as the provinces

of Cachapoal and Colchagua, where it has been found in just a few sites in the precordillera, generally in the O'Higgins region, at around 1500 m, blooming from October-January, and often preferring part-shaded positions, sometimes with a few ferns for company, whether its niches take the form of south-facing cliffs or steep, boulder-strewn slopes. (Some report the species from just over the border into Argentina, where road cuttings join the list of possible habitats.) Fairly moist at blooming time, later on these habitats become decidedly dry, and the plants shut down, yet they don't aestivate in the manner of a few calceolarias with rhizomatous rootstocks from similarly, seasonally-parched areas.

There has been a suggestion that it is a biennial, but this is questionable; where cultivated stocks are concerned, time alone will tell. Whatever the truth, it is well worth the trouble of sowing a batch of the freely-produced, pepper-like seeds annually. That way, you can be sure to raise bona fide stock with large, rounded, crenately-crimped (in some examples minutely-toothed) and ruggedly-veined leaves, from the centre of whose rosettes arise, in early summer, usually solitary but substantial, distally-branched reddish stems, coated with short white hairs and with smaller, paired leaves at the axils.

The plant shown had been potted on at regular intervals, and had reached its maximum height of around 60 cm tall. Under sparser conditions it is often only three-quarters of this height, though always with largely unspotted, clear pink flowers whose upper hood and lower pouch are both inflated, and almost the same size (the upper ones measuring 10 × 6mm, their counterparts 10 × 10mm). The strong likelihood is that this welcome newcomer will perform well in a cold frame or alpine house, grown in a gritty, humus-rich and neutral compost, using a fairly deep pot and providing a topdressing of coarse grit, but that it will resent and reject any attempt to establish a niche outdoors.

Primula luteola **Rupr., P.C. Primulaceae**

Shown at Gardening Scotland, Ingliston on 31st May 2008 by Prof. & Mrs D. Rankin.

This singular species, from the north-eastern Caucasus (NE Georgia

PHOTO: IAN & CAROLE BAINBRIDGE

Primula luteola, P.C.

and Dagestan), seems to be perfectly straightforward to grow, but is not encountered in cultivation as often as might be expected, with just 11 suppliers listed in the current 'RHS Plant Finder'. It was discovered by Ruprecht in about 1861; he collected seed at the time, and plants were raised to flowering size at St Petersburg (Leningrad). From this source, it was sent to England in 1867, and has been continuously in cultivation ever since.

A close relative of the far more widespread *P. auriculata*, from NE Turkey through to the Tien Shan (and a member of Section Oreophlomis, which also encompasses the more familiar *P. rosea*), it is highly unusual in its large, lemon yellow (viz. not pink) flowers, 15-20 mm across and thrum-eyed in the award plant, carried in umbels of 10-25, or even 30, as shown, very rarely taking a Candelabra lead, with two tiers on display. At its most robust when massed along the banks of streams and in saturated meadows at (1400) 1700-3000 m, it can sometimes reach a height of up to 70 cm, according to some recent surveys, although this is almost unprecedented in gardens, where the c. 40 cm scapes represented by the award clump generally mark the uppermost limit. The distribution of farina is confined to the pedicels, the bracts, the inner faces of the calyces, and the upper quarter of the scapes; the narrowly ovate, minutely-toothed, mid-green leaves, measuring c. 21 × 3.5 cm and with pronounced petioles, have a prominent white midrib on the reverse, but are always efarinose.

We grow this rewarding, moisture-loving species in our standard compost, which comprises a mixture of organic material (increasingly based on bark), loam and grit and/or Perlite, with a liberal sprinkling of a 12-month slow-release fertiliser. The plants are housed in a shade tunnel, which in practise means that they are shielded from overhead water during the winter, and equally from excessive sunshine during the summer, but such precautions are really only necessary when it comes to the production of first-rate plants for sale. In the garden, given a reasonably sheltered place, *P. luteola* flourishes without any special protection.

DAVID RANKIN

Primula aurantiaca **Smith & Forrest, P.C. Primulaceae**

Shown at Gardening Scotland, Ingliston on 31st May 2008 by Prof. & Mrs D. Rankin.

We had raised what purported to be *Primula aurantiaca* from seed exchanges several times, enduring a series of false-identity disappointments before finally acquiring the real thing. There can be no doubt concerning the genuine plant, for there is no other primula that exhibits a combination of dark red flower stems and calyces (and foliar mid-ribs to boot), coupled with brilliant, deep orange corollas. It is moreover substantially shorter than the most usually-encountered members of Section *Proliferae*, namely *P. japonica* (see earlier on in this compilation), *P. pulverulenta* and *P. prolifera* itself, and may have only three or four whorls of flowers. There is some variation in the depth of the colour, but if any hybrid with another orange or yellow-flowered species should occur, (*P.*

chungensis – unlikely because it flowers earlier, or *P. bulleyana*, which flowers later but slightly overlaps), these are easily identifiable and removed! We don't normally tolerate hybrids, as we strive on the whole to maintain stocks of pure species.

Cultivation is just the same as for *Primula japonica*, detailed on p.362. It should be planted in a fairly damp place, where stocks can be long-lived, despite some suggestions to the contrary, and first flower in their second or third year from seed. DAVID RANKIN

On average 30 cm tall, this efarinose, strikingly-coloured species from a few areas of western Yunnan, close to the Mekong-Yangtse divide, at around 3500 m, was introduced by Forrest in 1922, and named (with regard to its distinctive flower colour) the following year. Up to six whorls of flowers can be produced, though the average of three or four seen in the plants submitted is more likely; each bears 8-15, deep reddish-orange, annulate, more or less horizontally-presented blooms, which John Richards reports as self-incompatible if pin-eyed, but self-fertile in thrum-eyed examples, such as those shown. The flowers are broad-petalled and 10-13 mm across, with slightly-notched petals; typically, they are supported by a 15 mm reddish pedicel, and the bracts are linear. As with most of its relatives, a humus-rich compost is indicated, with a neutral or slightly acid pH, although field reports note that it occurs in wet alpine meadows, 'often along rivulets on limestone as well as slate'.

***Paris polyphylla* Smith var. *stenophylla* Franchet, P.C.**

Trilliaceae

Shown at Gardening Scotland, Ingliston on 31st May 2008 by Prof. & Mrs D. Rankin.

If there was an award at a show for the slowest-growing plant, this pleasing *Paris* would be a strong contender. We have had it for nearly 10 years; in the spring of 2008, for the first time, it sent up a second shoot. But it was well worth waiting for, since the single flower probably attracted more comments than anything else on our Gardening Scotland display. The 30 cm flowering stem held aloft a single whorl of about 15 linear-lanceolate leaflets, dark green on top, shading to deep red at the centre, and a matching deep purplish-red on the undersides, revealed by the undulating edges. A further short stem arose from the centre of these, bearing the flower, which consisted of about ten outer tepals, light green, short and pointed, and a similar number of extraordinary inner tepals, long (9.5 cm), thread-like and yellowish-green with purple bases. These contrasted well with the cluster of dull red stamens, and the purplish-green ovary, with its complementary red stigma.

Flora of China has it as anything from 35-115 cm tall, and separable on account of its 1.5-2.5 cm wide, lanceolate to linear-lanceolate leaf blades. We received it as "var. *forrestii*", a name that doesn't figure among the half dozen synonyms (*P. arisanensis* Hayata; *P. bockiana* Diels; *P. hamifer* H. Léveillé; *P. lancifolia* Hayata; *P. polyphylla* var. *brachystemon* Franchet, and a couple of daiswas for good measure).

Roscoea cautleyoides 'Pennine Purple', P.C.

It is apparently a widely-occurring subsplit of the polymorphic *P. polyphylla* (a different example of which received a Preliminary Commendation in 2007, see *The Alpine Gardener* 75: 526-8), and has been recorded from forests and rocky slopes at a variety of altitudes, up to 3500m, in 15 provinces of China, and also as far west as northern India and Nepal.

We grow this fascinating variant in a clay pot, sunk in a sand plunge in a cold frame, covered from about October to March. Repotted every year, towards the end of its high summer dormancy, in a standard loam/organic/grit compost, with added slow-release fertiliser, it has at long last rewarded our efforts.

DAVID RANKIN

PHOTO: IAN & CAROLE BAINBRIDGE

Meconopsis **'Willie Duncan', P.C.**
Papaveraceae

Shown at Gardening Scotland, Ingliston on 31st May 2008 by Dr E. Stevens.

As noted in the Introduction, a report of this handsome, piercingly blue 'Himalayan poppy' is scheduled to appear in a later issue of *The Alpine Gardener*. The same comment applies to *M.* 'Bobby Masterton' and *M.* 'P.C. Abildgaard', shown by the same exhibitor and recipients of this award on the same date.

Roscoea cautleyoides **Gagnep. 'Pennine Purple', P.C.**
Zingiberaceae

Shown at Gardening Scotland, Ingliston on 30th May 2008 by N. Huntley, Hartside Nursery Garden, nr. Alston, Cumbria. CA9 3BL.

Predominantly creamy-yellow flowered in cultivation, this widely-cultivated and very reliable stalwart of the genus has been grown in gardens since the late nineteenth century. The purplish representatives, nowadays categorized as var. *cautleyoides* forma *sinopurpurea* and var. *cautleyoides* forma *atropurpurea*, have been known for as long as the species has been grown in gardens, but are far less frequent therein. It is a moot point to which of these minor subdivisions the 'greyed-purple' clone that occurred on the exhibitor's nursery should be assigned, but this query apart, it is one of the very few such examples that has been bulked up for commercial distribution, and is a most attractive variant, which received a unanimous vote of approval. The nursery is beautifully situated at 300 m in the western Pennines, not far from the Lake District; a combination of provenance and flower coloration has inspired the clonal name.

As presented, at the start of its flowering period, which in other examples can stretch from late April to high summer (Bees' 'August Beauty') or, very exceptionally, as late as October, the clump on show was 26 cm tall, with fleshy stems enfolded by four or five alternate, ovate-lanceolate leaves up to 12 × 2.5 cm, hyaline-edged. The terminal flowers, borne well clear of the upper foliage on slender, 3 cm long floral tubes, in loose clusters of three or four, were a delicate purple (Horticultural Colour Chart 187A), though with paired creamy stripes at the base of the lip. The upper (dorsal) petal measures 3 × 1.4 cm, and is hooded in typical fashion; the two lateral ones are deflexed and rather smaller, to 2 × 0.6 cm, and narrowly linear-ovate. A welcome, representative

Calceolaria glacialis, P.C.

range of this Yunnan-Sichuan species is presently grown, and readers should refer to Gary Dunlop's particularly comprehensive, recent overview of the genus in *The Alpine Gardener* 76: 177-217, for all manner of information regarding cultivation, descriptions and historical information.

Calceolaria glacialis **Weddell, P.C.***

Calceolariaceae (Scrophulariaceae)

Shown at Wimborne Show on 7th June 2008 by Dr M. & Mrs A. Sheader.

The genus *Calceolaria*, previously assigned to Scrophulariaceae and recently placed in its own family (Calceolariaceae), contains about 300 species, distributed from Patagonia to Mexico. Most species are found in the Andean zones of central Chile northwards to Peru and Ecuador, but relatively few of these are presently in cultivation. *Calceolaria glacialis* grows in rocky or sandy grasslands of the dry arid puna of northern Argentina and southern Bolivia at 3500-4900 m.The plant submitted to the committee was from a Flores & Watson seed collection made in northern Argentina. The species is perennial, forming a dwarf, 2-6 cm high cushion. Each rosette carries a pair of solitary deep-yellow flowers; the upper lip is reduced, the lower lip, held horizontally, is flattened with a pale primrose underside. Individual flowers are unusually long lasting (a matter of weeks), so that a floral display can be expected in cultivation from May to July.

Seed of calceolarias usually germinates within a few days of sowing, or else not at all. Several seedlings resulted from our 2007 sowing of *C. glacialis*, most of which flowered the same year, and then again in 2008. With high-altitude calceolarias such as this, plants grow best in well-drained acid composts, with the addition of leaf-mould or peat to aid water retention. Prolonged hot weather necessitates daily watering and plants seem to survive better in large pots sited uncovered in semi-shade during the summer months, but then transferred under glass in the winter months. Botrytis can afflict plants throughout the year but the main problems encountered result from prolonged periods of summer heat. Luckily both 2007 and 2008 have been relatively wet and cool, and plants have responded well to these prevailing conditions.

This is one of the best of the alpine cushion species and it should certainly be grown more widely. Unfortunately (and unusually), despite attempts to hand-pollinate, plants have produced disappointingly little seed.

MARTIN & ANNA-LIISA SHEADER

Calceolaria umbellata, P.C.

PHOTOS: ROBERT ROLFE

Calceolaria umbellata* Weddell, P.C.

Calceolariaceae (Scrophulariaceae)

Shown at Wimborne Show on 7th June 2008 by Dr M. & Mrs A. Sheader.

This is another hitherto obscure *Calceolaria* from southern Bolivia and north-western Argentina, growing at altitudes somewhat lower than the previous species (*C. glacialis*), viz. 1500-3650m, where it grows in seasonally rain-lashed, mossy habitats on scrubby slopes and in dry puna grassland. Seed received from a Flores & Watson collection in northern Argentina was sown in 2007; the seedlings developed very quickly indeed, flowering the same year and then again in 2008.

Disporum smithii 'Variegatum'

PHOTO: DOUG JOYCE

Like the foregoing, it is a dwarf, cushion-forming species, reaching a height of 5-25 cm, and developing progressively, so that it is tallest towards the end of the flowering period. Though superficially similar to *C. glacialis* in flower shape, plants of *C. umbellata* are markedly more robust and floriferous with two flowering stems per rosette, each carrying four to eight flowers in a terminal cyme. Cultivation for this species is as for *C. glacialis* (for further details, see the foregoing account.)

MARTIN & ANNA-LIISA SHEADER

***Disporum smithii* (Hook.) Piper 'Criele', P.C. * Convallariaceae**

Shown at Wimborne on 7th June 2008 by I. Betteridge, Rose Cottage, Annswell Lane, Smisby, Ashby de la Zouch, Lecicestershire. LE65 2TA.

This mainly Asiatic genus has become more popular in British gardens lately, mirroring an increased interest in closely-allied *Polygonatum*, from which it differs in its sometimes branched stems and more slender rhizomes. Of the eastern species, *Disporum smilacinum* (from Japan, Korea and China) has long been selected by Japanese gardeners for its very occasional but very striking, variable leaf forms, of which one might mention 'Kincho', with yellow leaves and delicate green striping, and 'Ginga', whose whitish leaves are flecked and stippled green. Other selected named forms have appeared in Western cultivation of late, for all that the white and green-striped *D. sessile* 'Variegatum' is the only selection that can be said to be commonly available.

Turning to the USA, the five native species are divided between the western

Disporum smithii 'Criele', P.C.

PHOTO: ROBERT ROLFE

and eastern states. *Disporum smithii*, from moist, evergreen woodlands, stream banks and the lower slopes of the coastal ranges, from southern British Columbia south to central California, is often grown for its creamy flowers and orange berries. It is sometimes mistaken for the more widespread *D. hookeri* var. *oreganum*, but that species has smaller, less flared flowers.

The award plant was not in flower when exhibited, but was in any case atypical of *D. smithii* both in its low stature (at most 10 cm tall, whereas 30-40 cm is more usual, and sometimes even twice that height) and especially its creamy yellow-washed foliage, the equal of any *Hosta*. It was first exhibited in England by Blackthorn Nursery in a new and rare class at the AGS Cheltenham Show in 2002, Robin White having obtained his stock from well-known woodland plant specialist Darrell Probst (Massachusetts). He in turn recollects that the plant was found, if memory serves, growing wild rather than as a chance seedling of garden origin, by Jerry John Flintoff (Seattle, Washington) in 1995. A few plants have been distributed in this country under the clonal name "Riele", but Mr Probst advises that he was given his plant labelled 'Criele' by the finder.

The standard advice is to divide plants in very early spring, just as they are re-awakening from dormancy, but at Blackthorn, experience suggests that early August is preferable. It resents disturbance, and takes quite a while to re-establish. (Axillary cuttings are also sometimes advocated, while seed sown immediately it is ripe - not stored - gives good results, but surely wouldn't yield replicas of the remarkable parent.)

'Criele' has low, slender, arching stems with alternate, sessile, broadly elliptic and undulate leaves c. 4 × 2 cm. These are so comprehensively variegated with cream (2D) that in some cases only a few marginal green streaks are present; more often, but never consistently, the leaf tip and the upper third portion look as if they have been dipped in green paint and then left to drain, while sometimes the splashes and streaks occur more extensively, with the midrib showing traces of green, and flecks or lines elsewhere, often following the pattern of the slightly grooved veins. Whether or not you care much for variegated plants, this undeniably makes a very strong statement.

Roscoea humeana **Balf. f. & W.W. Sm. forma *alba* Cowley, P. C. Zingiberaceae**

Shown at Wimborne on 7th June 2008 by J. Humphries, Lodore, Star Hill, Hartley Witney, Berkshire. RG27 8AQ.

This relatively early-flowering, very decorative species is locally prolific in Yunnan and Sichuan, from where material was first brought back in the late nineteenth and early twentieth centuries. For a long time only the purple-pink forms were generally grown, but in the last 15-20 years especially the range has broadened, and the latter-day patron saint of the genus, Jill Cowley, has described several phases. Dark, almost blackish-purple forms were recognised as forma *tyria* in 2000, soft yellow ones as f. *lutea* (in the same year, including in their synonymy *Roscoea sichuanensis*,) and in 2007 forma *alba*, delineating the white ones, joined the throng. The first two have already received awards (a clone of f. *tyria* has progressed to an A.M. this year; see p. 365) but albinos are much harder to source, partly because parent plants have only a 10-20% true-breeding rate, and partly because vegetative propagation by means of division in midsummer is a slow business, with any spare plants avidly scooped-up by ever-vigilant collectors.

Almost all stocks derive from two plants collected in 1987 by the Sino-British-Lijiang Expedition, under the number SBLE 636, one with a greenish yellow tinge, the other rather more handsome and faintly pinkish with age

PHOTO: ROBERT ROLFE

Roscoea humeana forma *alba*, P.C.

on the reverse of the flowers. These were kept at RBG Edinburgh, where one of the expedition's participants, Ron McBeath, worked as Assistant Curator. In 1998 he and his wife Susan set up Lamberton Nursery, just outside Berwick-on-Tweed; here stocks from the above source have been painstakingly worked up. These are grown under the shelter of a polytunnel, in black plastic long toms, buried almost to their rims in a ground-level sand plunge. (This is important; leave them free-standing and their contents will either 'cook' on a hot summer's day, or suffer the plant equivalent of hypothermia in the winter, as the writer has found to his cost with a treasured offset. Planted out, the tubers often work their way down to a greater depth, and are further protected by a much greater body of soil, making losses much less likely.)

Every so often a seedling comes good, inheriting the virginal purity of the vegetatively-propagated parent, and one of these was submitted for award. This was not realized at the time, when the suggestion was made that a clonal name would be a suitable way of commemorating the introduction's 21st birthday. But the plant shown, while representative of forma *alba* at its best, is a one-off, and as such it is best to leave matters with the Latin qualifier, at least until a proven, freely-multiplying example, or else the better of the two SBLE progenitors, comes before the Committee.

All that needs to be said at this stage is that although the flowers are fleeting (in very warm weather they last only a day or two), and are produced successively and sometimes abundantly, as with another waxy-white ephemeral blooming around the same time, the central American *Weldenia candida*, you simply remove the fallen, withered, long-tubed blooms day by day, and enjoy a performance that can last for a fortnight at least. The flowers are notable for their large, hooded, acuminate dorsal petal, or cowl (the Cowley nexus hasn't escaped me) and their slightly ribbed, bifurcated, double-tiered lip, with no hint of any coloration beyond the yellowish throat. The smallish clump seen had three shoots, with the broad, deep green leaves semi-developed, and a total of 10 flowers in their prime: this is an audacious, as-if-from-nowhere early summer performer that can be enjoyed as a pot plant, in a peaty raised bed, or in a slightly-shaded, high-humus billet, where it will perform reliably if kept free from competing vegetation.

Allium oreophiloides **Regel, P.C.***
Alliaceae

Shown at Wimborne on 7th June 2008 by Mrs C. Coller.

Thanks in large part to the numerous catalogue listings of Jânis Ruksâns, Central Asian alliums are better known in cultivation than ever before. A few have taken to life in the open garden with aplomb. Others are happiest when grown under bulb frame or cold greenhouse conditions. The remainder hover uncertainly on the very boundaries of cultivation; only a few will endure. Some are statuesque, with large orbs comprising hundreds and hundreds of flowers, held on sturdy stems up to a metre tall. Others are much dwarfer, in some cases virtually

stemless, and it is towards this end of the scale that a newcomer, *Allium oreophiloides*, fits within the spectrum.

Bulbs were first offered in the above nurserymen's 2004 catalogue, but there have been one or two earlier seed collections. In 2000, for instance, Vojtěch Holubec found the species at 3300 m, growing in scree in the Talaskij Ala Tau range, a subdivision of the Tien Shan, where *A. oreophiloides* has its north-eastern limit. (He describes the stems as up to 8 cm tall, with 'bright red balls 5 cm wide' and 12 cm long, prostrate leaves, which is of significance from a gardener's point of view, since the award material, representing an introduction sourced from Tadjikistan's Zeravschan range, has smaller, 7-15 flowered umbels of very pale pink flowers, the rather starry segments attractively marked inside and out with a dark central stripe.) There is some suggestion that material from the Tien Shan is typically longer-leaved, but this may reflect a very incomplete sampling: although described as long ago as 1875, there have been few gatherings, and the species remains a rarity, in gardens and in herbaria alike.

At this juncture, it is worth pointing out that two entities are recognized. Most can be assigned to subsp. *oreophiloides* Regel, from north-eastern Afghanistan, Badakhshan, the Pamir-Alai and the Tien Shan. Although almost certainly long since lost to cultivation, in 1971 a disjunct population was described by Per Wendelbo, discovered at 3200-3300 m on the Salang Pass by the indefatigable Paul Furse and Rechinger. This little-mentioned, southernmost outlier goes by the name of subsp. *salangense*.

As seen, the plants shown were hardly suggestive of the well-known, generally rich purple-pink *Allium oreophilum*, but then again, Jânis Ruksâns relates that this species is known from easternmost Turkey and the Caucasus all the way east to north-western Pakistan, with at least one consistently white-flowered morph (in Azerbaijan) and a soft pink variant that arose on his nursery. For all that it has superficial resemblances to *A. oreophiloides*, the two are separately classified in this complex genus. *A. oreophilum* was first ascribed to Section Molium (presently Section Porphyroprason), with flattish leaves, their sheaths usually subterranean. A. *oreophiloides*, once grouped in Section Haplostemon (now Section Scorodon), has the scape protected for much of its length, above ground as much as below, by leaf sheaths; the perianth segments have a prominent midrib and, in this case, the two or three leaves are not flat but semi-cylindrical and filiform, c. 0.75 mm across and either splayed or more or less prostrate. The flowering head is non-bulbiferous (so it won't shower its progeny recklessly hither and thither, in the manner of several Asian allies). In any case it's a much-reduced affair, no more than 3-10 cm tall in full flower, the scapes issuing from 1-1.5 cm, spherical, grey-tuniced bulbs; the 4-7 mm tepals are subacute or obtuse, and held on usually subequal pedicels. Palest rose seems to be the predominant flower colour.

PHOTO: ROBERT ROLFE

Photo Opposite: *Allium oreophiloides*, P.C.

Blooming occurs in May or early June in cultivated stocks, but later still (July-August) in the wild, where this species is more truly alpine and strictly dwarf than almost any other thereabouts.

BOTANICAL CERTIFICATES

[To plants of exceptional botanical interest]

Miersia chilensis **Lindl., B.C.***

Alliaceae

Shown at Vincent Square on January 15th 2008 by The Director, RBG Kew.

This tuft-forming curiosity could easily qualify at first sight for inclusion within the ranks of the most boring plants known to mankind. Its flowers are decidedly small, almost gnat-like, and green (though there is also the occasionally cultivated var. *bicolor* M. Muñoz, in which the involucral bracts are dark purple). However, discerning horticulturists will soon appreciate that this plant has a lot more going for it. At first sight you really have to look hard even to spot the flowers, but having done so, you realise that the plant has many of them. However, they are very tiny: about 3 mm across and 5 mm long, green overall but with a tiny speck of black. They are zygomorphic (symmetrical in one plane only) and look like a swarm of small flying insects. In fact, this plant is one of the few non-orchids that appears to exhibit insect mimicry in order to achieve pollination. The foliage is bright shiny green, very narrow, and pendulous. Some of the flowers even nestle within the foliage, making them even more inconspicuous.

Miersia chilensis B.C.

Flowering starts in early January, and continues for at least six weeks. Our stock has not set seed, possibly because we only have one clone. The bulbs are repotted annually in late summer-early autumn, at which time I get a chance to check the bulbs. These are bright purple in colour, and every year one bulb becomes four, all sharing the same basal plate. So the pot fills up quickly.

When Kew received the bulbs in 2003, I did not think they were going to do very much as we only got a few, but this underestimates their productivity. They like to be really tightly-packed, and are grown in a gritty, loamy mix, with plenty of water in the growing season, which is throughout the winter. They seem to appreciate really dry conditions when dormant. They are grown in unplunged pots in our warm glasshouse, kept at a minimum of 4°C in the winter, but I suspect they could probably cope with lower temperatures if they really had to. Unlike some of

PHOTOS: RICHARD WILFORD

the other plants in the same house, if the temperature suddenly drops they remain unperturbed.

Mike Fay in Kew's Jodrell Laboratory has been working on these plants; he reports that genetic studies have shown that *Miersia chilensis* is most closely related to the other members of Alliaceae with zygomorphic flowers, predominantly from Chile. These include *Gillesea graminea* (which also displays insect mimicry) and *Gethyum atropurpureum* (or *Solaria atropurpurea*), both of which are known in cultivation. More distant relations are *Nothoscordum* and *Ipheion*.

Miersia chilensis comes from low altitudes in central and southern Chile. Bulbs were donated to Kew by Rancho Santa Ana Botanic Garden, who acquired them from J.A. (Alberto) Castillo in 1993. KIT STRANGE

***Dionysia zschummelii* Lidén, B.C. Primulaceae**

Shown at Blackpool on 15th March 2008 by Mrs J. Bramley.

In 1966, the English football team famously won the World Cup, the Beatles were in their heyday, and London was a highly fashionable, decidedly 'swinging' capital, teeming with fashion designers, hairdressers, models, photographers, musicians and assorted artists of world renown. You could survey all of this from the brand new BT Post Office Tower, if you booked-in at the revolving Top of the Tower restaurant, opened that year by a novel duo, government minister Tony Benn and showman Sir Billy Butlin.

In Iran, the second Shah, Muhammad Reza, had already been in power for 25 years, and his country was considerably less liberal in outlook. Businessmen, politicians and expatriates were far more likely passengers on inbound flights than independent travellers, who in any case often made the journey overland as part of an odyssey lasting months rather than weeks. At this time fewer British tourists ventured abroad, and those that visited Iran couldn't rely on the assistance of the bespoke tours now offered: they were very much on their own. Jim Archibald's first visit, in 1966, is of pivotal significance in the history of studies involving the genus *Dionysia*, for he brought back seed of 11 species – more than anyone else had managed hitherto – including one new to science, the eponymous *D. archibaldii*, from two of the highest mountains in the Zagros range, SSE of Khorramâbâd (Zard (= Zardeh) Kuh reaches 4548 m.) Even now, no other *Dionysia* has been found at comparable altitudes; only *D. curviflora*, from a quite separate mountain block far ESE, attains or very slightly exceeds the 4000 m mark.

Dionysia archibaldii has consistently proved to be one of the trickier species both to propagate and to grow on to a respectable size. It's been done on a few occasions, with flower-thronged cushions produced from time to time, but such achievements are the exception to the rule. Their scarcity has little to do with the typically early-flowering performances on record, weeks before AGS Shows. A few growers, the late Eric Watson most notably, raised seedlings, both farinose and efarinose, but these tended to conform to 'standard' *D. archibaldii*, with compact cushions of revolute, subobtuse, more or less entire

Dionysia zschummelii, B.C.

leaves, and violet-pink flowers differing little from one plant to another. Then, in 1996, Zamzad described *D. bazoftica*, said to differ in its crenate leaves, its indumentum, the length of the bracts, and the appearance of the calyx teeth. Plants introduced from the type locality (Darreh Bazoft, Chebd, north slope of Kuh-e Taraz, at 1700-2300 m) certainly *looked* different, with much faster-growing and farina-dusted but otherwise somewhat *D. aretioides*-like cushions, and larger, sometimes deep violet flowers.

Confronted for the first time with a representative of the latter, Jim Archibald (who has experience of the broad span) queried why such plants couldn't be included under the remit of *D. archibaldii*, and in Lidén's 2007 revision, this has come to pass. But it is perhaps surprising that these aren't retained even at varietal level, whereas a more northerly outlier, *D. zschummelii*, found at 2600-700 m between Aligoudarz and Shoulabad by Dieter and Rosi Zschummel in 2002, is upheld as distinct. This can be seen as a microform, and differs in its densely aggregated, glabrous, markedly revolute, short leaves and its narrow bracts; the pale lilac-purple or lavender-pink flowers are somewhat smaller too, at 9-14 (cf. 12-16) mm. It has similarly challenged the skills of cultivators, but a few have succeeded in producing small cushions plastered with flower – something only very rarely achieved with *D. archibaldii* sensu stricto.

Dieter Zschummel and his wife Rosi, after whom this recent find is named, have made numerous significant discoveries on their many enterprising plant-hunting expeditions;

alpine gardeners owe them a very considerable debt. They chanced upon this newcomer (pers. comm.) in 2001 on Ghadee Kuh, between Aligoudarz and Shoulabad in Lorestan Province, at 2600-2700 m. Lower down the mountain they had already encountered *Dionysia lurorum*, and then, climbing a fairly steep, rocky slope, they came upon an abundance of the newly-described *D. crista-galli*, possibly intermixed with *D. haussknechtii* (the foliage details differ critically, but were left unchecked, so a re-visit is required to confirm this possible association). Just one pink-flowered *Dionysia* was found in flower, though others were found a little higher up, in a boulder-dominated area; this is the only known site for *D. zschummelii*, though other, less accessible declivities in the same locale may also harbour populations (pers. comm.). The initial reaction was that the long-lost *D. sanyeri* had finally been relocated, but this differs in several important respects, and remains something of an enigma. Meanwhile, *D. zschummelii* will tax the skills of those relatively few growers who thankfully concentrate on this rewarding genus, but will repay their best endeavours in full measure.

ROBERT ROLFE

Solanum trinominum **J.R.Bennett, B.C.* Solanaceae**

Shown at Harrogate Show on 26th April 2008 by Dr M. & Mrs A. Sheader.

Solanum is not a genus usually associated with the rock garden or even show bench appearances, and several exhibitors and visitors seemed somewhat bemused to witness typical potato-like flowers on a compact plant. That said, the leaves show little similarity to those of a potato. And contrary to the numerous comments made, the pot was not packed with potato-like tubers; this species is non-tuberous.

Solanum trinominum belongs to a group of eleven species classified under Section Regmandra within the Solanaceae. Members of this

Solanum trinominum

PHOTOS: ROBERT ROLFE

section are components of the lomas vegetation of Chile and Peru. The lomas habitat is characteristic of low coastal hills, where rainfall is very infrequent and moisture is supplied by thick stratus clouds that form against the hillsides, plants receiving moisture in the form of condensation, usually during the early part of the day. The lobed, fleshy, pubescent leaves of the *Solanum* seemed designed to capture such moisture. In El Niño years there may be brief periods of heavy rainfall. Soils are sandy, containing relatively little organic matter.

Solanum trinominum is a new species, described in 2008, but has been known under two other invalid names, hence the epithet, which signifies that it is the third that has been given to this species! Endemic to the coastal zone of three regions of Chile, namely Atacama, Coquimbo and Valparaiso, it is a perennial, woody subshrub, spreading by rhizomes to form well-spaced clonal patches. When growing amongst other vegetation it can reach a height of greater than 30cm, but in open conditions is usually 15-20 cm. The flowers are carried in terminal cymes and vary in size and colour (mid-blue to white). The plant shown had large, flat-faced (3 cm diameter) almost circular white flowers with blue-violet streaks along the central line of each petal. They are scented and long-lasting, closing each evening (when they appear to have wilted) but reopening by mid-morning.

In cultivation, plants do well in an open, sandy compost, watered freely and misted daily in hot weather. Our winter temperatures have rarely dipped below -5° C in recent years and *S. trinominum* has shown no ill effects under such conditions. Growth continues throughout these months, giving rise to compact flowering plants by April. Flowering continues until September, but in shaded alpine house conditions plants readily etiolate and therefore benefit from judicious pruning in autumn. Small, tomato-like, pea-sized, pearly greyish fruits are produced, but seed does not germinate readily. However, semi-ripe cuttings can be taken, which will root quickly at any time of year.

We have yet to try *S. trinominum* outside, but have attempted other lomas species in our sand beds. Many of these candidates disliked the relatively hot and dry (low humidity) conditions prevalent in summertime.

MARTIN & ANNA-LIISA SHEADER

CULTURAL COMMENDATIONS

[To growers whose exhibits show evidence of great cultural skill]

Cyclamen hederifolium (6.10.07); Mrs J. Wyllie

Cyclamen hederifolium f. *albiflorum* (13.10.07); Dr & Mrs M. Brown

Ranunculus calandrinioides (5.04.08); Dr P. Semple

Viola columnaris (5.04.08); B. Robinson

Fritillaria olivieri (15.04.08); J. McGregor

Saxifraga aretioides (3.05.08); Drs I. & C. Bainbridge

Trillium grandiflorum 'Flore Pleno' (10.05.08); I. Betteridge

GREENTOURS

NATURAL HISTORY HOLIDAYS

Alpine Garden Society Tours

A series of dedicated departures for AGS members.

Narcissi of Western Iberia & Morocco
2 weeks in March 2010

Tulips, Irises & Corydalises of the Tien Shan
2 weeks in April 2010

Yunnan - Gentianas, Cyananthus, Comastoma and the amazing Crawfurdia
16 days in September 2010

Crocuses, Colchicums & Irises of Jordan
10 days in January 2010

Autumn Bulbs

A little rain in October and suddenly the parched landscapes are transformed...

Turkey • Peloponnese • Morocco
Three 1 or 2 week tours in Oct/November

Central Asia & China

Meconopsis, Cypripediums and Primulas in China's mountains and the flower-rich Tien Shan Mountains.

Tien Shan Mountains 18 days in June

Yunnan • Sichuan • Sikkim
Three 18 day tours in May, June & July

Botanical Treasures of Turkey, Jordan, Iran & The Caucasus

An unparalleled selection of flower-rich holidays.

Lake Van • Southwest Turkey • Anatolian Diagonal • Pontic Alps
2 week tours from March to August

Iran's Zagros Mountains & The Northwest
Two 2 week tours in April & May

Georgia • Jordan
2 week tour in April, May & September

Tel/Fax 01298 83563 • enquiries@greentours.co.uk

www.greentours.co.uk

Relaxed and Friendly Holidays
Expert Guides • Small Groups

By Warmer Shores ...

Spring sees a sublime floral experience in the Mediterranean basin.

Chios • Sicily • Crete • Gargano
1 and 2 week tours in April

Northern Greece • Peloponnese • Chelmos • Andalucia
1 and 2 week tours from March to June

Europe's Great Mountains & Scandinavia

Scenically majestic and with a great range of alpines.

Pyrenees • Dolomites • Maritime Alps • Slovenia
1 and 2 week tours in June and July

Spitsbergen • Iceland • Gotland • Lapland
1 or 2 week tours in May, June & July

The Americas

Flowers in marvellous landscapes from the Arctic all the way to the Torres del Paine ...

The Highlands of Mexico
16 days in February

Canada – Ontario, Arctic & Rockies
Three 2 week tours in June & July

Northern California 16 days in May

Chile 22 days in December

Blooming Africa

The Cape's bulb show and the beautiful flora of Tanzania's Southern highlands

Tanzania 16 days January
South Africa 16 days September

Leigh Cottage, Gauledge Lane, Longnor,
Buxton Derbyshire SK17 0PA

ISSN 0002-6476

Alpine garden society