THE ROCK GARDEN 135

July 2015

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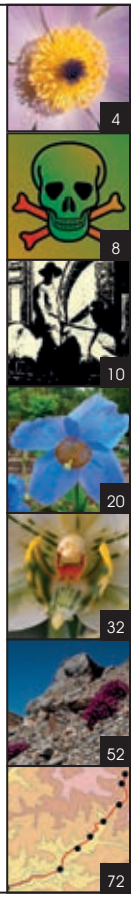
The Rock Garden

The Journal of the
Scottish Rock Garden Club
July 2015

Number 135

Cover: *Soldanella* 'Sudden Spring' (Photo: Liz Cole)



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

Please note the editor's new email address

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

Journals usually arrive in February or August. Please contact the Subscriptions Secretary in case of non-arrival (see inside front cover).

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Contact may also be made through the club website: www.srgc.net

Dear Member, I write from Scotland on a cold May Sunday as easterly winds bring a dreich cold rain at 6°C from the North Sea. Frost has recently reduced rhododendron blooms to squishy pulp and it is hard to recall the balmy 20°C days of April when *Fritillaria meleagris* stood tall, *Erythronium* nodded in warm zephyrs and the daffodils were unusually vertical. Things change. My wistful nostalgia may fall on sympathetic ears in northeastern America, where winter laid siege well into 2015. Who would be a northern temperate zone gardener?

Nevertheless, rather like giving birth (or so I understand, having no personal bodily experience of parturition), the painful memory declines once the sun starts to shine again. Some of you will have a year ahead of reshaping your gardens, planting, tending and propagating; others will delight in expeditions to exotic places where the dearest jewels of the alpine world are found. As usual, this issue of the *The Rock Garden* reflects these interests. It contains an unusual voice from the dead: George Forrest explored in the days before aeroplanes and the internet. His journeys were slow, perilous and scarcely connected to his home civilisation. His account is a reminder of the sacrifices and vicissitudes encountered in the search for our plants. Who now stands on his pedestal? We do not lack for candidates; if you are one of them, please write for the journal about your experiences. Or, if you stay at home and tend your own gems, please write of your successes or even your failures, and of your botanical interests. The journal can only reflect your own enthusiasms and achievements.

The Editor

www.srgc.net

This is our QR Code. It will appear in all our future journal issues

The SRGC has joined the Amazon affiliate program. A link to Amazon now appears at the very bottom of our web pages. Anything bought via the link earns money for the SRGC at no cost to you. The club only receives the donation if you access the Amazon site using the link on our web pages shown below. Once you click the link the Amazon site works as usual and you may browse and purchase as normal. Clicking our link lets Amazon know - no matter what you buy - to give the SRGC a percentage of your spend.

The club has already benefited from this scheme. If we encourage anyone (they need not be SRGC Members) who uses Amazon to use our link they will contribute funds to the SRGC. We hope this scheme adds a new dimension to your online shopping and that you will consider using this method for the benefit of the Club.

Discussion Weekend 2015

Planning is well under way for the Discussion Weekend in Grantown-on-Spey in its sestercentennial year. The event will continue the success of two previous years' weekends, with plenty of Highland hospitality and the odd surprise or two. You all seem to love Grantown and the Grant Arms so much that we are breaking with tradition and holding a third weekend here. To check details please email findhorncarol@icloud.com

Delegates arriving by car should leave the A9 at Aviemore and follow the A95 to and through Grantown. The hotel is on the right of the Square. If you are coming by public transport we recommend the scenic train journey through the Grampian Mountains to Aviemore and then onwards via the frequent bus service to Grantown. The nearest airport is Inverness, approximately 45 minutes from Grantown, although delegates from the South may find it easier to fly to Edinburgh and travel northwards by train.

Saturday morning will, as usual, be free time for delegates to visit some of the local scenic spots. One option is to take one of the Bird Watchers and Wildlife Club (BWWC) guided walks through Anagach Woods and down by the River Spey. An alternative would be to drive out to Revack Estate for a wander around, with a visit to their rather good coffee shop! To absorb more of the scenic beauty of the area take a drive out to Lochindorb, admiring the views on the way, bird watching and plant spotting.

There is so much to do in the area around Grantown-on-Spey from bird watching to botanizing, golfing to fishing, that you may want to consider extending your stay and going on a Red Deer Rut Safari or driving over the Dava to Burghead to do some bird or cetacean watching; this is one of Carol & David Shaw's favourite spots for bird watching and, as always, the extremely helpful BWWC folk will be happy to give you advice on where else to go to see the local wildlife.

The 2015 Discussion Weekend programme's themes intertwine the old and the new with some tales of the unexpected. This year's speakers include some of our old friends and four exciting speakers new to Scotland. We are very fortunate to have seduced such a fine collection of leading international experts to speak to us in 2015.

We look forward to welcoming you back for another great weekend, one we know and hope you will enjoy thoroughly.

Programme

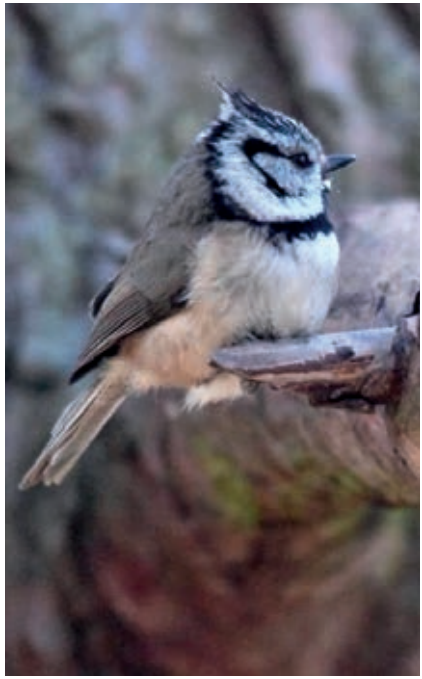
Friday 2nd October
- Jānis Rukšāns: *The Jim Archibald Lecture*: Crocuses old and new
- Small Bulb Exchange

Saturday 3rd October
Morning – Woodland walks and show
Afternoon
- Robert Unwin: *The John Duff Lecture*: History of the RBGE rock garden
- Ian Strachan: Extreme botanizing on the north face of Ben Nevis
- Kaj Andersen: Danish rock - building the crevice garden at Bangsbo Botanic Garden

Evening – Reception, dinner and plant auction

Sunday 4th October
- Johan Nielsen: Bulbs of the western Himalayas
- Camiel de Jong: *The William Buchanan Lecture*: Growing hardy orchids
- Joanne Everson: 12 years' hard labour on the Kew rock garden
- Todd Boland: *The Harold Esslemont Lecture*: Where alpines meet the sea: the flora of the limestone and serpentine barrens of Newfoundland

Friday's Jim Archibald bulb lecture will be followed by the sociable small bulb exchange. After lunch on Saturday, our speakers will cover diverse themes of the history of the RBG Edinburgh rock garden, exciting alpine botanical survey of the North Face of Ben Nevis, and the development of the huge crevice garden at Bangsbo Botanic Garden in Denmark. Our Saturday evening will pass in the social blur of the reception, dinner and plant auction. Sunday's speakers will offer us a wide view over the bulbous plants of the western Himalayas, propagation and growing of hardy orchids, the development of the rock garden and alpine house at Kew, and the alpines of the famous Newfoundland barrens.



Crested Tit

The 68th SRGC Seed Distribution

Carolyn McNab and Carolyn McHale

The South-West Scotland Rock Garden Group took over responsibility from the Edinburgh Group for the seed distribution this year. As we had encouraged our group to take on the task, we felt duty bound to play key roles. Carolyn McNab became the seed distribution manager (SRM) and Carolyn McHale the seed distribution's seed packeter. Our spouses were volunteered for major attendance too. All found it much more enjoyable than expected and we would like to share the behind-the scenes experience with you.

Already many of you will be collecting seeds to send to the seed reception manager. Last year Stuart Pawley, SRM for many years, compiled the long list of over 5000 names. The bulk seed then goes to the seed packeting manager, Ian Pryde, and his team who have the enormous and fiddly task of cleaning seed and putting just the right amount in those slippery transparent glassine packets. We took up the story from there, receiving boxes and boxes of those glassines all numbered and ready to send out.

Premises: Our group uses the restaurant area in the visitor centre at the National Trust for Scotland's Threave Gardens for meetings. Fortunately, the restaurant was closed for January and we could set up the seed distribution there as a central location for us. This large, light and airy room took all our tables easily and, best of all, it was also heated. Our predecessors, the Edinburgh team, had refined the required equipment and we marvelled at the wooden trays, mounted on little legs, that hold the thousands of glassines. The tray design ensures a comfortable working height – no sore backs for us!

Staffing: Our first concern was to recruit enough volunteers to become seed request pickers, to work on a new and unfamiliar task when they could be skiing, enjoying winter sun or keeping warm at home. We set up a rota to focus on the daily quota we would need; twenty-five members came to help on one or more half days across the two-week period, contributing over 800 man hours. Ian and Carole Bainbridge and some members of the Edinburgh group gave us invaluable help at the start. The volunteers were not deterred by the gales – trees came down over the Threave Gardens drive – or snow. We watched the blizzards blast down off the hills and envelope us. It proved to be an unexpected social occasion in the middle of winter as well as an educational opportunity, given the range of seeds.

Shelf-stocking: Each year a pre-determined number of glassines are filled for each listed and named seed. The number is based on previous demand, just like popular lines in a supermarket. We started by filling the

trays with thousands of already prepared seed-filled glassines. Numbers of packets varied from just 4 or 5 for seed in short supply or low demand, to 20 or 30 packets for popular seeds such as *Meconopsis*. Inevitably, some plants were soon being requested more often than in previous years and all the filled glassines had been used. Large brown envelopes of spare donor seed sat below the seed trays awaiting this very need. We set up a seed packeting area and had lessons in how to recognise fertile seed in the donor's envelope, how to remove surplus chaff, and how to measure an appropriate amount of seed into the glassines. This latter was no mean feat, as some fine seed would fly off at the merest hint of a breath. Packeting to keep up with the seed request pickers was quite a race on most days. More admiration for the main seed packeting team!

Home Delivery: SRGC members come from Scotland of course but also from numerous other countries. We set up boxes based on the international postage zones: UK, EU, rest of Europe, USA, Australia and New Zealand … suddenly we realised the global nature of the seed distribution, with seed coming from and going back to members all over the world.

There are international regulations that govern the distribution of seed. This meant that we had to take particular care over the packaging and posting of seeds to certain countries. For example, the USA box was rather daunting as each packet required the three pages of permits within, and a yellow and green customs sticker to go on the envelope. Neil McNulty, the seed distribution treasurer, who sent us the seed requests and accompanying documents, often had to chase up missing pages. Even now, as we write in May, there are five seed requests in packets awaiting proper documentation. Customs authorities in some countries require a complete list of the seeds that are sent. Luckily, SRGC has developed a small computer program to make this task easier for the packers.

Bargain Time: The surplus seed left after the main orders is still full of wonderful varieties. We could not believe that the 16 trays of glassines would gradually empty enough to be condensed into two trays. Yet, over the course of the two weeks the glassines flew off the tables. The final two trays are the ones that you may have seen at the various SRGC shows, giving visitors another chance to be tempted. Whether it is *Hepatica*, *Helleborus* or *Cardiocrinum*, have a go and see what happens! By the end of the distribution, there were still many large envelopes containing excess

Helleborus . . . Hepatica . . .

donated seed. Leftover seed is a valuable source of income for the SRGC and is sold to a major seed supplier. Do please donate as much seed as you can; it will not go to waste. It is also worth remembering that there is a list of donors prioritised by the number of years and the amount of seed contributed. Donors' seed requests are processed before non-donors so if your desired seed is in short supply you have a better chance of success.

Customer Service: February was the month for responding to enquiries and chasing paperwork. Once packets enter the postal system, we have no knowledge of their whereabouts. Several consignments destined for addresses in Europe took much longer to arrive than one would expect and - not surprisingly - some for beyond Europe were delayed in customs. One member received his seed in Mexico at the end of April. A number also sat in a box awaiting permits or USA APHIS stickers – so to avoid this please send **all** the paperwork either with your seed request or by mail the same day. Any online order made in November or December should have paperwork sent by mail **at the same time** so as to arrive by the assembling date of early January.

Cardiocrinum from seed

Full details of the 2015-16 seed exchange are in the Secretary's Pages. Please note the change for seed donation. The seed distribution information is there and will be on the order forms and online. Please read it carefully. The seed distribution has been honed over many years by past volunteers to a well-oiled process. Our group coped well at our first attempt and is confident that it will be able to do the same again next year. We look forward to processing your seed requests in January 2016.

Pulsatilla halleri ssp. *slavica* - number 3395 in the 68th SRGC list

Killer Disease of *Aquilegia*

Carrie Thomas

A new disease is threatening all aquilegias in the UK, and beyond. The south of England is particularly badly affected, with bought plants commonly infected. *Aquilegia* Downy Mildew (ADM) has decimated my own national plant collection. The disease is in Kew and RHS Wisley. Like many new diseases (think Ebola), ADM is extremely virulent, killing plants after infecting others and leaving long-lived spores in the soil. Immediate and drastic action is needed. So that other gardeners and nurserymen may prevent what has happened here, I have produced a series of webpages, starting with the overview: http://www.touchwoodplants.co.uk/aquilegia-downy-mildew.htm

How can the spread be stopped? Early identification and removal of affected plants or leaves may be the only viable 'control' for home gardeners. Prevention is better, so beware infected bought plants; many retail outlets and nurserymen do not yet know about ADM. As growth begins, plants may already be systemically infected. Abnormal whitish-green growth is very distinctive, more erect than normal and with longer leaf stems to leaf surface area. The leaf edges may curl upwards or downwards and eventually die, crumbling away to the main leaf veins. Plants may look sick, unhappy, blasted, blighted or frazzled. Slug slime on plants may indicate infection, as they graze on the mildew itself. If you leave such systemically infected

Top to bottom:

- Systemically infected plants: whiter leaves; more upright; smaller leaf surface to stem length
- A use for slugs! Glistening slime and eaten holes are a useful ADM alert
- Initial infection: subtle yellowy, angular patches are often less obvious than these

plants, not only will they die but meanwhile they will efficiently infect other nearby plants and very likely contaminate the soil with resistant spores that may last decades. Later in the season the signs are different when infection occurs from spores: look for yellowy patches on the leaves. Mottling is angular as it follows the leaf veins, differing distinctly from variegation seen in leaves of the Vervaneana group. In moist conditions the mildew grows out through the stomata and forms a downy covering on the underside of the leaf, releasing millions of spores. The downy growth isn't always easy to see because rain - for example - confuses its look. The yellowy patches are the easiest symptom to look for.

What to do with infected plants and leaves? Burning is best, or bury them in your garden at least half a metre deep, or else use your local authority composting. Do not put them on your own compost.

What can you do to help? I am compiling an online directory of where ADM is found. If you find any signs, please let me know ... even better with a photo of confirmation. This directory may become an important epidemiological tool, so please support it. What else? Even if you have no signs of ADM, please tell other gardeners about it. Talk, email and social media all help. If you want to enjoy the wonderful flowers of *Aquilegia* in the future, act now to protect your own, those in the wild, and those of other gardeners. SRGC members may be growing a wider range of *Aquilegia* species than usual so, if you find any plants that seem resistant, please let me know by email at carrie.thomas@ntlworld.com or, otherwise, phone 01792 522443 for further scientific investigation (I am working with both UK and overseas plant pathologists).

Top to bottom:

- Dark ADM lesions on flowering stems
- Blasted or blighted lowers and buds
- Lesions on pods: the few viable seeds may carry the infection further
- Downiness on leaf underside is confirmation of ADM but is rarely seen

Pavel Křivka has brought this article to our attention. It was first published in *The Gardeners' Chronicle* in 1910. It reveals the stark horror and cruel vicissitudes suffered by some of the most famous of plant collectors even as recently as a century ago.

As we enjoy the beauties of their plant introductions let us spare a thought for the sometimes fatal outcomes of plant collectors' adventures. The article is reproduced here with the same prose as the original, without editorial change, and stands as model of clarity and straightforward story-telling. Only the metric equivalents to heights have been added parenthetically.

The Perils of Plant Collecting

George Forrest

THE
Gardeners' Chronicle
No. 1,221.—SATURDAY, May 21, 1910.

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THE PERILS OF PLANT-COLLECTING.

FEW realise the great hardships and dangers which have to be faced in order to secure new plants for cultivation in Europe. In the warmer regions there is danger from miasma, fever, animals and snakes. Not infrequently too, the collector has to seek his specimens among savage or semi-civilised peoples, who, in most instances, strongly resent his intrusion into their midst; thus seldom a year passes without toll being exacted in one way or another.

I will describe an incident I experienced whilst plant-collecting in Western China. In the N.W. corner of the Chinese province of Yunnan, where China, India and Tibet meet, and by the banks of the great Mekong river, at an elevation of 5,000 feet (1500 m), was the French Catholic mission station of Tzekou. It is a country of mighty rivers; there, in a single degree of longitude, are four of the mightiest in the world, the Yangtze, or River of Golden Sand, the Mekong, the Salwin and the

Irrawaddy; and of vast mountain ranges which tower up between the parallel rivers to far above the limit of eternal snow, which, at that latitude, (28° N) is about 17,000 feet (5200 m). The narrow valleys, broken by cross ridges and great spurs, are cut off from each other by difficult and dangerous passes, closed for half the year by snow. The great rivers, which flow through funnel-like gorges, are quite un-navigable; the upper Mekong can only be crossed by bridges consisting of a single rope composed of split bamboos, across which passengers are slung, trussed up with leather thongs like chickens ready for the spit. Numerous tribes, nearly all of Tibetan origin, have settled and built their huts among the valleys and ridges. The diversity of customs, languages and religions in this little-known corner of the world is truly remarkable; like the slopes of the Caucasus, it might be called the country of the hundred nations. Here and there in the folds of the mountains the Lamas of the yellow sect have established huge gombas, or lamaseries, and, by a combination of force and fraud, have become the real masters of the country; they terrorise the poverty-stricken and superstitious peasantry, and pay little or no regard to the nominal sovereignty of the Celestial mandarins.

A Plant Collector in China. Portrait of Mr. George Forrest taken in Talifu, May, 1905.

In the summer of 1895, I found myself collecting in these mountains, my headquarters being with the hospitable and venerable chief of the Tzekou mission, Pere Dubernard. He first settled at Tzekou when Napoleon III was at the height of his power, and he had never left the country since. The region was unsettled, the Lama world around had been disturbed by the British invasion of Lhassa in 1904, and still more rudely shocked by the attempt of the Chinese to establish themselves at Batang, a small town on the great road from Szechuan to Lhassa. These circumstances led to a rebellion of the Batang Lamas, and the murder, with all his followers, of a high Chinese official at Batang in March of that year. At the same time, the French missionaries stationed there, with all their converts, were killed, and the mission stations destroyed

The trouble was not long in spreading south to Atuntze, a small Chinese-Tibetan trading station, situated on a terrace high above the left or east bank of the Mekong, and only two-and-a-half days' journey from Tzekou, which nestled under the cliffs close to the right bank of the Mekong,

in latitude 28° N. Chinese officials and troops were sent to Atuntze in April to restore order, but it is needless to add they only made confusion worse confounded, and in a few days they were completely hemmed in. Rumours and counter-rumours poured into the mission at Tzekou day by day, adding to the difficulty of our situation, and the terror of the native Christians. It soon became clear that the Lamas meant business, and were determined to pay off old scores of jealousy against the missionaries, who had endeavoured for so many years, not without success, to deliver the people from the moral and material chains of Lamaism.

Even our friends among the Tibetans fell away from us or proved false. The mission house was indefensible, and, if defensible, we had no one to defend it save two aged French priests and myself. Therefore, when on the evening of July 19 the news came that the town of Atuntze had fallen, that the Chinese troops had been wiped out almost to a man, and that the lamaseries were all up and concentrating their forces to attack Tzekou, immediate flight became necessary.

The rising moon that night saw us making our way by a narrow and dangerous track along the right bank of the Mekong, the two Fathers on their mules, and myself and the little band of native Christians on foot; on our left roared the Mekong in furious flood, on our right rose the great Mekong-Salwin dividing range. We hoped to reach the village of Yetche, 30 miles to the south on the left bank of the river, where there was a friendly chief and some Chinese troops; but, unfortunately, as in the dark we passed the lamaserie of Patong, owing to a noise made by some of our party, we were detected, and a shrill signal whistle was sent across the river to warn the countryside of our escape. Early next morning, at the next village, we were told that the enemy, by executing a forced march, had crossed the river to the south, and had raised the people there, thus cutting off our retreat. The local headman, a drunken and treacherous rascal, found many excuses to delay our flight, and thus we lost more valuable time. Eventually we got away from him, and proceeding early in the forenoon we reached a height to the south of the village. From this point we had a clear and extensive view looking to the north, and saw a great column of smoke rising in the still morning air over the site of Tzekou. Then our last hope of escape left us, and we knew the enemy was hot on our track. Descending from the height into the next cross valley, I was for pushing on as long as we had strength left to do so, hoping that we might be able to break through to the south before the enemy had time to form a complete cordon around us. However, after the sight of the destruction of their home, the last vestige of spirit seemed to leave my two companions; they became utterly despondent and began to make preparations for the worst, insisting on making a stop by the side of the stream in the valley for the double purpose of holding a meeting with our followers, and taking some food. So dangerous was the situation that, whilst my companions were engaged at their devotions, I left them and

ascended a small auxiliary spur to reconnoitre. To the north I had a clear view of the crest of the ridge we had descended, and had not long to wait ere my expectations were realised. Suddenly there appeared a large number of armed men running at full speed in Indian file along the path we had just traversed. I gave the alarm at once and immediately all was confusion, our followers scattering in every direction. Père Bourdonnec became completely panic-stricken, made his way across the stream, by a fallen tree, and, despite my attempts to stop him, rushed blindly through the dense forest which clothed the southern face of the valley. However, escape in that direction I was sure would be impossible, as our delay had given the enemy time to mature their plans and close in on us; the Père had not covered a couple of hundred yards ere he was riddled with poisoned arrows and fell, the Tibetans immediately rushing up and finishing him off with their huge double-handed swords. Our little band, numbering about 80, were picked off one by one, or captured, only 14 escaping. Ten women, wives and daughters of some of our followers, committed suicide by throwing themselves into the stream, to escape the slavery, and worse, which they knew awaited them if captured. Of my own 17 collectors and servants only one escaped.

Portrait of Mr. George Forrest taken in Talifu immediately after his escape from the lamas.

The valley in which we were surrounded was a rift in the hills some four miles long by one and a half broad, closed to the east by the Mekong, and to the west by the dividing range, while to the north and south were high ridges occupied by the enemy, and thickly clothed with Pine and mixed forests. When I saw all was lost I fled east down a breakneck path, in places formed along the faces of beetling cliffs by rude brackets of wood and slippery logs. On I went down towards the main river, only to find myself, at one of the sharpest turns, suddenly confronted by a band of hostile and well-armed Tibetans, who had been stationed there to block

the passage. They were distant about a hundred yards, and sighting me at once gave chase. For a fraction of time I hesitated; being armed with a Winchester repeating rifle, 12 shots, a heavy revolver and two belts of cartridges, I could easily have made a stand, but I feared being unable to clear a passage before those whom I knew to be behind me arrived on the scene. Therefore I turned back, and after a desperate run, succeeded in covering my tracks by leaping off the path whenever I rounded the corner. I fell into dense jungle, through which I rolled down a steep slope for a distance of two hundred feet before stopping, tearing my clothing to ribbons, and bruising myself most horribly in the process. I then got behind a convenient boulder and made every preparation for a stand should they succeed in discovering my ruse, which I never doubted but they would. Fortunately, however, they did not find me, and, presuming I had continued my course up the valley, rushed past my hiding place. There I lay till night fell, when I attempted to scale south, but, after toiling up 3,000 feet (900 m) of rock and through forest and jungle, I found a cordon of Lamas, with watch-fires and Tibetan mastiffs, which precluded all hopes of escape in that direction, and, as daylight approached, I had to return to my hiding place by the stream. The following eight days and nights were hopeless repetitions of the first; the days were spent in hiding in the most convenient spot I could find at dawn, the nights in trying to elude the watchfulness of my enemies and get away south. For that time, a period of nine days, all the food I had consisted of two dozen cars of Wheat and a handful of parched Peas, which I providentially found where they had been dropped by a fugitive or by some of the Lamas. During some of these days I was kept continually on the move, tracked and hunted like a wild beast by the Lamas and their Tibetan adherents, who thirsted for my blood. On the second day I was forced to discard my boots to avoid leaving a distinctive trail, burying them in the bed of the stream; another day I had to wade waist deep for a full mile up stream to evade a party who were close on my heels; once a few of them came on me suddenly and I was shot at, two of the poisoned

Pedicularis mussotii
When the Lamas besieged Batang, they burned down the mission chapel, and killed the two missionaries, Père Mussot and Père Soulié.

arrows passing through my hat; another time my hiding place was discovered by a Tibetan woman, one of many who had been sent out to track me down. Once as I lay asleep under a log in the bed of the stream, exhausted by my night's fruitless journey up the mountain side, I was awakened by the sound of voices, and a party of 30 Lamas in full war paint crossed the stream a few yards above me. Armed as I was I could have shot down most of them, but, though enraged as I was at the time, I held myself in check, as I knew that to fire but one shot would be to bring a hornet's nest about me. My only chance was to keep still.

At the end of eight days I had ceased to care whether I lived or died - my feet swollen out of all shape, my hands and face torn with thorns, and my whole person caked with mire. I was nearly dead through hunger and fatigue, and on the evening of the eighth day and morning of the ninth was quite delirious for a time. Then I knew the end was near, and determined to make one more bid for life. In the valley there happened to be two small villages of four to six

Pedicularis monbeigiana
(Photo: Marijn van den Brink)
After the 1905 revolt, Father Monbeig later moved to Cizhong, built a church, founded a teacher training convent and devoted his free time to plant collecting. In 1914 he was murdered near Litang. More than twenty species have been named for him, including *Deutzia monbeigii* and *Cornus monbeigii*.

huts each, peopled by Lissoos, a sub-tribe of Tibetans, and I decided on holding up one of these, to force the inhabitants to give me food. This plan I carried out on the evening of the ninth day. Fortunately, instead of opposing me, the people proved friendly. The one and only food of these people consists of parched Barley, or Wheat coarsely ground; it is called "tsaniba." This they offered me, and having but little self control, after such a long starve, I partook of it ravenously, in fact to such an extent that I almost died of the effects. As it was, to add to my trials, I brought on inflammation of the stomach, from which I suffered for many months. The headman of this village proved one of the best friends I ever had, and at once commenced making arrangements to smuggle me out of the country. After four days spent in restful hiding, we descended the valley until we reached its junction with that of the Mekong. Here we were met by the headman of a village situated there, and he informed us that though the majority of the rebels had returned north, there were still many powerful bands scouring the countryside in search of me; in fact, one had spent the previous night in his village. He suggested we should go into hiding until after sunset, when he would send out some of the native hunters to escort us to a farmhouse a few miles distant, where we could spend the night in peace; then, on the following day, with guides he would send to me, I was to ascend west to almost the summit of the dividing range, and striking south we should skirt the troubled region and thus reach safety. This plan

Primula bracteata ssp. *dubernardiana* (Photo from Issue 124: Robert Rolfe)
Père Étienne-Jules Dubernard suffered a grisly end during the 1905 revolt.

we eventually carried out, but the misery of it all is entirely beyond my powers of description. It was the middle of the rainy or summer season, and I soon found myself in the thick of the worst downpour Yunnan had known for a generation. Up and up we climbed, struggling through cane- brakes, cutting our way through miles of Rhododendrons, tramping over alps literally clothed with Primulas, Gentians, Saxifragas, Lilies, &c., for these unknown hillsides are a veritable botanists' paradise, till we reached the snowfields on the backbone of the range, at an elevation of 17,000 to 18,000 feet (5200 to 5500 m). We had no covering at night, no food but a few mouthfuls of parched barley, and the rain and sleet fell in such deluges that to light a fire was impossible. On reaching the summit we turned south, travelling in that direction for six days, over glaciers, snow and ice, and tip-tilted, jagged, limestone strata, which tore my feet to ribbons. On reaching this point, we hoped we had got beyond the danger zone, and commenced our descent eastwards towards the Mekong. Down, down we went, over sharp, jagged rocks and through Bamboo brakes, until we reached the inhabited zone at about 9,000 feet

Rhododendron souliei (Photo: Hans Eiberg)
Jean André Soulié collected thousands of plants during his career as medical missionary and botanist; he was a colleague of the famous botanist, Père Jean Marie Delavay. His career was cut short by his murder in the 1905 revolt at the age of 47. Among others, he is remembered in names such as *Aster souliei* and *Primula souliei.*

(2600 m), and here, to put the finishing touch to my misery, I seriously hurt one of my feet. Round most of the villages, the inhabitants are in the habit of placing on the paths around their Maize fields what they name "panji " These are sharpened and fine-hardened pieces of Bamboo of 12 to 18 inches in length (30 to 45 cm); they are buried in the ground fully three-quarters of the full length, the sharpened end being upwards, and covered loosely with soil or leaves. In approaching one of the villages by an exceptionally muddy path, I unfortunately stepped on one of these "panji." Had I been in a normal condition of health, I might possibly have had strength enough to have thrown myself back in time, but I was so weakened by the experiences I had passed through and by exposure, that I simply fell forward on it; the spike, fully an inch in breadth, passing between the bones of my foot and protruding a couple of inches from the upper surface. I suffered excruciating agony for many days, and it was months before the wound healed completely.

Finally, we arrived on the right bank of the Mekong opposite the large village of Yetche. The chief of this village was a friend of mine. My troubles then were almost over. This excellent man came across the river, at great risk to himself, bringing clean cotton clothes for me, besides a large quantity of food, such as pork, eggs, chickens and cakes, and at last I got what I required more than even those, a change of clothing, a good wash and a night's rest.

As bands of Lamas were still prowling about near Yetche, disguised as a Tibetan and accompanied by my faithful guides and others, I continued my course down the right bank of the river till, four days later, I arrived opposite the little Chinese-Tibetan township of Hsias Wei Hsi, where Chinese troops were stationed. After much delay, everyone even there being panic-stricken, I managed to get some of the people to come down and assist me over the single rope

Swertia mussotii (or maybe *S. punicea*? Photo: SRGC Forumist "Arisaema") It is ironic that this plant, associated with a murder, should now itself be an endangered plant, collected and used mostly for its medicinal effects in rheumatism, osteoarthritis, hepatitis, gastritis and cholecystitis.

crossing the river at that point, and on reaching the town found another missionary (Père Monbeig), who had also escaped from a station in the west. He and the Chinese officials welcomed me as one returned from the dead, and a few days later he and I, accompanied by an armed escort of 200 Chinese soldiers, commenced our journey south to the nearest city—Talifu—which we reached in safety in the course of 19 days.

Later, I received from the military mandarin, named Li, a detailed account of the death of my two companions. As I mentioned, I saw Père Bourdonnec shot down; later the body was disembowelled, beheaded and quartered.

Père Dubernard escaped for two days, but was eventually run to earth in a cave farther up the valley. His captors broke both arms above and below the elbow, tied his hands behind his back, and in this condition forced him to walk back to the blackened site of Tzekou. There they fastened him to a post and subjected him to most brutal mutilation; amongst the least of his injuries being the extraction of his tongue and eyes and the cutting off of his ears and nose. In this horrible condition he remained alive for the space of three days, in the course of which his torturers cut a joint off his fingers and toes each day. When on the point of death, he was treated in the same manner as Père Bourdonnec, the portions of the bodies being distributed amongst the various lamaseries in the region, whilst the two heads were stuck on spears over the lamaserie of the town of Atuntze.

I was reported dead for almost three weeks, but, fortunately, though there seemed no reason to doubt the authenticity of the information, the news was withheld from England for a time by the consuls and the authorities at the Foreign Office, on the chance that I might have escaped; thus my family mourned my loss for only a week.

Although escaping with my life, I lost everything I possessed, all my camp equipment, ammunition and guns, cameras, stores; in fact, my all, with the exception of the rags I stood in, my rifle, revolver and two belts of cartridges.

What was much more serious, I lost nearly all the results of a whole season's work, a collection of most valuable plants numbering fully 2,000 species, seeds of 80 species, and 100 photographic negatives. It is difficult to estimate the value of such a loss; coming from an entirely unexplored area, probably one of the richest in the world, there was undoubtedly a very large percentage of new species. I had sent scraps of specimens home in my letters, and about a dozen of those, or one-third of the number, proved to be new species. A magnificent new species of Meconopsis, now bears the specific name "speciosa"; another, even finer plant, was a climbing Rhododendron, having the habit of Ivy, with minute foliage and large, fleshy, crimson flowers.

From *The Gardeners' Chronicle*, May 21, 1910

The RHS Meconopsis Trials

Ian Christie

Since the formation of The Meconopsis Group in 1998 the study of the Big Blue Poppies has continued, with the introduction of several outstanding named clones raising enthusiasm for these aristocrats from history. We are very fortunate to have dedicated gardeners and nursery people who have committed so much time and energy cultivating *Meconopsis*. I pay particular tribute to several people without whose help any trials would have been impossible: Dr Evelyn Stevens, John Mitchell from Edinburgh Royal Botanic Gardens; Beryl McNaughton; Jim Jermyn; Geoff Hill and more than a hundred members across the world, all lovers of Big Blue Poppies.

Meconopsis have long been exhibited at SRGC shows and, after *Gardening Scotland* in 2009, various selected plants were put forward to the Joint Rock Committee for trial, with members from the Royal Horticultural Society (RHS), Alpine Garden Society (AGS) and SRGC all to be present. The awards considered at these meetings were for exhibition as flowering plants, either a Preliminary Commendation (PC) or an Award of Garden Merit (AGM). This structure gave new enthusiasm to the Group, which had set out to clarify as many Big Blue Poppies as could be individually

Facing: *Meconopsis* 'Slieve Donard' in the sloping trials area at Harlow Carr
Below: *Meconopsis* 'Inverewe'

identified, especially those within the George Sheriff Group - with others well known from history.

The trials for RHS Awards of Garden Merit were held at the Harlow Carr Gardens in Harrogate, with satellite observation gardens at RHS Wisley, RHS Rosemoor, the Lakeland Horticultural Society's Holehird Gardens at Windermere, and the garden of Evelyn Stephens at The Linns near Dunblane. In the summer of 2010, twenty-three selected and named clones were assembled. Three plants of each were produced by Evelyn Stevens, Beryl McNaughton and Christie's Nursery, with three seed-raised *Meconopsis* 'Lingholm' from Graham Butler's Rumbling Bridge nursery. John Mitchell delivered all these candidates to Harlow Carr Garden.

Meconopsis 'Bobby Masterson'

The Infertile Group

The Meconopsis Group selected plants for this group. *M*. 'Slieve Donard' was the only entry to have a previous AGM and it was adopted as our standard for purposes of comparison with *Meconopsis* 'P. C. Abildgaard', *M*. 'Bobby Masterton', *M*. 'Bryan Conway', *M*. 'Crarae', *M*. 'Crewdson Hybrid' and *M*. 'Mrs Jebb'.

The George Sherriff Group

In this group were *Meconopsis* 'Ascreavie', *M*. 'Barney's Blue', *M*. 'Dalemain', *M*. 'Huntfield', *M*. 'Jimmy Bayne' and *M*. 'Susan's Reward'.

The Fertile Group

In this group were *Meconopsis* 'Lingholm', *M*. 'Louise' and *M*. 'Mophead'.

Stand-alone Cultivars

Individual plants were *Meconopsis grandis*, *M. grandis* 'Himal Sky', *M*. 'Inverewe', *M*. 'Keillour', *M*. 'Marit', *M*. 'Stewart Annand', *M*. 'Strathspey' and *M*. 'Willie Duncan'.

Meconopsis 'Marit'

Several prominent members of the RHS, AGS and SRGC Joint Rock Committee contributed to our group. Mary Ridley kindly acted as our chair and proved herself very able to keep everyone in order. Some other Meconopsis Group members were co-opted from the second year when we were joined by Andrew McSeveny, RHS Trials officer, and Andrew Willocks, Harlow Carr gardener.

All our *Meconopsis* were planted on the trial site selected at Harlow Carr in the late summer of 2009. Several criticisms were voiced about the site. The area had been an old raised rock garden on a steep slope and it was feared that some areas would dry out at the top of the slope whereas others towards the lower end would be wet. All weeds and dead plants had been removed before digging over the area. Andrew Willocks and his team planted the groups of three plants, giving as much space between them as possible. I then visited this site

Meconopsis 'P.C. Abildgaard'

every year to record and photograph the progress of each group of plants. The area did indeed provide a trial, for nowhere could every plant have exactly the same conditions. SRGC, AGS and RHS members attended assessment get-togethers that were arranged and managed by Mary Ridley, and I kept all records from these meetings.

Weather was an important factor at the site and it seemed to follow a pattern similar to that in Scotland. The two years 2011 and 2012 had some extreme conditions: winter lasted for months, followed by strong gales and drying winds. Andrew mulched the plants with composted straw and grass mix so as to retain moisture and suppress weeds, also adding a little fertiliser. The growing plants progressed and stimulated great interest. Despite the early set-backs some showed real potential even at early stages while other tried and tested forms did not do so well. Once again the trial site was questioned as 'not a level playing field' although for me it beneficially showed the general public that *Meconopsis* could grow on a windy hill in a fairly open aspect.

The final judgement day was set for early June 2013. The reliable contingent from Scotland made the journey southward to meet the AGS and RHS members at Harlow Carr. There followed a very deep discussion of each plant, using pictures and the notes taken at the previous annual meetings; reasonable conclusions were reached once each plant was voted on for award of an AGM. Ten plants gained the award, which was for me a satisfactory conclusion to three years of work. No doubt at some time in the future more plants will reach the standard of AGM but for now we must concentrate on propagating and promoting these ten.

The *Meconopsis* that were awarded an AGM

This short account of the *Meconopsis* trials cannot cover the interesting detail given in the final RHS trial report, which is available online and which I particularly recommend members to read at leisure at http://apps.rhs.org.uk/planttrials/TrialReports/Meconopsis%202010-2013.pdf. The Meconopsis Group web site www.meconopsis.org also contains full details of the awards and portrays the conditions of the trials. Our cordial thanks go to the RHS, the AGS and the SRGC for all their support in the trials.

Infertile Blue Group:

Meconopsis 'Slieve Donard', confirmed AGM.

This plant set the standard for these trials and its award of garden merit was, perhaps predictably, confirmed. In 1935 Alec Curle raised this sterile clone in Edinburgh by crossing *M. grandis* with *M. baileyi*. It gained its name from the Slieve Donard nursery around 1967. It is a beautiful big blue poppy cultivar that is now grown very widely. When it first appears, there is a tiny rosette of upright elliptical leaves with a furry coat of long

white-tipped hairs, which with maturity become less prominent. Basal and flower-stem leaves are elliptic with a sharp tip and smooth or entire margins, or are weakly sinuous with shallow and sometimes minutely toothed indentations. There are four mainly overlapping silky and ovate petals. In the middle of each flower is a pronounced boss of golden stamens that become brown when older, with a projecting long and slender ovary. Maturing fruit capsules become covered with conspicuous and long spreading bristles but in this sterile plant, contain only aborted and non-viable seed material.

Infertile Blue Group:

Meconopsis 'P.C. Abildgaard'; *M*. 'Bobby Masterton' and *M*. 'Mrs Jebb'

Meconopsis 'P.C. Abildgaard' is an excellent sterile clone with cerulean flowers. Troels Juhl introduced this cultivar to us after he saw it in his college garden where it had been raised from Danish Primula Society seed. Evelyn Stevens received a division that turned out to be unique, vigorous and easily propagated. It was named for the founder of the college where it originated and has proved very popular. The rosettes of leaves with sharply defined marginal teeth come out much later than 'Slieve Donard' or 'Bobby Masterton', as do the flowers on their tall and elegant stems. The ample leaves throughout the plant with their regularly spaced marginal teeth are handsome garden features and the cultivar is notably floriferous. Fruit capsules are similar to those of 'Slieve Donard'.

Meconopsis 'Bobby Masterton' is a strong and clump-forming cultivar, long cultivated in Scottish gardens. The flowers, similar to those of *M*. 'Slieve Donard', are distinguished by the spring and adult leaves and the fruit capsules. The spring leaves have intense red-purple pigmentation over both surfaces, and less obvious hairs. The mature basal and flower-stem leaves are narrow and elliptic, with clear and shallow teeth along their margins. The bristles covering the maturing fruit capsules are less dense and shorter (about 2 mm or slightly more) than in 'Slieve Donard'. The carpels join with a bald suture whereas 'Slieve Donard' has bristly sutures.

Meconopsis 'Mrs. Jebb' and the related *M*. 'Crewdson Hybrid' have been grown for a long time. Both are strong and propagate easily by division. The sideways-facing deep blue flowers of these hybrids never reveal the purple seen elsewhere. 'Mrs Jebb' has shallow flowers, a little smaller than other cultivars, and the stout-shaped pleated petals overlap to create a wavy margin. The leaves are tinged red-purple and have a hint of brown that is unique to 'Mrs Jebb' and 'Crewdson Hybrid'. Both cultivars flower slightly later than 'Slieve Donard' and 'Bobby Masterton' but they precede the George Sherriff Group. In windy sites these plants are valuable because they are shorter than many others.

Facing: *Meconopsis* 'Susan's Reward'

Meconopsis 'Keillour'

George Sherriff Group:
Meconopsis 'Dalemain' and *M.* 'Susan's Reward'

The George Sherriff Group is so-called because its members are believed to derive from seed collected by Sherriff in1934 in eastern Bhutan with the collection number *Meconopsis grandis* GS600 (strictly, L&S600). Probably hybrids formed in gardens, they are both beautiful and useful because they flower late.

The George Sherriff Group clones are readily identified after they first emerge in spring. They may be recognised immediately by their characteristic rosettes of elliptic new leaves, red to purple pigmentation on both leaf surfaces, and their dense coat of short and soft hairs. The pigmentation disappears as the leaves mature. Broad stemmed leaves fill the lower storey of mature plants, while wonderful blue flowers crowd the upper storey. The short fruit capsules are barrel-shaped and thick with short pale-coloured bristles and have a short or medium style and largish stigma.

M. 'Dalemain' and *M*. 'Susan's Reward' are two of four very similar clones in this group.

Meconopsis 'Dalemain' grew over large areas in Dalemain Garden in the English Lake District and was named and sold as the garden's eponymous blue poppy.

Meconopsis 'Susan's Reward' was brought to our attention by Sue Sym. It is said to grow well in the drier climate of the east of Scotland. Sue was given the plant by Betty Sherriff of Ascreavie and afterwards grew it in gardens in the Scottish Borders and Edinburgh. The plants are rich in leaves and have attractive bowl-shaped flowers, often deep blue, but sometimes – even within the same garden - mauve or purple.

Fertile Blue Group:

Meconopsis 'Mop-head'

Meconopsis 'Mop-head' has *Meconopsis grandis* in its ancestry. Liz Young raised it as *M. grandis* about thirty five years ago from SRGC seed. She selected one of the numerous seedlings and named it 'Mop-head'. An important feature is that among the big blue poppies it is one of the earliest to flower, with very large satin blue flowers some 15 cm across, and produces a few good divisions in spring.

Stand-alone Cultivars:

Meconopsis 'Inverewe', *M*. 'Keillour' and *M*. 'Marit'

Meconopsis 'Inverewe' is a distinctive clone from John Anderson at Inverewe Garden. It is readily propagated by division. The basal leaves of the newly emerged rosette are quite distinctively and strongly pigmented red to purple. As they mature and become longer they lose pigmentation and the petioles lengthen. Five or six flowers come from the false whorl. The unusual pedicels reflex strongly near the flower, so that flower buds and the newly opening flowers themselves are downward-facing. This attitude persists as most of the pedicel lengthens. A delightful tiered appearance results from the sequential opening of the flowers within the false whorl and as they mature the flowers tend to face more sideways. The short fruit capsules are barrel-shaped with a dense bristle covering.

Meconopsis 'Keillour' is a very easily recognised clone that came to our attention from SRGC member Stuart Pawley. Stuart was given it by the gardener at Keillour Castle, home of the plant-loving Knox-Finlays who had raised this unique cultivar. The plant shares many otherwise unique features with an unnamed clone, *Meconopsis* MG52. The leaves at any stage are pale green and oblanceolate. The stem leaves are relatively small and decrease in size up the stem. False whorl leaves are small and frequently puckered. The flowers face noddingly forward with broad and crinkly overlapping petals, forming undulations along the flower edges. The flowers have white centres that shade gently into the dark purple to blue

outer parts. The stamens are unusual, being smaller than other forms and mutating from gold to brown. The unusual fruit capsules are barrel-shaped and strongly grooved between the carpel sutures.

Meconopsis 'Marit' is one of several white forms - and the best, introduced to the United Kingdom thanks to Finn Haugli. It came from a cross of *M*. 'Lingholm' and *M*. x *sarsonsii*, which produced three sterile seedlings, one becoming 'Marit'. The rosette forms early and as it matures a leafy flower stem develops, topped with a false whorl. Short pedicels give a neat finish to the four or so flowers that form above the whorl. The plant has an elliptic maturing capsule with a stout style and prominent stigma while being distinctively and densely covered with long white-tipped ginger bristles.

Meconopsis grandis Cultivars:

Meconopsis grandis 'Himal Sky' was included despite a lack of enough plants around for sale at the time.

Meconopsis grandis 'Himal Sky' may have originated from Cluny Garden in Perthshire and has been with us a considerable time. It is long-lived, propagates well by division and sets fruit capsules with abundant viable seeds. This clone flowers very early, even before *M*. 'Mop-head' so has few big blue collaborators to cross with. Basal rosettes are slender-elliptical with almost smooth margins and without the red-purple pigment of some other clones. The flower-stem is short; it carries one or two stem leaves and a false whorl of two or three sessile leaves. A single flower comes from the false whorl when the plant is about 30 cm tall and has four, five or six mauve-blue petals, overlapping to give a wavy outline. After flowering, the pedicel goes on to lengthen greatly, terminating with the ripening fruit capsule. The capsules are large and - unlike cultivated hybrids - is glabrous, without bristles or hairs.

RHS Awards of Garden Merit Criteria

Members may like to know the criteria that have to be met for a plant to receive the RHS AGM. They are entirely pragmatic and are aimed at bringing good plants into prominence for garden use. A plant must be consistently:

- excellent for ordinary use in appropriate conditions
- available
- of good constitution
- essentially stable in form and colour
- reasonably resistant to pests and diseases.

Facing: *Meconopsis* 'Mop-head'

Exquisite Patagonian Orchids

Martin & Anna-Liisa Sheader

Patagonia, the southernmost region of South America, supports an interesting and often beautiful array of plants, not least among them the orchids. Most of these are found in open woodland, woodland margins or clearings and by rivers and lakes, but a few can be found on open steppe and mountain slopes. During our wanderings through Patagonia, since our first trip in 1997, we have spent most of our time exploring the drier mountains of Argentine Patagonia and the adjacent steppe. These mountains support a richer alpine flora, our main interest, than the wetter Chilean mountains to the west. There is a marked latitudinal precipitation gradient in Patagonia. Between the Pacific Ocean and the Andean peaks, moisture-laden air from the Pacific Ocean deposits 2000 to 7000 mm of rain or snow annually. To the east of the mountains, the steppe receives a mere 60 or 240 mm. Woodland can establish and grow where annual precipitation exceeds about 450 mm and so, with higher rainfall and therefore a greater area of suitable woodland habitat, Chilean Patagonia supports a more diverse orchid flora than does Argentine Patagonia, but, for the purposes of this article, we are focussing on the Argentine side of the Andes where we have botanised regularly and are more familiar with the plants.

The orchid flora of Argentine Patagonia is not very rich, the area supporting only 22 species. This is roughly half the number of orchid species found in the United Kingdom, which is only about one third the area of Argentine Patagonia. However, most of this land area consists of steppe, much of it dry semi-desert, unsuitable for most orchids; even so, orchid diversity in the area is low. As if to make up for the low number of species, most of the orchids that grow here are large-flowered, spectacular and beautiful. All are terrestrial.

Five genera of orchids are recorded in our area: *Chloraea*, *Gavilea*, *Codonorchis*, *Brachystele* and *Habenaria*; these last three are each represented by a single species only. All flower in spring or early summer, November to January in the Southern Hemisphere. *Chloraea* and *Gavilea* are closely related, and a recent molecular study indicates that there is a strong argument for their merger into a single genus. Both are nectarless and attract insects by deception, many being scented and producing perfume from secretions on the labellum (lower lip). Although relatively few species have been studied so far, at least some have been shown to be completely self-fertile and some others are able to self-pollinate. Pollinators are usually Hymenoptera (bees and wasps), Coleoptera (beetles) or Diptera (flies).

Chloraea

By far the largest genus with over fifty species, ranging from Peru in the north to Tierra del Fuego and the Falkland Islands in the south, is *Chloraea*. The centre of distribution for the genus is central Chile. In Argentine Patagonia there are only ten species, including two of the commonest Patagonian orchids, *C. magellanica* and *C. alpina*. Chloraeas differ from gavileas in a number of floral characters, the most obvious being the length of the column (the united stamens and style), which is 10 to 20 mm in *Chloraea* and less than 6 mm in *Gavilea*. Most chloraeas are robust plants with deep fleshy tuberous roots and large conspicuous flowers.

Chloraea magellanica, the beautiful Porcelain Orchid, is up to about 60 cm high, forming many-stemmed clumps, each stem with up to six large flowers. The whitish sepals and petals are intricately netted in dark green and the labellum has dark green papillae. This is one of the commonest Patagonian species, growing in a range of habitats, and one we expect to see on every trip. Despite this, whenever we find it in bloom, it is difficult to resist taking yet another set of photographs of this most attractive orchid. There are other similar species with netted sepals and petals. *C. fonckii* is rarer and less robust, but has a broader distribution, throughout Patagonia and on the Falkland Islands.

Chloraea magellanica

Chloraea viridiflora (Photo: Caroline Seymour)
Facing: *Chloraea speciosa*
Chloraea alpina

Chloraea cylindrostachya

C. speciosa, an open woodland species, has green papillae along the margin of the labellum, giving it a ragged appearance, and has long elegant sepals and petals. The other "netted" species, *C. viridiflora*, has, as its name suggests, green sepals and petals, with large, flattened, green and button-like papillae on the labellum. We have seen various beetles pollinating this species. In Argentina it occurs at a single locality in northern Patagonia, growing in an open woodland among rocky outcrops beside a large lake.

The other widespread species is *Chloraea alpina*. Where *C. magellanica* is delicately reticulate and subtly attractive, *C. alpina* is startlingly yellow-orange, but amazingly beautiful. As with *C. magellanica*, this species grows in a wide range of habitats but extends further out onto the steppe and higher up mountain slopes than any other of our orchid species. In some areas, close to the border with Chile, we have seen this species growing in spectacularly large numbers. *Chloraea alpina* begins flowering in early spring, and plants can be found in flower over a six-week (or more) period. *C. magellanica* comes into flower about two weeks later. Both species often grow together and hybrids are not uncommon, varying in flower form and colour between the two parents. For hybridisation to occur, the two species must have pollinators in common, remarkable for two species with such different flower colour and structure. In habitat, hybrids such as *C. alpina* x *C. magellanica* set seed, but, of course, these may not be fertile.

Facing:
Chloraea magellanica x *C. alpina*

Chloraea cylindrostachya and *C. leptopetala*, two species which some Argentinian botanists have confused in the past, have many-flowered spikes of greenish flowers, with the labellum covered by many small papillae. *C. leptopetala* is restricted to the extreme south, whereas *C. cylindrostachya* is found in central and northern areas, with no overlap in their distributions. *C. cylindrostachya* is the largest orchid in the area, with solid, upright flowers spikes, 50 to 100 cm tall. In this species, the pollinator is a species of solitary bee, *Colletes araucariae*, a species related to our own rare Ivy Bee.

There are three other *Chloraea* species characterised by longitudinal, parallel lines on the sepals and petals: *C. lechleri*, which has creamy yellow flowers, and *C. philippii* and *C. piquichen* with white flowers. *C. lechleri* is a rare woodland species; the other two are found in more open situations, often by water. *C. piquichen* (syn. *C. virescens*) is arguably the most attractive of the Argentine Patagonian chloraeas, with its tall, many-flowered (up to 15 blooms) spikes. The flowers are large and the labellum of each is clothed with prominent, sickle-shaped, green papillae.

Araucaria woodland, habitat of *Chloraea cylindrostachya* and *C. speciosa*

Gavilea

Unlike *Chloraea*, which is essentially a northern genus, *Gavilea* has its centre of distribution in southern Patagonia. Of the seventeen species in this genus, nine can be found in Argentine Patagonia. Most species are tall (20 to 80 cm) and robust, with many-flowered scapes. Flowers are often slightly smaller than those of *Chloraea* species and the labellum is usually prominently three-lobed. Four species, *Gavilea chica* (syn. *Chloraea*

Gavilea chica

chica), *G. araucana*, *G. wittei* (syn. *G. patagonica*) and *G. glandulifera* are predominantly white-flowered. *G. chica*, as the specific name suggests, is small (rarely more than 30 cm). It has recently been moved from *Chloraea* to *Gavilea* after a molecular study indicated a close relation to a Falkland Island species, *Gavilea australis*. *G. chica* grows in Patagonian bogs, wet meadows or flushes. It is unusual to find it with its flowers fully open during the day, so we think this species might be pollinated by night-active insects.

Gavilea wittei

G. wittei is restricted to the extreme south of Patagonia. In 2011 we saw this flowering by the thousands on open ground around the glacier-fed Lago Viedma. Growing with it, though in smaller numbers, was *G. araucana*, a species that has a broader distribution in suitable habitats throughout Patagonia. Its flowers are characterised by long, fleshy extensions to the lateral sepals which are swept backwards as the flower opens fully. The fourth member of this white-flowered group, *G. glandulifera*, is found throughout Patagonia. The flower spikes are tall, 40 to 70 cm, and the attractive flowers are arranged in a lax inflorescence. Petals and sepals are infused with green, contrasting with the bright orange-yellow labellum lobes. When its flowers are fully open, this is perhaps one of the most delightful members of the genus.

The remaining gavileas are predominantly yellow-flowered: *G. odoratissima*, *G. gladysiae*, *G. littoralis*, *G. lutea* and *G. supralabellata*. *G. odoratissima* forms robust clumps, with its sweet-smelling flowers carried on tall stems. It is a plant of open grassland or woodland margins in the northern half of Patagonia. Its broad orange central labellum lobe

Gavilea araucana Facing: *Gavilea glandulifera*

Chloraea and *Gavilea* habitat at Lago Viedma in southern Patagonia
Facing: *Gavilea littoralis*
Next page, left: *Gavilea gladysiae*
Next page, right: *Gavilea lutea*
Gavilea odoratissima

distinguishes it from the similar *G. littoralis*, in which the lobe is much narrower. *G. littoralis* is a southern species restricted to the far south of Patagonia and the Falkland Islands, where it grows in open meadows or scrub, often close to water.

G. gladysiae is a recently described species (previously confused with a Chilean species, *G. kingii*) found close to the Perito Moreno Glacier in southern Patagonia. With a sizeable Welsh-derived population in parts of Patagonia, Gladys has become a fairly popular name and the Argentinian botanist who described the species named the orchid to honour his teacher, Gladys. This species is known from a few woodland lake margin localities in the south of Patagonia.

The two remaining species are similar to one another and easily confused. *Gavilea lutea* has a congested head of medium-sized, lemon yellow flowers forming a compact spike. It occurs in woodland and by water throughout Patagonia. The closely-related *G. supralabellata* has flowers with a larger labellum and with fleshier green tips to the lateral sepals. Interestingly, the results of a recent molecular study suggest that this species has arisen as a hybrid between *G. lutea* and an unknown *Chloraea* species. Its distribution is limited to southern Patagonia.

Codonopsis and other orchids

The Dove Orchid, *Codonorchis lessonii*, grows in southern Beech (*Nothofagus* spp.) woodland throughout Patagonia, and occasionally in the open. In the Falkland Islands, where there are no native trees, it grows in open heathland. This is a beautiful species, with a single white flower on a short 15 to 20 cm stem. Where it grows abundantly, it carpets the woodland floor in much the same way that wood anemones do in similar British habitats.

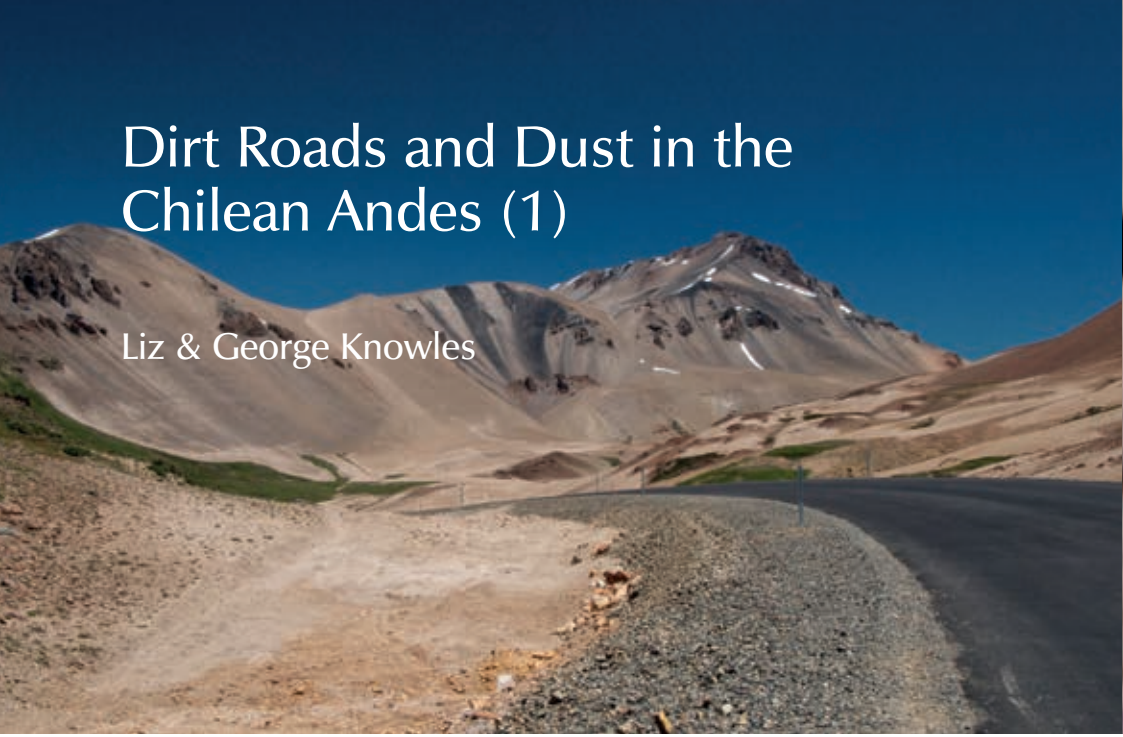
The remaining two orchids, *Brachystele unilateralis* and *Habenaria paucifolia*, are rare woodland species that we have yet to find on our future travels.

Although Argentine Patagonia supports a somewhat depauperate orchid flora, we hope that we have been able to demonstrate here that those species that do occur are spectacular and beautiful. Very few of these orchids are, or have been, in cultivation. All should be fully frost hardy in Britain, and we would expect some of them at least to perform well in the open garden, although a few might be better suited to pot culture. With the current interest in terrestrial orchids and their propagation from seed, hopefully some of these exquisite Patagonian species will become available in the future.

Facing: *Codonorchis lessonii*

Dirt Roads and Dust in the Chilean Andes (1)

Liz & George Knowles



What could be more appealing to anyone living in the January grip of a northern hemisphere winter than three weeks in Chile? The starting point for our foursome was the Farellones ski area, just an hour away from Santiago airport. Three of us had travelled in Argentina in December 2010, when our focus had been on rosulate violas. That trip began in Neuquen and continued northward on the eastern flanks of the Andes towards Mendoza, botanizing *en route* at Pino Hachado, Batea Mahuida, Copahue, Volcan Domuyo and Las Leñas. Now the plan was to parallel that journey on the dramatic western slopes of those same mountains.

In Argentina, following a track leading to the Chilean border at Paso Vergara, we had speculated on what plants grew west of the Andes and how many would be familiar and how many completely new. That query sparked a dialogue and two years later we set out on our Chilean travels. Over three weeks we drove 6000 km, traveling the Pan-American Highway south from Santiago to Temuco and back. Along the way we got to know many dusty gravel roads leading eastward into the Andes. Long drives were unavoidable because, as we also found in Patagonia, roads leading into the mountains are scarce and accommodation is limited away from the Pan-American.

Our starting point, Farellones, is a small ski hamlet at 2300 m. Just before embarking on the 39 hairpin bends that lead up to Farellones, we found *Alstroemeria ligtu* ssp. *simsii* in a wet seep by the road while,

An unknown *Mimulus* found on the Paso Vergara road east of Los Quenes

above 1500 m, *Alstroemeria pallida* grew on the parched hillside, the foliage already shriveled. On a brief visit to this area in December 2006 an acquaintance had suggested that we visit Curve 32, just below Farellones, and it was there on the bare hillside that we had seen *Calceolaria purpurea*, one of only a handful of non-yellow calceolarias seen on these trips. In January 2013 the area was bone dry, the calceolarias long over. However, a red-flowered cactus, *Neoporteria curvispina*, was in flower, also a yellow climber in the *Loasaceae* family, *Scyphanthus elegans*, and a rose-flowered sub-shrub *Viviania marifolia*.

Our plan the next day was to walk from Valle Nevado at 2500 m across a rock-strewn saddle to La Parva and then to follow the road back

Alstroemeria ligtu ssp. *simsii*

Alstroemeria pallida

Scyphanthus elegans

to Farellones, a hike of about 15 km. At Valle Nevado in December 2006, *Barneoudia major* var. *major* was in bloom beside remnant snow patches. In January the snow was long gone and *Viola philippii* grew in the disturbed volcanic grit of the ski hill along with three species of oxalis: yellow *Oxalis erythrorhiza*, *Oxalis compacta* ssp. *berteroana* - endemic to the Santiago area and with orange streaks inside its yellow petals, and pink *Oxalis compacta*. Composites included white *Chaetanthera lanata*, white and pink forms of *Perezia carthamoides*, *Nassauvia lagascae* and *Nassauvia pyramidalis*. *Oreopolus glacialis* grew here at the northern limits of its range. Two umbellifers, *Azorella monantha* and *Azorella madreporica* contoured themselves over rocks, succulent rosettes of *Nastanthus agglomeratus* dotted the bare hill, while mauve *Melosperma andicola* (*Scrophulariaceae*) displayed glaucous blue to green leaves. Two tropaeolums cascaded down the bare rocky slopes close to La Parva: *Tropaeolum nubigenum*, restricted

Valle Nevado: Flowers of volcanic grit. Facing top: *Oxalis squamata* ssp. *berteroana*. Facing bottom: *Perezia carthamoides*. Below: *Viola philippii*

to the cordilleras of Aconcagua and Santiago, and *Tropaeolum sessilifolium*. The latter species came in both white and rosy pink and had distinctive veining in its yellow throat.

We spent two days in the Cajón de Maipo, including a half day at Lagunillas ski hill (2200 m) whence Cerro Tupungato (6570 m) was visible to the North East. The ski hill has existed since 1933 and the less disturbed terrain was a marked contrast to the bare hillsides we had walked over at Valle Nevado. *Alstroemeria pallida* and *Malesherbia linearifolia* grew in abundance beside the gravel road, and higher up on the saddle, pink *Rhodophiala rhodolirion* came into view alongside *Tropaeolum*

Flowers of volcanic grit, on the road to Paso Vergara:
Facing: *Nassauvia lagascae*
Above: *Chaetanthera lanata*
Below: *Azorella monantha*

Tropaeolum nubigenum, La Parva

Tropaeolum sessilifolium, La Parva

Argylia adscendens, Lagunillas

sessilifolium. High on the ridge, mats of orange *Argylia adscendens* (*Bignoniaceae*) grew beside magenta-flowered *Montiopsis sericea*, together with mauve and yellow blooms of *Cruckshanksia hymenodon* (*Rubiaceae*) and salmon-pink flowers and glaucous blue leaves of the composite *Pachylaena atriplicifolia*.

Rhodophiala rhodolirion, Cajón de Maipo

Cruckshanksia hymenodon, Lagunillas

Pachylaena atriplicifolia, Lagunillas

Mutisia subulata, Baños Morales

Baños Morales is the gateway to El Morado National Park and the San Francisco glacier. The mutisias were striking on the approach (above) to the park, especially the scarlet flowers of *Mutisia subulata* which trailed though yellow *Mulinum spinosum*. The distant Volcan San Jose (6110 m) made a beautifully scenic backdrop. Close by, pale pink *Mutisia acerosa* climbed through *Chuquiraga oppositifolia* and further up the trail pale yellow *Mutisia sinuata* draped itself over rocks. It was initially a steep climb but the trail flattened off to 2500 m at the glacier. We saw three species of *Alstroemeria* in El Morado: *Alstroemeria umbellata* grew above

Mutisia acerosa, El Morado National Park

Alstroemeria umbellata, El Morado National Park

Mutisia sinuata, El Morado National Park

Alstroemeria exserens - El Morado National Park - *Tropaeolum polyphyllum*

2000 m – it is endemic to the cordillera east of Santiago; lower down we noted *Alstroemeria pallida*, endemic from Aconcagua to Santiago, and *Alstroemeria exserens*, endemic from Santiago to Talca. *Tropaeolum*

Mimulus luteus, Farellones

polyphyllum, magenta *Montiopsis umbellata* and fragrant white *Junellia lavandulifolia* grew beside the trail. Memorable but decidedly unattractive was the yellow parasite *Cuscuta micrantha* (*Convolvulaceae*), colloquially named "Angel Hair" which sprawled generously over vast numbers of plants in the park.

From Curico we followed the Rio Teno eastwards towards El Planchón. Every mile or so a plume of dust spiralled up, indicating that another truck was roaring towards us from the quarry at the head of the valley, heading to the cement plant in Curico. Beside a small waterfall east of Los Quenes, *Mimulus naiandinus* grew on the moist rock face. This pink and creamy white *Mimulus* was discovered over 25 years ago by John Watson and has been in cultivation for almost as many years. A few kilometres further on we found an unusually pale yellow *Mimulus*, possibly a hybrid, which had pink dots on the lower lip and a wash of pink on the upper. This plant bore no resemblance to the egg yolk yellow *Mimulus luteus* that we found growing at Farellones, which had a pronounced red mark in the lower lip.

Mimulus naiandinus, Los Quenes

Beyond the turnoff to the quarry the flowers became more numerous. Tubular red flowers of *Famatina cisandina* (*Amaryllidaceae*) appeared beside the track, also a small yellow shrub, *Calceolaria segethi*. Further on, a hillside was festooned with the pale pink flowers of *Mutisia ilicifolia*, its holly-like leaves ending in a long curly tail. At a fork in the road, we opted to turn right up a rough steep track. The hillside was a riot of pink *Alstroemeria exserens* and yellow *Tropaeolum polyphyllum*. Our 4WD vehicle was put to the test as we drove on, the road eventually levelled off and mountain peaks competed with flowers for pixel power. Las Lenas and Lago Escondido were just over the border to the east but as we never met any traffic on the road we had no way of knowing if this was the road that actually leads to the border crossing at Paso Vergara. Bi-colour orange and pink *Schizanthus grahamii* grew beside the road and purple *Calceolaria*

Famatina cisandina

Calceolaria segethi by the Paso Vergara road

Hillside *Mutisia ilicifolia*

Roadside *Schizanthus grahamii*

Calceolaria arachnoidea

Viola congesta, pale form, Antuco

arachnoidea stood out with its contrasting grey-green foliage. *Azorella monantha* formed sizeable mats on the rocky hillside, while small grey and brown pebbles provided camouflage for a large colony of *Viola congesta*. Nearby, *Anagallis alternifolia* grew on the boulder-covered slopes.

Anagallis alternifolia

Viola congesta, Paso Vergara road

Following pages: *Oxalis adenophylla*: Habitat and blooms in the Maule Valley, on the way to Paso del Guanaco

Calandrinia affinis

Much to our surprise, the road through the Maule valley had recently been paved through to the border at Paso del Guanaco. This will eventually relieve some of the traffic pressure on Portillo, currently the main border crossing between Chile and Argentina. Fortunately for us, the Argentinians had not yet completed the link between the border and the N40, so there was no through traffic to distract us from the stunning and surreal landscape at the top of the pass or from the vast numbers of mauve and white *Oxalis*

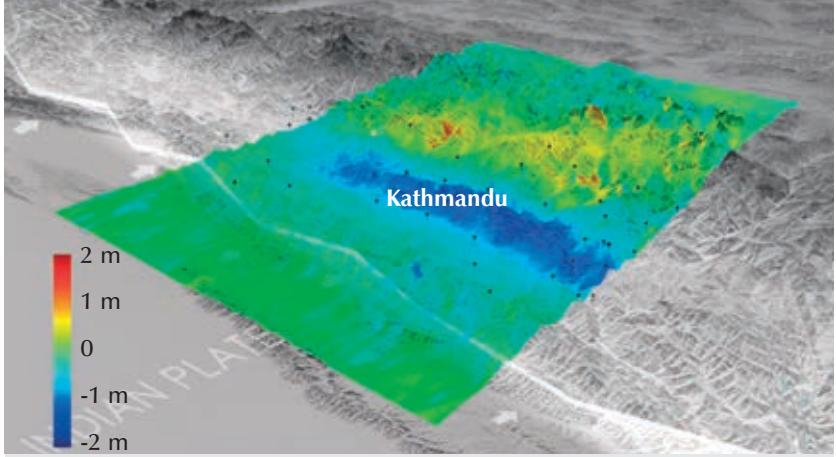
Olsynium frigidum

Oxalis squamata

adenophylla, *Calandrinia affinis* and *Olsynium frigidum* beyond Laguna del Maule. When we returned thirteen days later, the *Oxalis* flowers had all gone over and the mauve-tinted landscape had shifted to brown. The background of stark black volcanic peaks was set against deep blue summer sky. *Oxalis squamata* and *Schizanthus hookeri* appeared in big gaudy clumps.

- We will continue our journey in part 2, to appear in January 2016!

Schizanthus hookeri



As this issue of *The Rock Garden* was being prepared, Nepal was recovering from the effects of its worst earthquake for eighty years. Violent tectonic movements of the Indian and Eurasian plates have moved large parts of the Himalaya by a metre or more both sideways or vertically, with immense disruption and destruction. George Forrest explored the Himalaya at great personal risk a hundred years ago and, clearly, the perils are no less today. The SRGC supported Alan Elliott in his joining an expedition to Nepal in 2012 and it seems appropriate to publish Alan's account this year as a reminder of alpine botanical work that continues far from the relative safety and comfort of our own conservatories, laboratories and gardens.

Exploration of Darchula District, Nepal, 2012

Alan Elliott

For most of July 2012 I was a member of an international expedition, part of the *Flora of Nepal* project, exploring the flora of the Darchula district. We were organised and led by the Japanese Society of Himalayan Botany. The team consisted of six Japanese botanists, Colin Pendry & I from the Royal Botanic Garden Edinburgh (RBGE) and two Nepalese staff from the Nepalese Department of Plant Resources (DPR) who, like myself, were to be trained in field skills.

The Darchula district in the far west of Nepal had been identified beforehand as one of the most under-collected Nepalese regions, with a virtually unknown flora, because of remoteness and the closure of the area during the Maoist insurgency. Adam Stainton travelled some of the

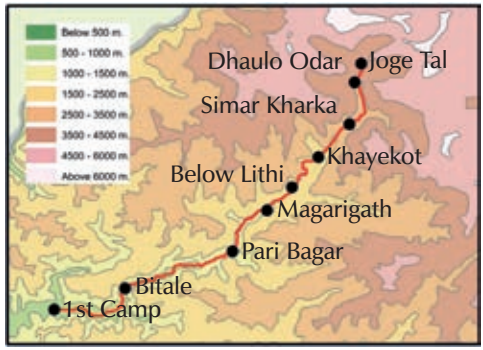
Above: Earthquake movements along the line of sight of the European Sentinel 1-A satellite are as much as a metre or two (Image modified from an original, courtesy of the German Aerospace Centre, *DLR*)

Nepal with the Darchula District highlighted

route in 1965 as he headed west through Nepal on his way to Kashmir. However, he collected very few plants on this trip, although RBGE has his collections from Darchula of *Clematis barbellata*, *Draba radicans* and *Primula drummondiana*. Collating *Clematis* photographs from the National Herbarium in Kathmandu has revealed to me that several Nepalese botanists have been to Darchula District, but it seems that none ventured further north than the valleys beyond Magarigath towards Api.

Our collecting protocols reflected our Japanese leadership. The Japanese collecting number 1211001, for example, may be interpreted as follows. 12 signifies the year 2012. 1 is the first collection trip of the Society of Himalayan Botany of the year. The next digit is unique to the collector; for example, our leader Hiroshi Ikaeda had 1 and I had 7. The last three digits are the collector's sequential numbers.

Ideally we sought seven examples but normally there had to be at least three, for Tokyo, DPR and RBGE. The exception was CITES-listed plants such as *Orchidaceae* with only two examples - both remaining in Nepal. On collection we assigned the full collection number, made notes on the altitude, position and habitat. We also noted and photographed any morphological characters that were likely to be lost on pressing and drying. We then pressed our annotated specimens in sheets of newspaper. On return to camp, we checked the specimens and put them into a larger press, placed on a rack and dried over Kerosene stoves. These stoves generate an intense heat that dries specimens rapidly. This is good in monsoonal conditions but it can make specimens crispy and brittle.



The route up the Chamilaya Nadi: Dethala to Joge Tal

Most evenings were spent transferring data from field books into our laptop spreadsheets and the *Flora of Nepal* database.

Forests of West Nepal

The feel of the vegetation in the far west of Nepal is very different to that of the eastern Himalaya; in general the number of species reduces from east to west. Between 1000 and 2000 m the predominant trees were *Pinus roxburghii*; from about 1500 m to 2500 m *Quercus incana* - *Quercus lanuginosa* appeared. All the vegetation to 2000 m was very degraded by continual chopping for fodder and clearing for agriculture. Above 2500 m *Quercus semecarpifolia* was sometimes dominant. Above 3000 m *Abies spectabilis*, interspersed with *Tsuga dumosa* and *Betula utilis*, dominated.

The tree line, as in much of Nepal, was artificially low because of clearing for grazing. The dense *Quercus semecarpifolia* forest ended around 3500 m and opened up to sub-alpine scrub. However, we found remnants of *Betula utilis* and *Rhododendron arboreum* forest at 4000 m on north-facing slopes, with *Juniperus* on the degraded margins.

The riverine forests in the deep and steep-sided valley beyond Khayekot above 2000 m were a mix of a number of deciduous species including *Acer thomsonii*, *Aesculus indica*, *Alnus nepalensis*, *Juglans regia* var. *kamaonia*, *Betula utilis*, *Rhododendron arboreum*, *R. barbatum* and *R. campanulatum*. The sub-alpine pasture above 3500 m was an impressive dense carpet of flowering herbs. The dwarf shrub flora associated with this altitude at the eastern end of the Himalaya was all but absent - *Rhododendron lepidotum* and *R. anthopogon* were the two most common shrubs, with occasional *Juniperus* species. Finally, the alpine slopes above 4100 m were sparsely vegetated but still contained some interesting plants.

The Expedition

By the time I arrived in Kathmandu our planned itinerary had changed because of landslides closing the road to Darchula. A new route would follow the Chamilaya Nadi from Dethala to the southern slopes of Api and we would partly retrace our steps before being picked up by bus.

5th July

We flew from Kathmandu to Dhangadhi in Kailali District. The airport approach road still showed the evidence of bunkers, trenches and barbed wire from when the insurgency had been at its worst. Nepal was relatively peaceful but Nature was doing its best to take it back. A hired Tata bus took us north the next day from Dhanghadi. For anyone who has never experienced a Tata bus: it is effectively a lorry with seats and no leg room, a beast of a vehicle that can deal with almost any condition and road surface. The journey was painfully slow and we took thirteen hours to travel a little over 150 km. Not far from Dhanghadi the southerly foothills start suddenly. The winding road was single track and often in shockingly poor condition with debris from rock-falls and landslides. We edged past vehicles coming

Aesandra butyracea, the edible fruit of the Chiuri tree

in the other direction, very close to the often precarious drop. The spotter would hang out of of the bus when we passed another vehicle and tap the side. A slow tap meant plenty of room; a franticly fast banging meant we were at the edge. Colin's words of wisdom when he saw me looking out the window down to the valley floor were *"Don't look. It won't change the outcome."* This part of the journey was easily the most dangerous of the trip. The *Kathmandu Post* reported that the death toll on Nepal's roads during July 2012 was well over 150. We survived.

The porters and Sherpas had gone by road from Kathmandu two days earlier with the trek equipment. When we arrived the camp was ready and waiting but it wasn't until the morning that the scale of the operation was apparent: ten botanists, ten Sherpas, a Sherpa leader, a cook, five kitchen staff and sixty-five porters. Our normal routine for the trek was to rise at 6 to check the previous day's collections were dry. After breakfast we'd leave camp around half past seven. The day consisted of walk and collect until the next camp. When we arrived - and this varied from noon to five o'clock - we'd process the specimens, have dinner and be briefed about the following day before turning in. Once we started the trek there were few facilities and some trails were found to be in very poor condition. Daily distances varied because camp had to be made wherever there was enough flat ground with access to water. We realised quickly that our revised itinerary was overly ambitious so decided to try for the southern slopes of Api and to return the same way.

7th July - Dethala to Bitale

Dethala is at 770 m in the warm temperate to subtropical valley floor. For the first two days we walked through agricultural land, relatively well populated, slowly gaining altitude. The vegetation was degraded with land given over to agriculture and the collection of plants for animal fodder. The predominant crop here was rice, which was busily being planted as we headed north; the other main crop was maize although we saw small banana plantations and most homes had a few banana plants.

Our first camp was at a police checkpoint above a partially constructed hydroelectric dam, close to Bitale at 860 m. The path immediately before the camp was a scaffolding walkway attached to a recently blasted rock face. The rock wall was particularly unstable, with small bits breaking off and hitting the walkway and making a pinging noise as they hit the scaffolding. Most locals ran across at full speed because two people had been killed in previous weeks by large falling rocks. We only learned this fact once in camp.

8th July - Bitale to Pari Bagar

Our expedition coincided with the fruiting of an interesting and locally important crop, the Chiuri tree, *Aesandra butyracea* in the *Sapotaceae*. We had opportunity to sample the excellent fruits and learn the importance to the local economy. Each family in the village of Chureni has two trees, from which they obtain about 200 kg of fruit containing 100 kg of seeds yielding about eighty litres of edible oil, making local people completely self-sufficient in oil. We were interested in the commercial potential of this crop and later at DPR we learned that there is a small-scale processing plant at Gokuleshwar which has had but limited success because of the presence of saponins in the fruit.

We wanted the most comprehensive collection of the flora as possible so each of us was assigned specific families to collect so as to prevent duplication. My families were *Ranunculaceae*, *Papaveraceae* and *Leguminosae* but I made *ad-hoc* collections of other plant populations whenever I felt others might miss my finds. Two interesting plants at 900 m, growing in wet limestone rock face under a waterfall, were *Primula floribunda* and *Pentasachme wallichii*. The common, but never abundant, *Arisaema* species in the valley was *Arisaema tortuosum*. It grew amongst rocks and often in the dry stone walls by the side of the track, especially around villages. It is one of my favourite *Arisaema* with its mushroom-scented inflorescence. Camp that night was near at the edge of the large village of Pari Bagar at 1128 m, where we provided the evening entertainment for locals who were content to watch us process specimens and eat dinner.

9th July - Pari Bagar to Magarigath

On the third day the terrain became more rugged. We were over 1400 m and the vegetation began to change from sub-tropical to more montane. Although there was less cultivation and more trees on the valley sides, vegetation was still degraded. The dominant tree was *Pinus roxburghii* which formed open stands on the grassy hillsides. My best find was *Theropogon pallidus* growing amongst boulders in a steep side valley of the Makari Gad.

There was no flat ground for us to camp so we stayed in the attics of three houses in Magarigath, the Sherpas and porters making the best of it as they could. Just beyond the village was the confluence of the Makari Gad and the Chamilaya Nadi, where one of two small mill houses had a

The habitat of *Meizotropis buteiformis*

convenient mill race. Here, after a scorching hot day and after we finished processing the specimens, we bathed and washed clothes in the icy water.

We cracked open a bottle of Laphroaig that evening and had a little *Callo Cheea* (Black Tea). It was a beautiful evening with clear skies and plenty of stars. We watched flashes from a lightning storm light up the sky far off to the south before turning in. At some point during the night the lightning and torrential rain made it up the valley to us and we were extremely grateful to be under a roof, rather than in our tents, until the roof started leaking. The strength of the storm was enough to partially flatten the fields of maize.

Meizotropis buteiformis

10th of July - Magarigath to Lithi

We started by crossing what turned out to be the last "good" bridge in the valley. The steep walk out of Magarigath gave us *Meizotropis buteiformis* on steep grassy slopes below *Pinus roxburghii*. One of my favourites, *M. buteiformis*, is impressive with large trifoliate leaves up to a metre long and a large two metre inflorescence with many bright orange-red pea-like flowers. The vegetation became woodier and less degraded as we continued up the valley. We had planned to camp near Ghunsa but instead we found a site below a large

Myce and the trifoliate leaf of *Meizotropis buteiformis*

The village of Ghunsa

cliff about 500 m below the village of Lithi. *Tagetes patula* and *Verbascum thapsus* were in flower around camp and we jokingly suggested this was a bit of amenity horticulture to improve the trail to Ghunsa.

11th July - Lithi to Khayekot

Up to this point we had followed the river, never being too far away from it. The valley now became a very steep and completely impassable gorge so our trail headed up the hillside to avoid it. Our long day started at 1600 m; the steep path took us up to Lithi at 2100 m before levelling out and steadily rising to Ghunsa at 2265 m. Beyond Ghunsa our highest was 2446 m, whence we descended to the river and the last village in the valley, Khayekot at 2011 m.

The vegetation changed with the 800 m gain in altitude. The trail beyond Ghunsa cut through grassy open hillsides that had many familiars: individuals of *Lilium nepalense* scattered about, thousands of purple-red stemmed *Roscoea purpurea* not yet in flower, *Androsace lanuginosa*,

Lilium nepalense at Ghunsa

Cotoneaster microphyllus, *Spiraea bella* and a robust *Arisaema flavum* growing on the grassy slopes. The most exciting plant of the day was a beautiful little specimen from *Ranunculaceae* that is so unusual that it has so far eluded a name, even to genus level.

A group of school boys coming back from Khayakot stopped to watch us. One carried a *Lilium nepalense* flower. They told us that they like to eat the sweet ripe fruit just before it starts to dry out - perhaps a reason for its scarcity. We told them that we were heading up to Api and learned that they spend a month up there collecting Cordyceps (*Ophiocordyceps sinensis*), the fungus that parasitizes several species of moth larvae. They get about 6000 rupees (US$67) for their work, which helps pay for their education. Did their teachers mind that they missed school? No, because even their teachers go up to make some extra cash.

12th July - Khayekot to Simar Kharka

This section was an easier and steadier walk through mixed broadleaf forest containing *Acer thomsonii*, *Aesculus indica*, *Alnus nepalensis*, *Juglans regia* var. *kamaonia*, *Betula utilis*, *Rhododendron arboreum*, *R. barbatum* and *R. campanulatum*. The valley was at times narrow and very dramatic, especially with the constant roar of the Chamilaya Nadi. Today saw the first flowering, rather than fruiting, *Clematis connata* growing through *Rhododendron barbatum*. Our camp at Simar Kharka (2812 m) was in the forest on an old re-vegetated landslip. This had once been a major event and must have blocked the Chamilaya Nadi for a time. The forest on the hillside above was full of dead trees. We initially thought that they might have been burned to open up new grazing areas but when we went up the following day we saw that only the conifers had been affected, probably by insect damage.

Usually, after camp went up most of the porters disappeared to the closest village for the night, but tonight, beyond the last village, they camped with us.

13th July - Simar Kharka to Dhaulo Odar

I saw and collected some interesting plants today; first of these was *Clematis barbellata* in fruit, growing in riverine forest while nearby was a single *Codonopsis viridis*. There were *Vicia bakeri* and two unidentified *Vicia* species, *Parochetus communis*, *Trigonella emodi*, *Piptanthus nepalensis*, *Anemone elongata*, *Ranunculus hirtellus*, *Thalictrum cultratum* and - most excitingly - a *Corydalis* with distinctive leafy bracts identified by Magnus Lidén as an undescribed species.

Codonopsis viridis

The first part was a steady but at times steep walk through changing forest. Initially it was a mix

A new *Corydalis* on the route from Simar Kharka to Dhaulo Odar

of broadleaved trees before becoming *Quercus semecarpifolia* forest and, on steep sections, *Abies spectabilis*, *Tsuga dumosa* with patches of *Betula utilis*. In the *Abies* - *Tsuga* forest Colin collected *Athyrium acrostichoides*, a new Nepalese species record. Eventually we emerged to a wide U-shaped valley and the grazing zone, the first flat bit of the trail for days. We walked through herb rich pasture where *Morina longifolia* was left well alone by the sheep, before penetrating some very atmospheric *Quercus* forest. We passed a single *Meconopsis* series *Robustae* in bud and decided to bide our time in the hope that it would be in flower on the way back.

We camped on the edge of a bog at Dhaulo Odor caves. In April and May, the Cordyceps collecting season, this area is like a bazaar but was now relatively quiet with only a few cattle and goat herders. Considering

Dense riverine forest of the Chamilaya Nadi beyond Khayekot

Looking to Joge Tal from Thadgadi Gad

the remains and squalor of the Cordyceps camp, '*Take only pictures, leave only foot prints*' seems not to apply to locals.

As we had walked up through the forest our Sherpas harvested fungi from the trunks of decaying trees. That evening we had huge portions at dinner, with fried *Polygonatum* rhizome for dinner, all very tasty. A DPR scientist told us that they were working with Nepalese forest peoples to commercialise forest products such as fungi, and remarked without hint of irony "*They have some good ideas, but unfortunately keep dying.*"

14th July - Dhaulo Odar to Joge Tal

The three kilometre walk between camps took four hours because of the bewildering array of

Morina longifolia

Colin Pendry and Ganga Dutt collecting on the moraine

plants. Out of the forest on a steep, beautiful and herb-rich river bank we collected *Anemone obtusiloba*, *Anemone polyanthes*, *Corydalis pseudojuncea*, *C. calycina* and *Androsace globifera*. Slightly higher we found *Astragalus candolleanus*, a very robust *Vicia*, *Arisaema jacquemontii* and a single *Lilium oxypetalum*.

The pasture around our camp at Joge Tal (3800 m) was astonishing for its number of flowering plants. Colin thought it the most herb-rich pasture he had seen during his extensive fieldwork in Nepal. The grazing regime was obviously just right to prevent either shrubs or grasses becoming dominant. We had lunch, including garlic noodle soup, on a large boulder looking up to the easterly valley terminal moraine while sitting on *Lloydia longiscapa* and a very fragrant *Elsholtzia eriostachya*. After lunch we headed west following the river and collected a number of species from the sandy floodplain: *Crucihimalaya himalaica*, *Astragalus candolleanus* and an *Aster* species. We also saw plenty of *Oxyria digyna*; it is always good to see a familiar Scottish plant.

After following the Chamilaya Nadi northwest we headed up a north-facing slope into small patches of *Betula utilis*, *Rhododendron arboreum* and *Sorbus thomsonii* forest at 3940 m. The forest floor was littered with *Allium prattii* and *Polystichum prescottianum*, a beautiful fern with a red midrib to the rachis. Descending towards camp we walked through *Juniperus* and *Rhododendron lepidotum* scrub and collected *Delphinium brunonianum*. It was interesting to see that the diverse shrub flora associated with this altitude at the east end of the Himalaya was all but absent here.

15th July - Bobaye Glacier

The Japanese had a rest day and stayed near to camp, but Colin, Ganga, our Sherpas and I headed up the Lamakhaya Gad to the easternmost corrie. We hoped to reach the terminal moraine of the glacier from Bobaye Chuli (6808 m). It was a steady walk along a reasonable trail used by herders but

Epilobium latifolium ssp. *speciosum*

Juncus alliodes

at times felt like a lot of effort for very little altitude gain. We stopped at about 4150 m to catch breath and ended up collecting a good number of plants such as *Corydalis cashmeriana*, *Pedicularis* and two crucifers growing in moss on boulders.

Leaving the track we headed up onto the lateral moraines to discover a good number of *Lilium nanum* var. *nanum* and to collect *Cypripedium tibeticum*. As with all CITES listed plants we only took two voucher specimens, one for the Nepalese National Herbarium at Godovari and one for Tribuvan University Herbarium. We collected an *Anaphalis nepalensis*, *Leontopodium jacotianum*, two *Salix* species, the large flowered *Epilobium latifolium* ssp. *speciosum* and the much smaller flowered *Epilobium chitralense* (a new species record for Nepal if confirmed) on the lateral moraine. We then walked out onto the glacier. Himalayan glaciers are not like the bonny blue ice glaciers of South America and New Zealand, but are grey-brown bleak Mordor-like landscapes covered in rock and debris. Other plants we found in this interesting little plant community in the debris on the glacier included *Juncus allioides*, *Carex nivalis*, *Saxifraga kumaunensis* and *Silene himalayensis*.

That evening the cloud lifted, the sun came out and we had clear views of the snowy peaks around us, with the slightly lower second peak of Api (7076 m) looming over our camp. We took some group photographs of our

Saussurea obvallata

Corydalis elegans

botanical family. I thought a good caption would be *Apiaceae* (get it?) but I think it was lost in translation.

16th July - Thadgadi Gad

Half the group headed up the southern slopes of the same valley we had visited yesterday, aiming to reach 4500 m. On the walk up we found *Corydalis elegans* ssp. *elegans* and *Saussurea obvallata*. We smelled the intense soapy citrus scent of the *Saussurea* before seeing the beautiful plant with its red midrib to the leaves and bracts. After crossing a small snow field a little higher, we collected *Primula reptans* and *Primula elliptica*, another new species record for Nepal if confirmed. It was here that I suddenly became very lethargic, found it increasingly difficult to walk and could not keep my eyes open. I checked my altimeter and saw we were at 4400 m; I decided at once it was time to go down. My Sherpa, Myce, suggested we drop a couple of hundred metres to see if I felt better before lunch but I had no appetite when stopped. Once we got going again I found it more and more difficult to focus and stay upright. I started to feel very hot and had to stop to take off layers. There was no trail down so Myce helped me by picking the best descent through the *Rhododendron lepidotum* and keeping me upright as I stumbled downwards. It felt a very long way back to camp and on reaching the last bridge my knees gave up and I collapsed in

a heap. Myce hauled me back to my feet and must have dragged me over the bridge because the next thing I clearly remember is being in my tent.

17th July - Joge Tal

I was confined to camp and was glad that we weren't moving. Before everyone else left camp they all gathered around my tent to debate what to do with me; I was offered everything from antibiotics to Tamiflu. Eventually I was left with some high energy snacks and a stash of Japanese rehydration packs. The Japanese thought they would be more effective than the UK ones. The trek crew visited me regularly during the rest of the morning, bringing me porridge and hot water and making me take my temperature. I remembered it was my birthday and opened the card I had brought from Scotland from my partner Carolyn, which made me feel better. The consensus was that some kind of virus had hit me harder than everyone else.

That evening at dinner, as it was my birthday, the Japanese insisted that I sit at the head of the mess tent in "the special place". They broke out more whisky to celebrate but I had to leave them to it. As well as the usual Daal Bat we ate very fresh goat kebab and chips (I assume a Scottish-inspired meal) and a huge birthday cake.

18th July - Joge Tal to Simar Kharka

It was time to retrace our steps down the valley. I felt better today but lost a "discussion" about how much equipment I was carrying; poor Myce ended up carrying almost all my gear, as well as his own.

Passing through the Cordyceps camp we found *Clematis montana* in fruit growing through a *Prunus* that was doing its best to look like a *Betula*. We descended quickly past the Dhaulor Odar camp site. On an open slope in riverine forest we collected what turned out to be *Meconopsis robusta* that had been in bud only five days earlier. Interestingly, plants in direct sun had purple-black bases to the bristles on the leaves and stem whereas the plants in the shade did not. I mention this because the purple-black base to the bristles has been used as a distinguishing character between various taxa in the genus. The *Meconopsis* account in Volume 3 of the *Flora of Nepal* used this character in the Key to distinguish *M. gracilipes* from *M. dhwojii*. We sent some dried leaf material off as soon as we got back to a PhD student in Texas to sample DNA and the results indicate that *Meconopsis robusta* is very closely related to *Meconopsis chankheliensis* – making them effectively little more than colour forms of each other.

19th July - Simar Kharka to Khayekot

After a short two and a half hour walk we were back in Khayekot. We had planned to camp in the grounds of the school as previously but because we were there by ten o'clock school was still on so we camped a little way from the village. After a bit of sleep and lunch I went with Colin, Ganga

A bridge made from *Rhododendron* stems

and our sherpas up a trail that had seen better days. We collected ferns and a *Scurrula elata* in the forest. Coming out of the forest we came upon abandoned terraced fields. Because of a general lack of enthusiasm we sat for an hour in the sun taking in the view before collecting *Chamabainia cuspidata*, a diminutive *Urticaceae* herb growing in the field margin.

20th July - Khayekot to Lithi

I found today hard going with still not being right. I was glad of the good track between Khayekot and Lithi. At Ghunsa, Colin insisted I distribute my gear around the others. By the end of the day I was glad of it because, exhausted, I fell twice on the steep descent from Lithi to our camp.

21st July - Lithi to Okhal

I again found it very hard going and spent much of the day on autopilot, staring at the back of Colin's boots and trying not to fall. We camped near the village of Okhal on a flat volleyball pitch. News had come up the valley that the road was shut by a landslide, which might mean two extra days walking to clear the blocked road.

22nd July - Okhal to BitaleIt

It was another day of walking and not much else. The porters were eager to go early to walk in the cooler morning and avoid the intense sun

Primula reptans

and heat of the valley floor. On arrival at Bitale we heard the road was open again; it looked promising that we'd be able to get out by bus. We sat under our umbrellas in the scorching sun for a couple of hours overlooking the construction site just watching the goings-on. It was the closest thing to mind-numbing television we'd had for two and a half weeks. Despite the hive of activity that was the construction site there was plenty of wildlife. We watched an eagle perched on the cliff face above the river being harassed by much smaller birds. Then later a couple of Nepal Gray Langur (*Semnopithecus schistaceus*) crossed the grassy slopes high above river on the other side from our camp; they watched us for a while before disappearing into the forest.

23rd July - Bitale to Dhanghadi

After a night of constant heavy and at times torrential rain we worried about the reactivation of the landslide. However, we walked less than an hour so as to cross a bridge into the village of Sotti where we joined our three buses.

24th to 31st of July - Kathmandu

In Kathmandu it took us three days to sort the specimens and divide them for the different institutions. We made a trip to DPR to secure our export permits. At Tribuvan University Botany Department, Colin Pendry

Primula elliptica

Primula munroi

and Professor Ikeda gave short seminars about the current progress of the *Flora of Nepal* and the Expedition to Api. We spent a day at the National Herbarium at Godovari and with Colin's help I photographed 630 *Clematis* specimens. This was a useful exercise as there were many specimens, especially from localities in the mid-hills, that do not have duplicate representation in UK herbaria. They will enter the *Flora of Nepal* database, georeferenced where possible and with the specimen image linked. All the plant data obtained from this trek and previous expeditions may be accessed through the Botanical Locator link on the *Flora of Nepal* website (www.floraofnepal.org). This includes the specimen data, maps, field photographs and images of herbarium specimens. I also started a thread on the SRGC forum (www.srgc.net/forum) about the trip in General Subjects - Travel/Places to Visit, or just enter *Darchula* in the search box to find additional information and images.

Trek Statistics

The Darchula expedition collected 383 genera for flowering plants and ferns. In total we made 1181 collections. Although we have made progress in identifying them many do not yet have their final identification. There are 129 collections only identified to Family and 52 collections with no identification; these are listed as "unknown" or "Fern".

I thank the Scottish Rock Garden Club and the Davis Exploration Fund for financially supporting my participation in this expedition.

Stirling Show in Kincardine 21st March 2015

A bright and sunny but cold morning welcomed our exhibitors to the first show of the year in Scotland. They were also welcomed by the sight of a TV camera crew who filmed many aspects of the show for *The Beechgrove Garden*. George Anderson talked to members about the plants and the club. I hope the broadcast will help to attract more gardeners to grow our wonderful range of plants and to come along to see the very best on display.

As expected at this time of the year, bulbs featured prominently both in the competitive classes and in the Royal Botanic Garden Edinburgh's gold medal winning display. This included a host of daffodils, fritillaries and squills, the last including the pretty sky-blue *Scilla melaina* from the Taurus Mountains in southern Turkey. There were also superb examples of the obese form of *Narcissus bulbocodium* and of the natural hybrid *N.* x *munozii-garmendiae* (*N. triandrus* var. *cernuus* x *N. cantabricus*) which earned the Regius Keeper certificates of merit.

Particular delights among the bulb classes included the Juno irises *II. rosenbachiana*, *aucheri* and *nusairiensis*: the last hails from Syria and was exhibited by John Lee (Glasgow). Margaret & Henry Taylor (Invergowrie) showed two of their own *Narcissus* hybrids. Both have the wild form of *N. alpestris* as one parent, whereas the other parent of the creamy white flowered *N.* 'Tinkerbell' is *N. triandrus* ssp. *triandrus* and of the white and pale yellow bicoloured *N.* 'Ballet Girl' is *N. cyclamineus*. These are super garden-worthy plants and I had only a slight preference for the former because of its neater proportions.

There were many saxifrages dotted around the benches, always a delightful sight in early spring. These tight cushions of varying diameters were completely covered in flowers of white to various shades of pink. Striking blue and cerise flowered hepaticas mixed with rather more subtle pale pinks, white and bicoloured forms, including singles and doubles. Fine large plants of *Pulsatilla vulgaris* 'Budapest seedling' and *P. vernalis* exhibited by Sue Simpson (Drongan) in class 44 for two pan *Ranunculaceae* illustrated that, after starring in Section B, she will continue to do well now that she has to be in the open section.

Though section II was fairly thin there were some nice plants on display. Of particular note was Alan Gardner's (Falkirk) Jubilee Class B six pan winning entry of three *Hepatica japonica* forms and three *Corydalis solida* forms. Alan went on to win a bronze medal and the Fife county trophy for most points in the section. I noted also in the section a very nice leaf form of *Cyclamen balearicum*, a species not often seen on the bench.











Saxifraga Tenerife

SAXIFRAGE 'MayGould'


The best primula in the show (Spiller trophy) was *P. allionii* 'Mary Berry' exhibited by the show secretary, Sam Sutherland. A lovely deep red selection of *Corydalis solida* was the best European plant (Ben Ledi trophy), exhibited by Tom Green (Rowlands Gill). The Carnegie Dunfermline Trust trophy for most points in section I was won by Stan da Prato (Tranent). A certificate of merit was given for *Asarum splendens*, exhibited by Watt Russell (Tranent). Unusually for this species, the leaves were only just emerging from the pot, so enabling the bizarre deep brown flowers to be seen in all their splendour!

However, the day really belonged to Cyril Lafong (Glenrothes), for it was his large pan of *Trillium rivale* 'Purple Heart' that stole the show. This was adjudged the best non-European plant (Institute of Quarrying quaich) and the most meritorious plant in the show. This was Cyril's 50th Forrest Medal – an astonishing achievement and one that I think will be hard to better. He also took the Glassford Sprunt trophy for the best pan of bulbs in a pan not exceeding 19 cm diameter with his *Fritillaria gibbosa*. Cyril had two superb pots of this lovely species, but it was the one from his Class A small six pan entry that got the award.

Cyril has been the club's top exhibitor for many years, and the quality and breadth of his horticultural and presentational skills are there for all to admire and enjoy show after show. Here can be cited his small six pan entry of saxifrage, primula, dionysia, narcissus, trillium and fritillary, and his large three pan entry of *Tecophilaea cyanocrocus*, *Pulsatilla vernalis* and *Dionysia aretioides*. His entry in Class 2 for new rare or difficult was *Saxifraga pulchra* with tight heads of pale pink flowers held just above the cushion. This difficult to cultivate plant hails from Yunnan and was introduced by the ACE expedition. A richly deserved achievement Cyril – congratulations from us all!

David Millward



Saxifraga
'Leonardo Da Vinci'


Anemone
caucasica







Saxifraga Frank Sinatra


Hexham 28th March 2015

The Northumberland show is a meeting of friends. An opportunity for SRGC and AGS to meet, share notes, a bit of banter and maybe (whisper it quietly) a bit of muttering about how the other society does things. Of course, most of us are members of both, so it is really a meeting of those who show mainly at SRGC shows and those who show mainly at AGS shows. But this show belongs to both.

When it comes to the plants, we think we know them too, many of them seeming like old friends. But at Hexham this year, almost every one I spoke to, from hardened exhibitors to first time show visitors, was taken aback by the sheer quality and size of the display, especially in the classes for large plants. Yes, there were a few which had been better the week before, but they were outnumbered by plants of real worth.

The show hall is designed so that the large six pan class faces the entrance. But this year there were three entries, all with huge plants, and each on another occasion would have won. The winners, and of an AGS medal, were Frank & Barbara Hoyle whose entry was built around their huge, venerable and stunning *Cyclamen pseudibericum*. This plant had already won a Farrer medal this year at the East Lancashire show and, if anything, was looking even better than there. Add one of their enormous *Dionysia aretioides* (I didn't discover whether it was the same plant that had won the Forrest medal at Kendal), two saxifrages ('Bridget' & 'Coolock Gem') and two Primulas ('Marjorie Wooster' & 'Pink Aire').

Above: *Iris wilmottiana* (Brian Burrow)

However, the Hoyles did not go on to win the best in show for their third week. That privilege went to another frequent winner (describing both grower and plant): repeating its triumph from Kincardine the week before, *Trillium rivale* 'Purple Heart' won the best in show and the Farrer medal for Cyril Lafong. Somehow, despite all the other plants, it could still be seen across the room. Apparently, Cyril almost didn't bring it – for lack of space! As well as being a very attractive clone, it also flowers earlier than most. Cyril grows it like a bulb, in a soil with a good proportion of leaf mould, making sure that it doesn't dry out.

A plant rarely seen nowadays is *Townsendia rothrockii* f. *alba*, which won the *Compositae* class (yes, we may call them *Compositae* again!) for Tom Green. The outer ray florets were greenish, rather than the lilac of the species or the white that the name suggests. Tom grows his plant in a plastic pot (hidden for show purposes), putting it outside for better light, except in the rain, and ensuring that it does not dry out.

The winner of the R B Cooke trophy for the most first prize points was Don Peace, last year's winner of the Giuseppe cup for the most first prize points at AGS shows throughout the year. As usual, his well grown and immaculately presented plants were seen around the benches. The plant of his that caught my own eye was *Fritillaria carica*. He had two on the bench: a small one that didn't look out of the ordinary; and a larger one

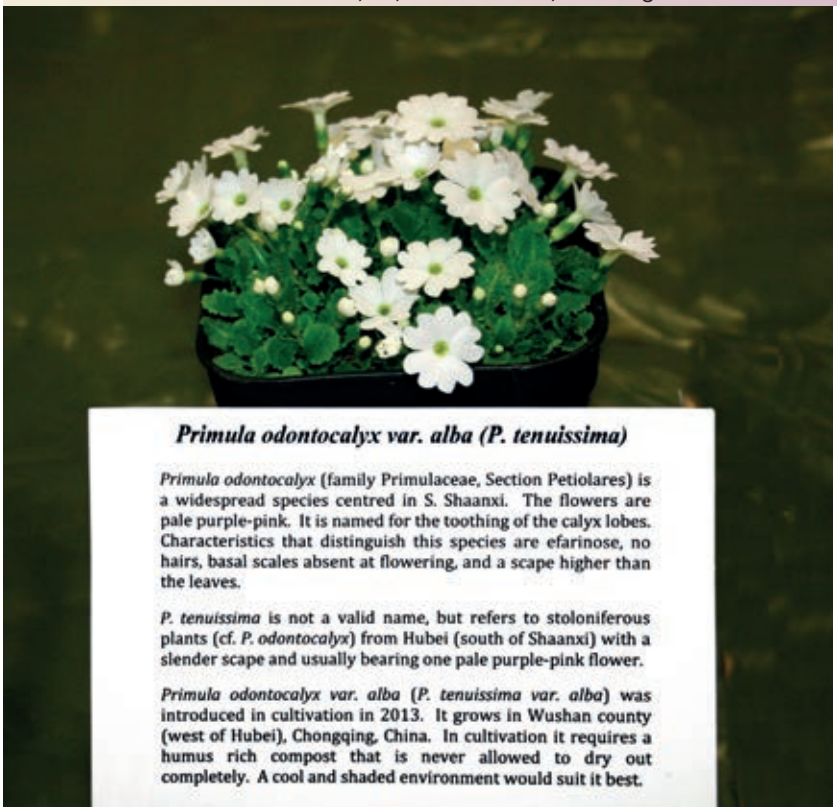
Above: *Viola beckwithii* var. *beckwithii* (Eric Watson)

Six pans distinct rock plants: the AGS Medal (Frank & Barbara Hoyle)

that was very compact and impressive in an understated way. Again, the clue to success was in the light. This plant had been moved outside from late winter, when there were first signs of growth. The less impressive plant had been under glass until later.

Even the easiest plants can look stunning when well grown and well presented. One exhibitor regularly gets teased for bringing 'Sweet Peas'

Notes on two *Primula odontocalyx* species from Cyril Lafong . . .



to the shows. In fact the plant he brings is *Lathyrus vernus*, an easy border plant which he grows outside with just a little protection before shows. Looking beyond the familiar, there was a fine display of massed fresh pink flowers, backed up by very fresh green leaves, that gave Barry Winter's *Lathyrus vernus* var. *albarosea* the first prize for a plant native to Europe.

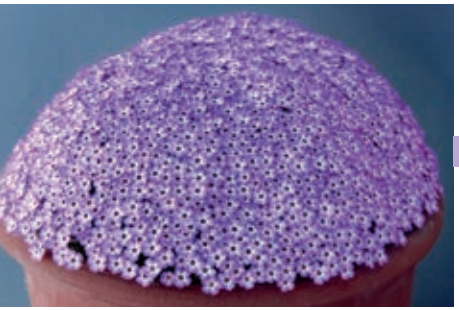
Townsendia rothrockii f. *alba* (Tom Green)

At the other end of the difficulty scale is *Dionysia bryoides*. It is possible that some AGS members think this to be a common plant, because of the number of plants at many of their shows, but nearly all are grown by one man. Derek Pickard grows his plants from seed and succeeds in growing them twice as large as most other growers. As it is a plant of arid regions with deep roots, he grows it in long tom pots, with a care to detail that few people can match.

Dionysia aretioides (Fred & Barbara Hoyle)

The best of several plants at Hexham won the Sandoe trophy for a plant in a pan not exceeding 19 cm.

Another group of plants almost universally grown in long toms is the Juno Irises. Also plants of arid regions, they have long storage roots below the bulbs. Some of the taller species may look a little ungainly on the bench but Brian Burrow's plant of *Iris willmottiana* was compact,



Dionysia bryoides (Derek Pickard)

rare, difficult and a stunningly attractive shade of vivid blue. Brian had grown the plant from Gothenburg seed. His methods are unlike those commonly advised for Junos, in that he stands the long tom pot on a damp gravel tray throughout the year and only pots it up every three years. It works for him, and the plant was rightly awarded a certificate of merit.

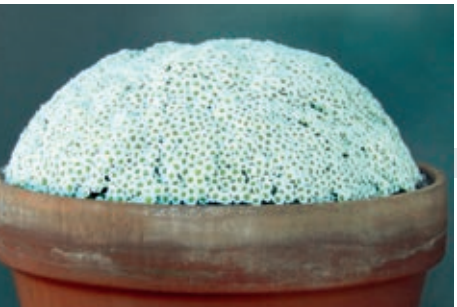
Saxifraga georgei (Mark Childerhouse)

The management of summer dormancy is also why *Viola beckwithii* remains rare in cultivation. This plant from the arid regions of the USA won the E G Watson trophy for plants new or rare in cultivation for Ian Kidman. Ian grows this viola in a very deep pot, keeping it un-watered in the plunge in the summer and with the bottom of the plant damp in the winter. Interestingly, he

Saxifraga EW83 (Mark Childerhouse)

moves the plant into a shallower pot in the spring to show and after showing returns it to the deep pot to grow new roots.

The Hexham show has a number of classes for new and rare plants and there were four plants of *Primula odontocalyx* - a petiolarid from China - two of the species and two of *Primula odontocalyx* var. *alba*. The two taxa appeared to be completely



Saxifraga 'Coolock Gem' (Mark Childerhouse)

different species; perhaps some more work is needed! The other interesting thing about *P. odontocalyx* var. *alba* is that Alan Newton's pot contained a number of small plants with large flowers, while Cyril Lafong's plant contained a much larger plant covered with smaller elegant flowers. Apparently, in their first year the flowers of this variety are large and as the plant grows in successive years it carries smaller flowers.

The class for three rock plants of any one genus gives the option for botanical notes, suggesting to some exhibitors that this was the opportunity for a systematic study, while others (and the judges) preferred the usual beauty parade. Mark Childerhouse produced three interesting Himalayan saxifrages. *Saxifraga poluniniana* used to be commonplace, was widely used in hybrids, but is now rarely seen. Much the same could be said about *Saxifraga georgei*. The third plant was labelled *Saxifraga* EW83. This, still very rare in cultivation and difficult to grow, is often labelled *Saxifraga georgei*; indeed, Tony Stanley won the small *Saxifragaceae* class with an excellent plant so labelled. Evidence was presented to show that *Saxifraga* EW83 is in fact a hybrid; hybridization is apparently widespread in the Himalayas, with some visitors suggesting there to be more hybrids than true species. That raises a lot of interesting questions such as - have we defined our species correctly?

As well as the competitive displays, there were two superb non-competitive exhibits. RBGE staff made their customary quality display of bulbous plants, earning a gold award. Mike Dale, on behalf of the local group, earned a large gold award for his display 'Plants by Post'. This was a display of postage stamps featuring alpine plants and native flora (often endangered). The presentation included pristine sheets of stamps, first day covers and mini-sheets, all from a wide range of countries, with some of the plants pictured also being displayed.

Having enjoyed these and many other plants, spent our money at the many plant stalls and enjoyed the company, it only remains to congratulate Peter Maguire and all involved in running the show on another great success, thanking them for all their hard work.

Peter Hood (Photos: Mike Dale)

A glimpse of *Fritillaria michailovskyi* (J Akers)

Edinburgh April 11th 2015

The show judging opened on a cold but sunny morning. The hall seemed full of colour and scent with such a wide variety of plants on display. The Forrest medal this year went to Cyril Lafong for his golden yellow *Hymenoxys acaulis* var. *caespitosa*. He also won the Henry Archibald rose bowl for three pans of rock plants of different genera which included his Forrest-winning plant and the Elsie Harvey memorial trophy for three new, rare or difficult to grow plants which were *Primula* aff. *odontocalyx* f. 'Alba', *Saxifraga felineri* and *Primula bullata* var. *bracteata*. To round off his wins of displays of multiple plants at the show Cyril also won class one section one for his six pans of distinct rock plants.

The professional plant of Forrest quality went to the Royal Botanic Garden Edinburgh for an *Erythronium multiscapideum*. The RBGE also received an honorary gold medal for its splendid floral display. The Alfred Evans quaich for best pan of *Ericaceae* other than *Rhododendron* was won by Stan da Prato with his *Andromeda polifolia* 'Nikko', Stan also won the

Facing: *Tristagma leichtlinii* Above: *Fritillaria* 'Craigton Cascade'
Below: *Hymenoxys acaulis* var. *caespitosa*

Midlothian vase for best *Rhododendron* with a *Rhododendron* 'Ptarmigan' and the Reid rose bowl for most points in section one.

Among the many fine pots of primulas on show, two outstanding award winners were Cyril Lafong's *Primula henrici*, which earned him the R E Cooper Bhutan drinking cup, and Tom Green's *Primula* 'Lismore Jewel' which won him the K C Corsar challenge cup for the best American or European primula. Alan Furness won the A O Curle memorial trophy for his *Primula rusbyi*, *Hymenoxys torreyana* and *Glaucidium palmatum* var. *leucanthum*.

Facing: *Trillium rivale* Below: *Primula rusbyi*

In the best bulb, corm or tuber section Carole & Ian Bainbridge took the Henry Tod Carnethy quaich for their lovely white *Narcissus rupicola* ssp. *watieri* 'Abaleish'. This plant also brought them a certificate of merit. The other award of a certificate of merit was to Alison Ward for her pink *Trillium rivale*. Stella & David Rankin won the Bill Mackie quaich for their *Saxifraga* 'Tycho Brahe'. Christine Boulby took the Midlothian bowl for her *Hepatica* 'Millstream Merlin'. Watt Russell's miniature garden saw him awarded the Boonslie cup.

I was asked by one of the judges to point out to exhibitors for future reference that because of the lack of care in the presentation

Centre: *Narcissus rupicola* ssp. *watieri* 'Abaleish'
Below: *Primula* 'Holly Leaf'

of some of the plants, exhibitors had missed out on higher marks. The problems were dead or dying leaves that should have been removed, or too many leaves overhanging pots that would have been better trimmed back with some neat gravel showing around the plant. Are these handy tips to for catching the judges' eyes next year?

This was the first year with our new show secretary David Millward in charge. It proved a very successful one with visitor numbers up and both catering and club plant sales being very popular. It was also the first year that we had live tweets from the hall. So thank you very much to all involved for your hard work in making it such a great show.

Liz Cole

Primula bracteata

Some interesting plants on the show benches this year included Peter Semple's largest pan of the Native Primrose (*Primula vulgaris*) that anyone could remember seeing at the Perth show. Another plant deserving attention was *Arabis bryoides* var. *olympica* grown from seed by Nick Boss using a holistic approach to cultivation. I apologise to growers if I have missed anything from my following brief summary of the results.

The number of certificates of merit awarded illustrated the quality of some of the entries this year. Certificates were given to Peter Semple's *Primula vulgaris*, Sam Sutherland's *Primula rusbyi*, Cyril Lafong's *Iris suaveolens*, Watt Russell's *Trillium chloropetalum* and Jane & Alan Thomson's *Pleione* 'Britannia Doreen'. The best plant exhibited by a member resident in Angus, Dundee or Perth and Kinross for the Major General Murray-Lyon trophy was judged to be Ian Christie's delicate *Pteridophyllum*

Above: Primulas attract attention (Photo: *The Courier*)
Below: *Primula rusbyi* (Sam Sutherland)

Pleione 'Brittania Doreen' (Jane & Alan Thomson)

racemosum bearing nine white flower spikes and its characteristic spring-green ferny foliage. The Perth trophy went to Margaret & Henry Taylor, who were the Perth Group members who garnered the most points in the show. One of Margaret & Henry's plants was a lovely yellow-flowered *Tropaeolum brachyceras*. Susan Band also exhibited an interesting new *Tropaeolum*, one with mauve to blue flowers, *Tropaeolum hookerianum* ssp. *austropurpureum*.

The L C Middleton challenge trophy for most first prize points in section I was won by Stan da Prato with 660 points. He also had the most points in the show, 960 points. The E H M Cox trophy for the best dwarf rhododendron went to Stan with *Rhododendron uniflorum*, a dwarf rhododendron from western China. This plant came originally from Glendoick and was very floriferous indeed with its pale pink flowers. Stan also won the Alexander

Iris suaveolens (Cyril LaFong)

Primula vulgaris 'Drumcliffe' (Bob Maxwell, First)

Caird trophy for the six pans in Class 1 - two *Andromeda*, *Trillium*, *Pulsatilla*, *Primula* and *Saxifraga*. They were all very large pans and even just looking at them I felt a bad back coming on!

The George Forrest memorial medal went to Stan for his large pan of *Andromeda polifolia* 'Nikko'. This cultivar is named after Nikko National Park in central Honshu. The common name of this plant in the United Kingdom is Bog Rosemary and it is a species that grows in peat bogs all over the circumpolar region, including Japan; if you want to grow it at home make sure you have a moist acidic compost. This particular form is very desirable as it is wonderfully floriferous and compact in comparison with our UK native form. The plant contains grayanotoxin, also found in rhododendrons and other plants of the family *Ericaceae*, which is said to be of use in lowering blood pressure - probably very necessary after transporting such large pots to the show(!) Could this be the key to Stan's success? However, it can be very poisonous for the same reason that rhododendron honey is toxic, so should not be tried at home.

Cyril Lafong was the winner of the R S Masterton Trophy for best Asiatic primula with his pan of *Primula bullata* var. *bracteata*. This is a yellow *Primula* with leaves similar to those of *Primula forrestii* which similarly

Pleione 'Shantung'

A Holistic Approach to the Cultivation of Lewisia longipetala

The main objective here is to grow a healthy plant. Priority has therefore been given to studying the plant's requirements, those that enable it to function well generally, remain healthy and in character. The traditional methods of cultivation required for show perfection, to suit an ordinary garden or greenhouse were not considered, neither was the plant's garden 'value'.

Essential Requirements:
Growth: like most species of Lewisia best in the greenhouse, it needs plenty of light, ventilation and also very well drained compost and surface area.
Watering: First done carefully in February/March and then throughout the summer, this is then reduced by early Sept; thereafter, the plant is kept dry all Winter until Spring - the plant's dormant period.
Misc: These plants are the result of natural regeneration from an original sowing in 2001.

Transcripts of Nick Boss's cultivation notes for two of his lewisias

A Holistic Approach to the Cultivation of Lewisia brachycalyx

The main objective here is to grow a healthy plant. Priority has therefore been given to studying the plant's requirements, those that enable it to function well generally, remain healthy and in character. The traditional methods of cultivation required for show perfection, to suit an ordinary garden or greenhouse were not considered, neither was the plant's garden 'value'.

Essential Requirements:
Growth: like most species of Lewisia best in the greenhouse, it needs plenty of light, ventilation and also very well drained compost and surface area.
Watering: First done carefully in Sept. until the colder weather, then reduce. Commence watering again as soon as shoots start to elongate c. Feb; initially this can be overhead watering, but as growth increases use a drip tray and only water by this means.
Dormancy: do not let the plant dry out at the roots, there must be slight moisture throughout the Summer, again use drip tray.
Misc: sowed 23/10/2010 Germ. 20/1/2010 and later

Lewisia tweedyi 'Aurea' (Bob Maxwell)

Lewisia tweedyi 'Lemon'

Lewisia tweedyi 'Rosea' (Tom Green, First)

Lewisia tweedyi (but not a First!)

belongs to the Section *Bullatae*. It appeared to have shorter peduncles than *P. forrestii* or *P. bullata* var. *rufa*. According to Halda's *The Genus Primula* this species is found in Yunnan on limestone cliffs and rocky places around 3000 m. Cyril also won the Dundas quaich and a certificate of merit for his *Iris suaveolens*.

The bulb trophy went to the Bainbridges, Ian & Carole, for their very large *Erythronium helenae*, a most elegant *Erythronium* which always looks good in a pot and does not have that annoying habit of flowering at ground level, possessed by one or two other *Erythronium* species.

The Joyce Halley award was awarded to Sam Sutherland for his *Astragalus loanus*, which was one of two seed-grown *Astragalus* species, the other being *A. simplicifolius*. Sam's advice is to scarify the seed with sandpaper; these delicate little gems also need a very gritty compost and careful watering if they are to do any good. Sam is certainly a cultivator of *Astragalus par excellence*.

Sheila McNulty was the winner with most points in Section II. It was great to have her entries but we could do with some new participants to hot up the competition among new exhibitors. Sheila won the John Duff prize for the best plant in Section II with her enormous *Saracenia*. We know that there have not been many (if any)

junior competitors at Perth for the last several years. Don't any of you have grandchildren to bring along? There is that lovely Georgina Blackwood trophy waiting to be won by them.

Cathy Caudwell

Lewisia tweedyi

Pteridophyllum racemosum

Lewisia tweedyi (Sue Simpson, Second)

Primula henrici (Cyril Lafong, First)

Glasgow 2nd May 2015

Weather in spring 2015 had been distinctly changeable, varying from over 20°C the previous week to -2°C on the Saturday morning when this correspondent set off for Glasgow with a car-load of exhibits. The warm spells had speeded up what was generally seen as a late spring while many growers reported that plants had come into flower and then gone over very quickly or had suffered weather damage. However, the show benches, though down a little in numbers of entries compared to 2014, still presented an impressive spectacle. Show secretary John Lee reported 22 exhibitors in total with 195 entries in Section 1 but only 18 entries in Section 2.

The top award involved a two plant race between Peter Semple's exceptionally large *Gentiana acaulis* that had in the region of 200 flowers and Cyril Lafong's graceful *Cypripedium* 'Ursel'. The Forrest medal went to the gentian, which had received a certificate of merit the previous Saturday at Nairn when not fully open. Peter has had it since around 2004 in a stone quern until 2009 when it was lifted for a Glasgow show and it has remained in the same pot ever since on a diet of intermittent *Tomorite*. The orchid also received the well-deserved Charles Simpson memorial trophy for best orchid in the show.

The timing of this show is attractive to a number of skilled plantsmen - and women - from the north of England who always bring some notable plants and often help with judging. Readers who do not show may not

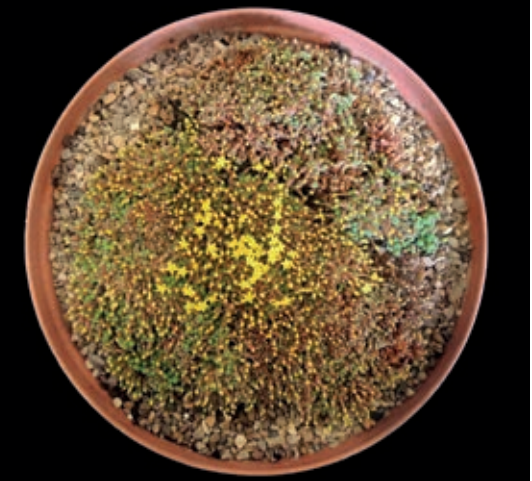
Andromeda polifolia 'Nikko'

Anemonella thalictroides 'Oscar Schoaf'

realise that our club has a unique system whereby you may judge at a show but still exhibit. We do this by having teams of three plus a reserve who joins the team whenever anyone drops out of judging a class where they have an entry. The way this works reflects the friendly nature of the SRGC.

Successful entries from across the border started with Class A, won by Ian Kidman's small six pans with the pink *Primula henrici* and *Daphne petraea* surrounded by four white flowers including two cassiopes. Brian & Shelagh Smethurst took the 75th Jubilee prize for best plant in a small pot with *Junellia coralloides* from South America. Not often seen, this created great interest though close inspection revealed a smell, provoking one grower to say this was not a plant he would like to take home in his car. The Bury couple also won the Ian Donald trophy for the best Scottish native plant with *Asplenium trichomanes*, the Maidenhair Spleenwort, in very good condition - a plant does not need to be rare or hard to grow to win. Both the *Junellia* and their *Veronica oltensis* received preliminary certificates from the Joint Rock Committee, which met at the show.

Cyril Lafong always adds interest. His three pan entry in class 3 which took the William Buchanan challenge cup for new, rare or difficult plants included *Saxifraga aretioides*, which has a limited range in the Pyrenees and Cantabrian mountains. It is a slow grower and tends to flower sparsely. The shade-loving *Jancaemonda* HJ 23 is a hybrid between *Jancaea heldreichii* and *Ramonda nathaliae* which Cyril thinks may be a bit easier to grow than its parent. *Daphne arbuscula* 'Alba' was introduced to cultivation around 2008 by Czech grower Josef Jurasek. This species has a number of



wild variants. This one is very slow growing and not easy to propagate so is usually grafted. Nearby, Sam Sutherland exhibited a hybrid between two forms of *Ranunculus parnassifolius* made by Margaret & Henry Taylor. This plant was a candidate for the best in a small pot category. Sam also showed a fine example of *Primula rusbyi* ssp. *ellisiae* that has won awards at other shows and did so here, taking the Joan Stead prize. However there was *Primula* interest outwith the competitive classes. Elspeth Mackintosh from RBGE brought along *P. sherriffiae* in flower. This plant was introduced by George Sherriff in 1934 and is rare in cultivation. This example was grown from seed sown in 2013 and the plant was kept in frost-free conditions. It received a certificate of merit. David & Stella Rankin displayed three forms of what is now *Primula bullata* var. *forrestii* with a helpful note explaining that *P. forrestii* had been thought a separate species but is now considered a form of *P. bullata*, as is *P. bracteata*. The Rankins' *P. coelata* received a preliminary certificate at the Joint Rock Committee.

The late William Buchanan has two trophies commemorating him at the Glasgow show. Your correspondent took the Dr William Buchanan rose bowl for six pans with a maximum of two from any genus with two andromedas, two rhododendrons, *Saxifraga stribrnyi* and *Trillium chloropetalum*. The big six class can create impact on the bench but congestion in the car. The

Paeonia obovata
Sedum humifusum
Townsendia alpigena

Class 62, First – Watt Russell

Class 96, First – Sheila McNulty

Edward Darling trophy is for three pans of dwarf rhododendrons. This year local member John di Paola triumphed with *Rhododendron* 'Ginny Gee' and two of Glendoick's 'Bird' series: *R.* 'Treecreeper' and *R.* 'Wren'. Tommy Anderson came up from the Lake District to win the Henry Archibald rose bowl for three plants from different genera, with a *Trillium grandiflorum*, *Uvularia perfoliata* and *Anemonella thalictroides* semi-double form.

Sue Simpson continued her excellent progress in her first season in section 1: her two pan entry that won the American species class included a *Lewisia tweedyi* (apparently now renamed *Lewisiopsis*) good enough for a certificate of merit. The Crawford cup for most first points in the open section was won by Watt Russell against stiff competition with a wide range of good plants ranging from six pans of sempervivums that won all three classes for *Crassulaceae*, to cushion plants and the only grey foliage plant in the show, a helichrysum.

Section 2 had few entries but some nice exhibits, notably Sheila McNulty's large pan of *Sarracenia*. Our club treasurer, Richard Green, took the James Wilson trophy for most points, and a bronze medal.

Last, but most certainly not least for hungry exhibitors and visitors, the catering team served up their customary first class fare!

Stan da Prato

. . . and farewell to Milngavie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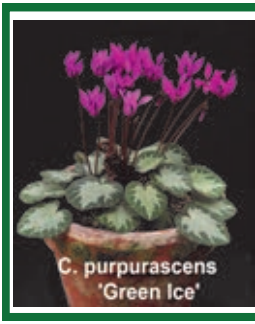

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