THE ROCK GARDEN 141

July 2018

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The Rock Garden

The Journal of the
Scottish Rock Garden Club
July 2018

Number 141

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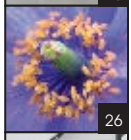

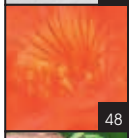

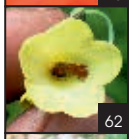

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The Editor welcomes articles, photographs and illustrations on any aspects of alpine and rock garden plants and their cultivation. Authors are encouraged to submit material electronically but articles may also be submitted in manuscript. Digital images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

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

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

The club is immensely grateful to David Nicholson, who has retired as our effective advertising manager. Enquiries about advertising should henceforth be made to:

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c/o Kevock Garden Plants
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ngaire.burston@hotmail.com

Annual General Meeting 2018
The AGM will be held in the Old Church Hall at Burnside, Scone from 10 till 3 o'clock on Saturday 10th November. There will be three short talks, the Clark memorial lecture, photographic competition, 50/50 plant sale and display. There is ample parking. Full details are in Dryas, page 18.

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International Gathering in **Highland Perthshire** to celebrate the world of **Alpine Plants** and **Rock Gardens**

8 - 10 May 2021 • Perth Concert Hall, Scotland • Registration opens Spring 2020

Discussion Weekend, 12th to 14th October 2018
At the Atholl Palace, Pitlochry, Perthshire

The 2018 Discussion weekend returns, after a gap of a decade, to Pitlochry. The venue is once more the 4-star Atholl Palace Hotel. The hotel has a good range of facilities including an indoor pool and spa and is an easy ten minutes walk from the centre of Pitlochry. If booking for double occupancy, please indicate your preference for a double bed or twin beds. If you are sharing with someone not included in the booking please state their name, otherwise we will try to find you a room-mate. All single rooms are booked but we can also provide information about other accommodation in the town with single rooms. Dogs are not allowed in the hotel. All rooms have lift access but if you specifically require easy access, let us know. In addition, please give us details of any dietary or other special requirements. If you need extra nights, we will book these for you, for your payment on departure. The booking form and remittance must reach Julia Corden no later than 11th August 2018. Please note that no refunds can be given after 14th August 2018.

The booking form is included with the July 2018 issue of *Dryas*, and should be returned to the Registration Secretary, Julia Corden, 2 Lettoch Place, Pitlochry, Perthshire PH16 5BB (please address any queries to Julia.corden@icloud.com)

Resident Cost

Friday dinner – Sunday afternoon tea – double room: £237 per person
Saturday morning – Sunday afternoon tea – double room: £168 per person

Non–resident Cost

Friday evening including dinner: £30
Saturday – morning coffee, lunch, afternoon tea: £30
Saturday – morning coffee, lunch, afternoon tea, dinner: £70
Sunday – morning coffee, lunch, afternoon tea: £30

Extra Nights

Double occupancy room – dinner, bed and breakfast: £159

Programme

Friday 12th October 2018

Evening

- The Bulb Group Lecture - *Corsican Spring revisited: in the footsteps of Jim Archibald* by Matthew Topsfield
- Small Bulb Exchange

Saturday 13th October

Morning

- Workshops and optional tours. Cluny or *Explorers* Gardens, or Distillery

Afternoon

- The Harold Esslemont Lecture - *Highlights from KwaZulu-Natal to Namaqualand* by Gerben Tjeerdsma
- *Chaos in the rock garden: putting theory into practice* by David Sellars
- *A journey to an unspoiled and untouched area in Arunachal Pradesh, a plantsman's dream* by Larz Danielsson

Evening

- Gala Dinner, Show Awards and Plant Auction

Sunday 14th October

Morning

- The William Buchanan Lecture - *Growing alpines in Swedish gardens* by Gerben Tjeerdsma
- *Alpine Jewels of the North Cascades and Olympic Mountains* by David Sellars

Afternoon

- *Smaller plants and choice alpines from my perspective* by Larz Danielsson
- *Cluny Gardens* by John Mattingley

The Importance of Altitude in Cultivating Species from Continental Climates and Sub-tropical Latitudes

Nick Boss

The favourable conditions for plant growth (in the growing season) and those that are unfavourable (dormancy) will be familiar to those growers who live in northern temperate regions. However, these conditions vary considerably between countries that have a continental climate and those in the sub-tropical latitudes, especially because of changes in altitude and associated patterns in the weather.

For example, hot and dry conditions at 300 metres in the summers of North & South America and Africa are normally unfavourable for growth, and plants therefore go dormant. Changes in weather patterns in the autumn give cool and moist air that provides favourable conditions for growth. Examples of genera that are physiologically adapted to this particular seasonal cycle are Lewisia, Massonia, Cyclamen and succulents of the Aizoaceae family. However, above 4000 metres summers are cool and moist, and there is late snow melt; growth is therefore

***Ourisia microphylla* growing in the Paso Vergara (Malargüe) on the border between Chile and Argentina (Photo: Italo Specogna)**

possible, at least until the end of the summer. Winter becomes the season for unfavourable growth because of its cold, darker and dry conditions.

The difficulty in cultivating species from moderate altitudes is that the seasons for favourable or unfavourable growth are less distinct. A relevant example is to be found in *Ourisia microphylla*, which inhabits semi-shaded volcanic cliffs at 1500 to 2000 metres in the Chilean Andes. Observations of *O. microphylla* in greenhouse cultivation indicate that the plant's holistic health improves if, instead of being in a plunge bed above the staging, it is placed underneath in semi-shade throughout the year. More important, summer is the season for partial dormancy, the leaves being retained for limited photosynthesis. The initial growing period begins in September when it is cool and damp and, except for a rest in the severest winter weather, growth recommences in March and then continues to about May, the later part of which is the main growing season. Flowering starts about July and continues into August; the seed ripens in time for the start of the cool and damp season in September. Natural regeneration may occur, even in the pan, but be aware that this does not happen when the plant lives on top of the staging - it is too hot and dry.

***Ourisia microphylla* grows well in the alpine house if placed in semi-shade so as to mimic its natural habitat throughout the year**

Jack Drake's Nursery at Inshriach, a haven for the finest alpine and woodland plants

Jim Jermyn

There is no doubt that, for a few generations of alpine plant growers located in Scotland and other parts of the world, the name Jack Drake is synonymous with an outstanding range of alpine plants. A visit to the nursery, set in the stirring surroundings of the Rothiemurchus Estate in the shadow of Cairn Gorm would certainly have offered inspiration and a little setback in personal funds! Driving from the south, I preferred to leave the A9 for Kingussie and then head north, weaving my way along the country road towards Kincraig. My anticipation was rising as I endeavoured to keep my eyes on the road and avert them from the imaginary sight of an Osprey seeking trout on Loch Insh. Turning right into the pretty village of Kincraig, the road continues towards the spectacular gorge at Feshiebridge and then, with my window depressed, the forest aroma of mixed pine and birch is somehow alluring, and before long the small car park is upon you, nestled in beside beds of candelabra primulas and vast patches of Farrer's Harebell Poppy, *Meconopsis quintuplinervia*.

The Developing Nursery

The nursery was born in February 1938 when a collection of alpine plants was transported from Hertfordshire to Aviemore by the London, Midland and Scottish railway. Nursery construction followed and Jack experienced initial problems with his chosen compost for growing the plants. Fortunately, John Innes compost was being developed and he was able to utilize this range of loam-based composts to great effect.

With the onset of World War Two, Jack served in the army, and the nursery returned to the wild. In the autumn of 1945, Jack went to work to rebuild his enterprise with

Above: Jack Drake and John Lawson by the pond at Inshriach in its heyday

Below: A Highland welcome awaits … Get your money ready!

Erythronium revolutum

one girl and two German ex-prisoners-of-war. The rock garden became a central feature of the nursery together with two alpine houses, frames and a potting shed. A major journey by car was arranged as Jack obtained petrol coupons and went on a grand tour of Britain buying alpine plants wherever he could. He produced his first catalogue in 1947.

In spring 1949, John Lawson came to work at Jack Drake's Nursery and together with extra summer staff he developed and enlarged it. In 1955 John became a partner in the business and the nursery continued to expand, with electricity first coming to Inshriach in 1962. Significantly, the following year a new propagating house was built with soil-warming cables.

My recollection of the nursery practice carried out during my tenure in 1976 was of a highly organized commercial production concentrating on a diverse range of challenging alpine plants. One should keep in mind that the growing season is short at this altitude and position, and frosts can affect plants in every month of the year.

Some of the Famous Plants

On arrival at the nursery in early Spring, visitors would be met by a fine array of *Narcissus* 'Little Witch', 'February Gold' and 'Jenny' growing amongst a deep cherry-red form of *Primula denticulata* overlooked by a splendid *Acer griseum*. As the season progressed, great drifts of *Erythronium revolutum* and of *E. oregonum* combined nicely with an array of dwarf rhododendron species and cultivars, *R.* 'Elisabeth Hobbie' could withstand

Cassiope 'Randle Cooke'

Above: *Primula reidii*
Left: *Primula sonchifolia*

the low temperatures and was a real show-stopper! The range of cassiopes was legendary and few customers went away without a few specimens of *Cassiope* 'Muirhead' or flat-growing *C.* 'Beatrice Lilley'.

I had and still have a great interest in Himalayan primulas and - my word! - how the petiolarid primulas thrived at Inshriach. The free-flowering *P. calderiana* and *P. sonchifolia* drew gasps and groans from visitors making the journey from southern counties. A little later in the season the nursery's glass-covered frames were home to large batches of the sweetly-scented *Primula reidii* var. *williamsii* in its lavender-blue and white forms. A high percentage of visitors was on holiday from the south and could not resist purchasing a few of these sumptuous plants, although it was a little challenging for them to prosper in Surrey and the Home Counties. As customers approached the shop and retail area there were a few well-positioned troughs planted with point-of-sale alpine plants. A favourite trough of mine was fully planted with the diminutive

Visitors to Inshriach

Gentiana verna x *pumila* at Inshriach

and rarely-offered *Gentiana verna* x *pumila*. The trough could be enjoyed in all its glory for several weeks of the season and was positioned so that customers could not avert their eyes from the amazing deep-blue flowers. I overheard many a customer remarking on its beauty and saying, *"Shall we have a few of these dear if they're available?"* Indeed, they were available – John Lawson was a master at marketing as well as growing these rare plants!

As the season progresses so did the range of plants on offer at Inshriach. I would like to highlight a few of the outstanding cultivars raised and popularized by Jack Drake and John Lawson. In the early 1960s seed was received of *Erigeron aureus* from the United States. Amongst the seedlings Jack (with his eagle eye) picked out a variant which was later selected and named *Erigeron* 'Canary Bird'. I still grow this wonderful plant today, where it forms a neat clump in a trough flowering almost endlessly with its lovely lemon-yellow daisies. Take out some buds prior to flowering from time to time to maintain its longevity. Another winner and probably John Lawson's best seller right up to our current era, is *Dianthus* 'Inshriach Dazzler'. A similar scenario occurred where seed of *Dianthus pavonius* was sown and a stronger seedling appeared in the seed pan. It's that simple if we allow the time to inspect seedlings and … select, select, select! It was this latter process that

Erigeron 'Canary Bird' has been a strong show favourite for many years

Dianthus 'Inshriach Dazzler' at Inshriach

took place with the now legendary lewisias at Inshriach. During my time there I could never have imagined such a successful approach with the production of the correctly named *Lewisia* 'Sunset' Group. Seed was saved from carefully selected colour forms, sown and then re-selected until almost pure cherry reds, deep orange, yellow, pure white and of course soft pinks were retained for further breeding. A few forms and possible hybrids were also raised and further propagated by tissue culture, one of these was named *Lewisia* 'John's Special'.

I guess that when anyone mentions the words *Blue Poppy* we automatically think of Jack Drake's Nursery. As a start-up pack when Jack first moved up to Inshriach, he obtained seeds from friends, including the great collectors, Ludlow and Sherriff, as well as from the Rentons at Branklyn. Despite the setback of the war years Jack re-built stocks and again selected fine forms from seed. I recall the gently sloping nursery beds with rows of immaculately grown forms of *Meconopsis grandis*, some emanating from the famous GS600

Incarvillea 'Frank Ludlow' at Inshriach

Meconopsis GS 600 (as was), now *M*. 'Susan's Reward'

(Ludlow and Sherriff) collection made in Bhutan. Further rows contained *MM*. 'Slieve Donard', 'Cicely Crewdson' and 'Branklyn'. Generous divisions sold for £3.50 in the 1970s/80s and the legacy of their meticulous growing technique means we can still enjoy most of these lovely cultivars today. Choice species such as *Meconopsis delavayi* joined forces with the more easily grown *M. baileyi, M. integrifolia* and *M. quintuplinervia*. Of course, it wasn't just plants that were sold at Inshriach, but a comprehensive list of quality seeds. Many of us recall obtaining and sowing their exciting forms of *Incarvillea* (originally raised from Ludlow and Sherriff, introductions) including the two cultivars, *II*. 'Frank Ludlow' and 'Nyoto Sama' as well as sensational forms of the *Celmisia coriacea* hybrids named *C*. 'Inshriach Hybrids'.

I should mention a group of alpine plants that are soon to be the subject of an RHS Trial at Wisley, namely the alpine *Phlox* species. Apart

Meconopsis 'Slieve Donard'

from those from a handful of growers on the continent, few cultivars can match those created at Inshriach in the 1960s to 1980s. Seed is rarely produced from the species such as *PP. douglasii, subulata* and *caespitosa*. So, again it was eager eyes that spotted fertile seeds and plants were subsequently raised creating hybrids from the above species growing in the rock garden. The seedlings were planted out in a narrow bed in front of John's house, the best of them were selected and following much deliberation (I was told that Jack enjoyed a good soak in the bath and dreamt up these catchy names) a number were named. When running Edrom Nurseries I sold many of these superb cultivars and could proudly relate how they were raised by my mentors. These included, *PP.* 'Crackerjack', 'Tycoon', Red Admiral' and 'Iceberg'. These plants were the result of ground-breaking work that has enhanced gardens the world over and simply join a throng of countless other plants raised at this great emporium for alpine plants.

Phlox 'Crackerjack' at Inshriach

Nomocharis, lilies, and the quite exquisite omphalogramma are just a few of the very important genera that were so enigmatic here. I would like to conclude though with two genera that will surely always stand out as a memory for visitors to the nursery. These are the Bog Primulas and autumn-flowering gentians. Beds of candelabra primulas together with vibrant colour forms of the sweetly scented *Primula florindae* in yellow, orange, and red; *P. sikkimensis* and *P. alpicola* in all its shades as well as a few rarities including *PP. chumbiensis* and *ioessa*. Close to the car park and beside the burn were masses of candelabra primulas, some were raised at Inshriach such as *PP.* 'Jackaroo' and 'Bonfire', while masses of the well-known *P.* 'Inverewe' were sold in bundles. A wonderful sight at flowering time!

Candelabra primulas en masse!

The woodland burn

John Lawson with Claire Muller

When working at Inshriach I was of course the young apprentice and was often sent down to lift clumps of these primulas and then they would be wrapped in newspaper with a label and rubber-band. Not rarely would a rather stern-looking lady come in and purchase quantities of these primulas. On my return from a significant journey to the other end of the nursery I would be met with the comment, *"Ah, splendid plants young man, would you pop along and get me another dozen"*!

Gentiana veitchiorum at Inshriach

Gentiana veitchiorum in its natural habitat

Autumn-flowering gentians were always a pride and joy of the nursery owners and visitors alike. They were planted out attractively in groups around the garden and then one could enjoy the nursery beds with each cultivar trying to outshine the next – a wonderful sight. As well as the popular species

Gentiana 'Drake's Strain'

Inshriach: house and garden

and cultivars, several new ones were raised at the nursery, including *Gentiana* 'Susan Jane', 'Blue Heaven', 'Blue Flame' and the superb *G.* 'Drake's Strain' (probably no longer with us) and a superb development of *Gentiana ornata*.

There is no doubt that, as John would recall, "*The success of the business has been due to the very loyal support we have received from our many customers*". Jack Drake retired at the beginning of 1971 and John Lawson continued to run the nursery as its sole proprietor, with a very loyal staff. John died in 2010 and was survived by his widow Christine and their two daughters, Dianne and Susan Jane. Visitors were always guaranteed a fine welcome and left the nursery with a less healthy bank balance but with a bountiful collection of superbly grown plants. Many readers will miss the Alpine Plant Nursery; however, we enjoy the memories, and many of the special Inshriach plants live on. We wish the current owners John and Gunnbjorg Borrowman every success with their venture.

Facing: *Gentiana* x *macauleyi* 'Kingfisher' from Keith & Rachel Lever (Photo: Peter Maguire) Below: The bog bed

Ophrys argolica ssp. *biscutella*

Himantoglossum hircinum

The Gargano Peninsula

Lynn and Michael Almond

The Gargano Peninsula is the spur just above the heel of Italy's boot, about three quarters of the way down

Good road access

Asphodeline lutea

Above Left: *Anacamptis pyramidalis* (Pyramidal Orchid). The scientific name *Anacamptis* derives from the Greek word 'anakamptein', meaning 'bend forward', while the Latin name *pyramidalis* of this particular species refers to the pyramidal form of the inflorescence.

Above Right: *Anacamptis papilionacea* (Pink Butterfly Orchid). Found in habitats like those of *A. morio*, this bulb is similarly very nutritious when cooked. It is a source of 'salep', a fine white to yellowish-white powder that is obtained by drying the tuber and grinding it to a powder. Salep is a starch-like substance which can be made into a drink, added to cereals or to bread. It can be prepared in the same way as arrowroot. Salep jelly has sometimes been used to treat irritations of the gastro-intestinal canal.

Meadows: *Ophrys bombyliflora* *Ophrys argolica* ssp. *biscutella*

Forms of *Anacamptis morio* (Green-winged Orchid)

In Britain and elsewhere, this tuberous perennial herb has a wide range of habitats including short and poor grassland, unimproved meadows, alpine pastures, forest fringes and open woodland. It prefers sunny alkaline soil and can thrive in poor clay-free ground of low nitrogen

the Adriatic coast. Basically, it is a large lump of limestone and seems to have more in common geologically with the Dalmatian coast on the other side of the Adriatic Sea than with the part of Italy to which it is actually joined. It surrounded by terraces of various geological periods and rises to about 1070 metres at Monte Calvo. Past changes in sea level – to which the Mediterranean is particularly prone – once isolated the Gargano as an island. This led to a distinctive fauna about ten million years ago and may have contributed also to the richness of the flora.

Today, the peninsula is buttressed on all sides with precipitous cliffs of up to 500 m. It is fairly heavily wooded in many areas and has a rich bird life. There are citrus and olive groves and vineyards along the northern shore; in the south some famous and heavy red wines are grown on the slopes. The famous oak forests of antiquity are largely

content. It is often sparse where it was once frequent; this decline owes to the ploughing and improvement of grasslands during the 19th and 20th centuries. This helps explain its relative abundance in the impossible-to plough Gargano.

gone, and near-surface or naked bedrock now characterizes much of the interior; the Umbra Forest, mainly beech, is an important surviving forest preserve. The Gargano is now a wonderful national park, covering more than a hundred thousand hectares (a quarter of a million acres). Northerly winds bring rain to the peninsula and help generate a unique microclimate in which the region supports more than 2200 plant species.

The Gargano has long been a Mecca for orchid lovers and boasts several forms of *Ophrys* found nowhere else. It is the sheer quantity of flowers, however, which overwhelms in springtime: orchids in their hundreds of thousands, narcissus in their tens of thousands, iris and cyclamen in their thousands, paeonies and campanula in their hundreds – and much more besides. We visited in the last two two weeks of April in 2016, although both the season and the weather can be very variable as

Iris bicapitata and habitat

Narcissus poeticus and habitat

the peninsula is like a rocky island, rising up out of the surrounding sea. We were told that the season was early in 2016 and in fact we saw few orchids down near sea level but, even so, the weather was cold for southern Italy; the temperature rarely rose above the low twenties and we had snow flurries on one day. The roads are generally good and the traffic light, although the distances from place to place are often further than you might think. We found that the late Tom Norman's First Law of Orchid Hunting (AGS Bulletin 49-3 p267) generally applies: *"The most interesting orchids are found*

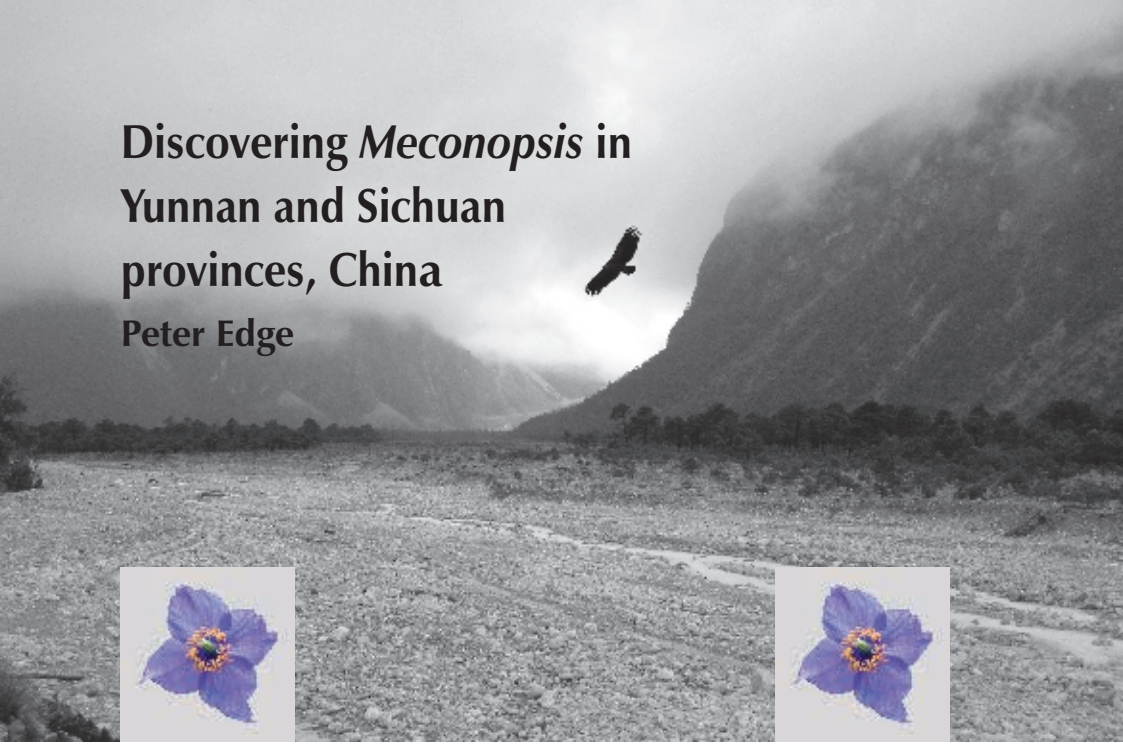
Neotinea tridentata
Ophrys bertolonii

in the greatest quantity within ten yards of the road". Most tourist accommodation is near to the beaches on the periphery of the peninsula and so is not ideally placed for exploring the whole area. Nevertheless, it is possible to find more conveniently located accommodation in places such as Castel Sant'Angelo, San Giovanni Rotondo and (where we stayed) Borgo Celano. We found almost all the orchids we had hoped to find, although we can also vouch for the accuracy of Tom Norman's Second Law of Orchid Hunting: "*The more exactly the site for a rare or unusual orchid is pin-pointed, the less likely you are to find it"*

Orchis quadripunctata
Ophrys fuciflora ssp. *apulica*

Discovering *Meconopsis* in Yunnan and Sichuan provinces, China

Peter Edge



Meconopsis are bold and dramatic and with any plant lover they deservedly have the reputation of being one of the most prized of garden plants. Not only that, but they seem to embody the wild mystery of Chinese mountains. During our three-week visit to China in June 2016 we visited the area that has the greatest diversity of species in the wild. We saw many different taxa of varying colours and forms and the more I saw them the more I came to appreciate and understand them in relation to the landscape. We travelled over large distances at varying elevations in both woodland and alpine habitats and saw a great variety of wonderful plants, but for me *Meconopsis* were the highlight of our visit.

The first *Meconopsis* experience we had was a search for *Meconopsis betonicifolia*, the first of the legendary Blue Poppies to be discovered. We were in an area called Nan He Jian, not far from the town of Eryuan on the road between Dali and Lijiang in Yunnan province. It was here in 1886 that the first specimens of this species were collected by the great French plant collector and priest Jean-Marie Delavay. The description of the species by Adrian Franchet was based both on these specimens and on some from nearby, but since then there have been few recordings of it in this area, the type location. Delavay's description of the location was imprecise and finding the plant in the wild again

Above: the upper valley of Gan He Ba, with the elusive *Meconopsis delavayi* and a depiction of a Himalayan Griffon Vulture from Jiajin Mountain

would be correspondingly difficult. However, David & Stella Rankin were prepared for this challenge. Delavay recorded it as coming from "*Bois de San-tcha-ho au dessus de Mo-so-yn*". With some shrewd detective work and pestering of locals, who recognized the town name and the plant photograph, we managed to find someone who was prepared to give up their morning to help us. We were to drive to the probable location of the valley in the mountains to the east. Here, we believed that at a height of around 3000 metres there would be a wood where this legendary plant would be found.

Although we climbed this valley and experienced the richness of the flora, we ultimately didn't have time to ascend it sufficiently high. However, by discovering the location of the wood where Delavay first found it, we have made progress towards a possible future visit, when we will have to start early and not be diverted. The valley justifiably distracted us with a treat of plants including *Primula blattariformis*, *P. bullata* var. *bullata* and *P. bullata* var. *bracteata*, as well as other beauties such as *Corallodiscus*, *Daphne* and *Rhododendron decorum*, so we were not disappointed. We saved our search for *M. betonicifolia* for another visit.

The first place we found *Meconopsis* was in the Gan He Ba, a vast post-glacial valley northwest of Lijiang. This amazing place has imposing views leading to the dominant Jade Dragon Snow Mountain to the West and is breath-taking. We saw *Meconopsis delavayi* growing next to the path into the valley, at an altitude of around 3200 m. With its simple purple-blue flowers growing in open scrub this was a pretty introduction to the genus. We also found the distinctive *Meconopsis rudis* which, although not in flower, could be identified by bristles on the leaves with red blotches at their base.

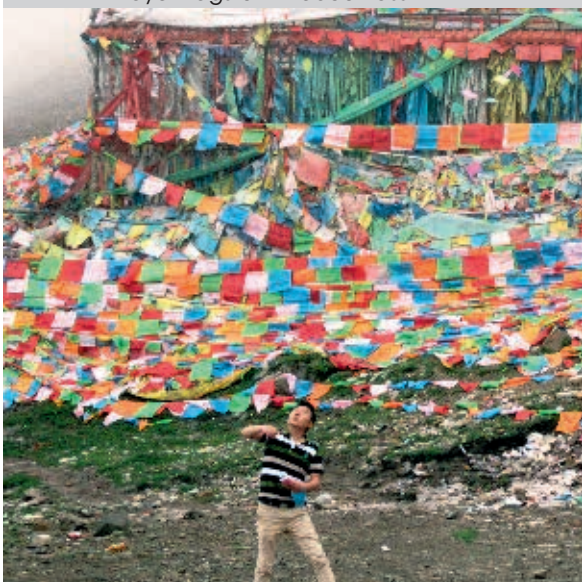
The next valley where we were to find *Meconopsis* was southeast of Zhongdian (Shangri-La) in Yunnan province, near to Tian Bao Shan. This area is predominantly populated by Tibetan people and in this remote and rural region they still wear the traditional dress. At the altitude where the conifers of the forests petered out to limestone scree we found *Meconopsis pseudovenusta*, identifiable by its fleshy lobed leaves. Like most scree plants it has adapted to this habitat by having a long tap root, often stretching very deep under the stones. Sadly for us, it was not bearing its purple flowers when we saw it. Close by we also found our first Large Yellow Poppy type of *Meconopsis*. These, in the series Integrifoliae, are characterized by being monocarpic high-alpine dwellers. They are dramatic, imposing and exciting. We found a small population of *Meconopsis sulphurea* growing at around 3600 metres between two logs, where the plants were protected from the grazing of yaks. This plant is identifiable by its upright form and the nodding poise of its flowers which notably have a distinct slender style. It concerned us that, perhaps because of overgrazing, this was the only specimen we found in the valley.

Meconopsis lijiangensis

Contradictory to what one might think, plants may thrive in the most disturbed places. The next day we visited a site just north of Zhongdian, on the slopes of the Hong Shan, where we found a significant population of diverse plants growing in very disturbed soils. They included six different species of *Primula,* including *Primula szechuanica*, and *Meconopsis lijiangensis*, a tall yellow species closely related to the previous. All were growing in a construction site for a reservoir, an area dumped full of rubble.

Our subsequent *Meconopsis* experience was not to be for another week but it was well worth the wait. After travelling north and east into Sichuan province we visited an isolated wooded valley leading into large mountains to the west. This was near to a village called Yele between Liangshan and Garze. The villagers' hay meadows were vibrant with the colours of butterflies and flowering

Prayer flags on Zheduo Pass



plants and higher in the valley this led into grazed and then pristine forest. It was here, at around 3000 metres, that we saw what we were looking for – *Meconopsis wilsonii* ssp. *wilsonii*; what a magnificent treat! These tall woodland plants with light purple flowers grew quite contentedly and abundantly by bamboo at the fertile stream-side, some of them up to two metres high. From one viewpoint, it was possible to see dozens stretching up the valley side. We later learnt that there were three places where our group had discovered the plant in this valley system, including one found by our driver, who had strolled even less than a mile from the car. We noted another unidentified *Meconopsis*, with slender leaves, tall stems and narrow seed pods, but this was not in flower. We also found *Meconopsis heterandra* in leaf but not in flower. This latter species is very local to this area and was only described in 2009.

Further north, Zheduo Pass to the west of Kangding is on a main route to western China. With its litter-strewn road and ugly pylons, disgusting toilets and loud smoky vehicles, the pass itself isn't pretty. However, at a height of 4200 metres it is a great starting point for seeking alpine plants. We found *Meconopsis integrifolia* ssp. *integrifolia*, another with large yellow flowers, growing between the rocks and the alpine sub-shrubs and in great profusion over the mountainside. Appearing through the mists and rain they looked amazing. We also found *Meconopsis henrici*, a vivid small blue flowerer contributing abundantly to the tapestry of flowering plants.

As we progressed north and deeper within Sichuan, we continued to see *Meconopsis* in increasing numbers and variety on all the alpine passes. The next time was a wonderful day. We travelled north from Baoxing, at 1000 metres, to ascend the pass over Jiajin Mountain. It was

Meconopsis integrifolia

a day of gradual ascent through remote and wild valleys. For a long time we were surrounded by trees for as far as the eye could see, and were surprised and delighted to find a solitary lady selling delicious hot potatoes. Later, when we stopped, a flock of enormous Himalayan Griffon Vultures glided around to within perhaps 20 metres of us. Truly we felt the surrounding of nature. Further up, above the tree line, there were alpine meadows with masses of spectacular wild flowers.

It was higher still that we found a most magical sight, *Meconopsis punicea*, the red flag poppy – in hundreds, flower heads swaying in the breeze. Somehow, photos cannot do justice to the way they move. Here, this species is at the southern end of its range. They grew mainly in large clumps, and we wonder whether this whole population consists of perennial plants. Amongst their number we also found the particularly rare white form, *Meconopsis punicea* forma *albiflora*. We were to see

Meconopsis punicea

Meconopsis punicea on subsequent days but that first impression of them was the first time that any of us had seen them flowering in the wild and it will never be forgotten.

In this same area we once more found *Meconopsis integrifolia* as well as *M. balangensis*, growing at the side of a boulder, tantalising in bud and yet to flower. The latter was covered with bristles on the leaves, rather like *M. rudis*. After getting going again we were just arriving at the 4100 metre summit when we noticed something very peculiar; it appeared to be a black *Meconopsis*. This gorgeous plant, about 60 cm in height, with drooping flowers, we indentified as *Meconopsis balangensis* var. *atrata*, a monocarpic plant with flowers that are perhaps more dark purple than black. In fact, some plants had much darker flowers than others, but that didn't take away any of the wonder. I find it remarkable that this variety was only described as recently as 2010, as it was growing so very obviously by the side of the road! It really makes one think about the possibility of unknown species that may be found further out in the less accessible parts of this region.

Nearby we found another example of the bright yellow *Meconopsis integrifolia*, this time squatter, with hanging flower heads, and looking very different to the plants we had seen previously. We aren't completely sure what this was. Perhaps there are morphological differences between the plants depending on the pass where they grow. If this is the case, there could be many more varieties than are presently described. Looking at this particular plant, I could understand how *Meconopsis integrifolia* received its common name of Lampshade Poppy. There was also blue *Meconopsis pulchella*, later found again on the pass at Ba Lang Shan. And so this day ended with bold reds and yellows, blacks and blues, purples and whites – vibrant and wonderful colours of *Meconopsis* glimpsed through the mists.

Over the next couple of days, we explored at Ba Lang Shan (4500 metres) and once more found *Meconopsis* in even greater variety. The yellow-flowered one growing here in great numbers was *Meconopsis integrifolia* ssp. *souliei*. *Meconopsis punicea* grew throughout and we found *Meconopsis balangensis* var. *balangensis*, a squat, monocarpic plant with spiny leaves, bold blue flowers and yellow stamens, characteristically in a central cluster with an outer ring. Another stately blue-flowered species was *Meconopsis pulchella*, with its nodding, four-petalled flower posture; there was one plant of a white form, which doesn't appear to have been reported before. *Meconopsis quintuplinervia* was our final identification. A close relative of *Meconopsis punicea*, this species has narrow, nodding, mauve-blue flowers, and the few that we saw were much more robust than those that we know in cultivation. One would also hope to find the cross between the two, *Meconopsis* × *cookei*, in this area although - alas - we did not.

Facing: *Meconopsis punicea* forma *albiflora*

Our visit to Yunnan and Sichuan revealed a total of nineteen taxa of *Meconopsis* of woodland and alpine forms, few of which I had previously seen in cultivation. It is impossible for me to choose a preferred variety: there were many bold and dramatic forms but equally as many smaller and apparently more delicate. Most of the plants we found would be garden-worthy, and many are not currently in cultivation. It is the challenge of the horticulturist to find ways to grow these plants. Just as importantly, it is the inspiration of this expedition to demonstrate how they might be used to enhance garden design. Surprisingly many of these plants have only been described within the past decade. It ought to whet the appetite of the plant explorer to see if there are more of these dramatic beauties which have not yet been discovered. It is inspirational to be introducing more of these plants to science and the wider world or indeed to be increasing our understanding of the way that they grow.

This expedition has heightened my awareness of this genus and the landscapes in which it grows. Perhaps every expedition highlights one genus more than any other and, if so, for me this time it was *Meconopsis*. They were some of the finest plants on a great many fine days of botanizing.

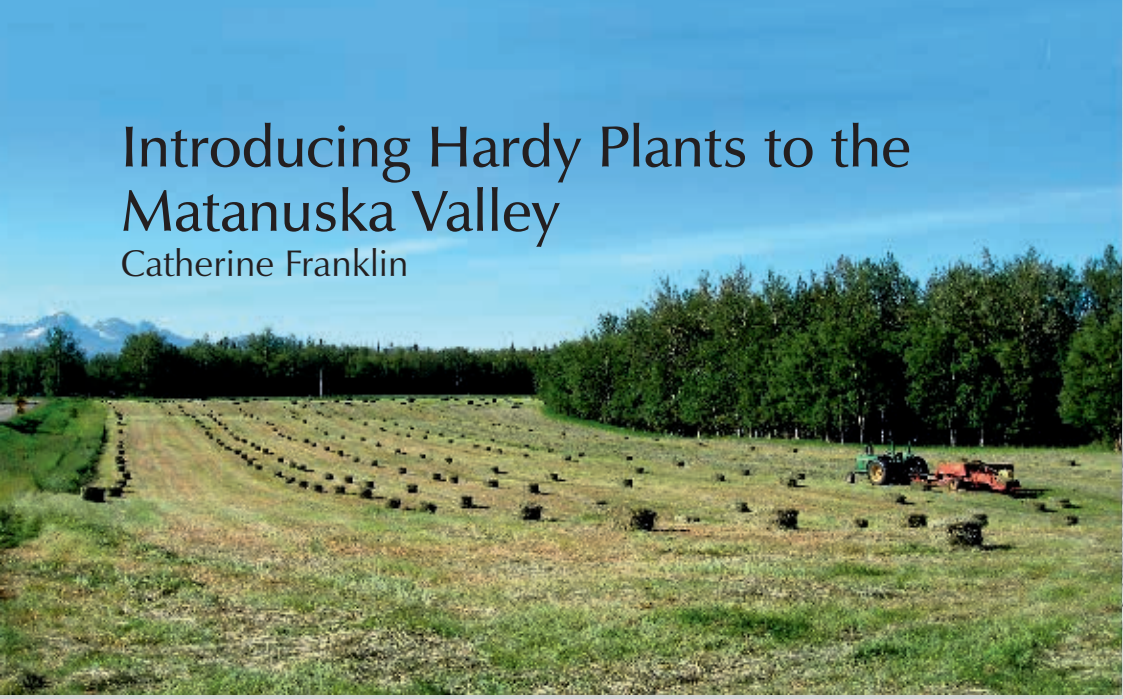
Meconopsis balangensis var. *atrata*

This is the third article in the series introduced by Stella & David Rankin in their piece *People, Plants and Places* in *The Rock Garden* Issue 139. There will be a total of five articles from: Chris Parsons, Peter Edge, Ed Shaw (issue 139), Graham Gunn (issue 140), and Ngaire Burston. Readers who would like to see a map of the areas visited should look at the map presented in issue 139.

Meconopsis pseudovenusta (Photo: Xiao Wei)

Introducing Hardy Plants to the Matanuska Valley

Catherine Franklin



Summer in the Matanuska Valley

We live fifty miles north of Anchorage, Alaska (USA), in the Matanuska Valley, surrounded by tall mountains that often keep their snow into June and even July. Some parts of the valley look like Switzerland. The growing season starts in April and ends in late September. The soil is windblown acidic silt that dries out quickly, and in consequence the topsoil varies in depth from ten cm to more than three metres. Spring is usually dry – except for melting snow – with summer rain in late July, August and September. My father used to say that we would be a desert were it not that the ground is frozen during most of the year. High quality fruit such as apples, raspberries, strawberries, saskatoons (*Amelanchier alnifolia*) and gooseberries are grown, as are currants, vegetables and hay.

The University of Alaska established the first experimental farm at Sitka in 1898. This was followed by the Matanuska Experimental Farm in 1916. In 1935, during the Great Depression, the Matanuska Valley colony around Palmer was begun with the aim of helping farm families from the mid-West to have a new start. It was a hard, lonely and isolated life and many families returned home although others came up on steamships to replace them. The Palmer Experimental Station was established in 1949 to assist agriculture in the valley.

My parents came to Anchorage in 1948. Father was an entomologist for the US Army at Fort Richardson and mother, a bacteriologist, supervised the laboratory at nearby Elmendorf Air Force Base. In 1950, my father joined the Palmer Experimental Station as the entomologist

Winter at home in the Matanuska Valley

and mother retired to take care of the growing family. She, from upstate New York, had been raised on a prosperous dairy, poultry, vegetable and fruit farm. They wanted to farm-raise chickens, flowers and fruit and vegetables for the table. And so it was that they searched and purchased an 88-acre colony farm that replacement colonists had abandoned. All the windows in the barn and chicken house had been sold; the only moveable items left were two stools and a broom. They cleared and tilled fields and planted Canadian hybrid Lilac hedges (*Syringa villosa* x *reflexa*) for wind breaks. The Palmer Experimental Station horticulturist, M V Babb, was doing extensive trials on woody ornamentals, perennial flowers, trees and small fruits and vegetables. He found that imported nursery stock was either damaged in shipping or at the nursery or both. He then grew seedlings from many sources to find hardy stock suitable for south-central Alaska. Babb generously helped father with contacts for nursery stock and seed sources in Canada and Europe. Father joined the RHS, AGS and SRGC and received seed lists from the botanical gardens in Copenhagen, Bergen, Uppsala, and Goteborg. He drove the Alcan (Alaska/Canadian) highway during many summers and visited Canadian experimental stations and nurseries.

Years later, we can look at shipping lists and at plants in the field and see what survived our dryish summers and the long, cold, windy and snowy winters. Frank L Skinner and his nursery, in Dropmore, Manitoba, Canada, supplied of most of the woody and herbaceous material that lived and flourished.

Callianthemum

Primula vulgaris
Primula wulfeniana

Frank Skinner was born in Rosehearty in Aberdeenshire, Scotland, in 1882; his family moved to Aberdeen when he was six years old. According to his 1966 memoir *Horticultural Horizons - Plant Breeding and Introduction at Dropmore Manitoba* he *"spent one of the happiest periods of my life"* in Aberdeen. In 1895 his family emigrated to Canada. Between 1918 and 1963 he sourced 102 woody and 147 herbaceous specimens from the northern US, Canadian experimental stations, Kew, RBGE, northern Europe and Manchuria. He came to realize that *"our greatest problems in developing and raising horticultural plants are due to the climate"*. His *"long, cold, dry windy winters"* are like ours in the Matanuska Valley. He hybridized 81 trees and shrubs and 69 perennials at Dropmore over those years. He was recognized internationally as an outstanding botanist, horticulturist and plant breeder, receiving many honours. My parents ordered many plants from Skinner, beginning in 1951 until the nursery closed after his death in the 1970s. Here are the perennials that have proven to be hardy for us over fifty years.

Our own Callianthemum angustifolium (Skinner) is the first old-timer to bloom, usually on May 15th. The finely cut and blue-green foliage is as beautiful as the abundant white daisies. It is tough, never sets seed and divides easily once the foot-long

(30 cm) white roots are washed and cut back. Skinner sold Alpine Sun Rose seed for 30 cents a packet in 1965.

Primula vulgaris is the first primrose to bloom in pale yellow, followed by *P. veris* and *P. elatior* in shades of yellow, orange and red. An Anchorage visitor a few springs ago saw the three primroses in bloom. She started to cry and explained her tears. She was originally from England and as a child had picked those flowers in the woods of home.

Primula wulfeniana has had its label stepped on and broken by many moose feet over the years. It is a treasure when it blooms in mid-May. We acquired it as wild-collected seed from an AGS or SRGC seed list. It gets extra water during dry summers and shade from hot afternoon sun as do our many *P. auricula* seedlings in cream, yellow, burgundy or pale pink. The Mongolian violet in deep yellow is a true violet that could be *Viola glabella*. It grows one to two inches (3 to 5 cm) tall, often blooms twice a summer and self-seeds profusely in flower beds and lawns. It could by some (not us) be called a weed. *V. altaica* (Skinner) is not as tough but has lovely blue blossoms.

Blue and white flowered *Aquilegia akitensis* and *A. jucunda* dwarf both came from Skinner's Nursery at 30 cents a packet. Skinner happily sold many beautiful

Primula auricula
Primula elatior

Aquilegia akitensis

speedwells: his *Veronica incana* and *V. austriaca* ssp. *teucrium* are still with us here. This latter Austrian Speedwell makes a lovely clump with dark sky-blue flowers in June. *Primula cortusoides* (Skinner sourced these from Uppsala Botanic Garden in 1928) has beautiful flat pink flowers and blooms well with extra water. *Dracocephalum altaicense* was described by Skinner in his 1965 catalogue as *"easily the best dragonhead we have so far grown"*. The deep sky-blue flowers are profuse in June.

Another long-time veronica comes from the wind- and moisture-swept Aleutian Islands. A bush pilot saw it from the sky, turning the islands purple, and gave seeds to Lenore Hedla (an Anchorage garden writer), who kindly passed seed on to us. The Aleutian speedwell only survives here in semi-shade with extra water. It is *Veronica grandiflora* or *V. kamtchatica* or *V. aphylla* var. *kamtchatica*.

Veronica austriaca ssp. *teucrium* *Veronica incana* *Aquilegia jucunda* (dwarf)

Iris setosa 'Alba'

Soldanella cyanaster is the most robust of the snowbells we grow here. The lavender snowbell needs a cool spot and extra water in the summer. To survive our dry winters, we cover it with spruce boughs. Any leaf left uncovered for the winter turns brown.

Primula cortusoides

Soldanella cyanaster with winter-browned leaf

Iris setosa

Our two June-blooming bearded irises are planted with the rhizome just above soil level. The deep purple is Skinner's and the smoky burgundy came from Aubin Nursery in Morden, Manitoba. *Iris pseudacorus* (Skinner) is June-blooming in a moist location. *Iris setosa* and *I. setosa* 'Alba' are our native blue and native white irises and need moisture to bloom well. They live all around the *Ring of Fire* from northern Japan, northeast China, eastern Siberia and west to Alaska.

Native to the woods north of the barn is *Cornus canadensis*, a beautiful circumpolar gem with large white flowers and good fall colour. It grows well in the woods, the edge of the woods, and in full sun if it gets the right amount of water.

Iris pseudacorus with *Meconopsis baileyi*

Cornus canadensis

There is only one highway from Anchorage to Palmer and when it was widened in the 1960s father dug dark pink *Dodecatheon pulchellum* off the Ekutna flats before the bulldozers came. Now a primrose, the Shooting Star grows well in partial shade and full sun. It seeds itself from the flower bed into the gravel in our driveway. If the summer is dry, we cut off the seed pods, water well and cover with an old bed sheet to prevent wilting. Canadian horticulturists William Cummings, Louis Lenz and Don Hoag from North Dakota State University came up in the summer of 1969 and everyone went to Hatcher Pass. They returned with *Fritillaria camschatcensis*, the Chocolate Lily. Now Hatcher Pass is a state park and digging is not allowed. Although the Chocolate Lily has a smell like carrion, the bulbs and the rice it sheds were eaten by the native people all over this area. The easily shed rice can make it a weed in a flower bed. Skinner sold many selections of Day Lilies. Only *Hemerocallis middendorffii* (yellow) and *H. fulva* (coppery) have survived and they make huge clumps that delight us for three to four weeks in early June.

Skinner also sold beautiful old French peony selections. 'Sarah Barnhardt,' 'Festiva Maxima', 'Karl Rosenfield' and 'Felix Crouse' are very hardy reliable bloomers. *Lychnis chalcedonica* (Skinner) and *Trollius europaeus* bloom side-by-side and are extremely hardy. The scarlet and orange-yellow combination is very effective in July. *Primula florindae* is one of the last primroses

Fritillaria camschatcensis
Hemerocallis middendorfii

Veronica grandiflora with *Primula incana*, *P. halleri* and *Corydalis solida*

to bloom in yellow, rusty or red and its spicy fragrance is lovely in the semi-shade. *Sedum telephium* came from Bergen Botanical Garden seed list long ago. Their selection has dark red flowers in late July and has seed heads that last well into the fall. With excellent fall colour, this sedum is extremely hardy and tolerates dry conditions well.

Primula florindae

Many of our flowers are finished blooming by State Fair time (end of August) but *Aconitum napellus* (Skinner) is a stunning Monkshood, four to five feet tall with bi-colour blue and white.

With the long winters, snow, and low temperatures (-25°F/-32°C) recently, we have few insect pests. Slugs came up from Minnesota on nursery stock and are now well established but Sluggo and regularly applied diatomaceous earth keep them under control. A slug jar – a plastic jar with screw cap lid filled with salt water – is necessary with the weeding tools in late July and August when it starts to rain; we just drop them in. For the rare times aphids attack Columbine or Hawthorn, insecticidal soap generally works.

We do have moose. They love vegetable gardens, apple trees and Nanking cherries (*Prunus tomentosa*). Perennials that are walked upon often never recover. When moose start their night-time wanderings in late August, it is time to close the gates in the eight-foot-tall moose fences (the posts are sunk in cement). If a flower bed or row of perennials is not fenced in, we also place plastic-covered wire stacking kitchen cabinet shelves or 'plant protectors' on the ground wherever needed. When the 'termination dust' (that is, snow) starts to cover the mountains in late September, it is time to cut the flower beds back and cover them for the winter. Early winters can be dry, windy, and

Paeonies aplenty

Trollius with *Lychnis*

Primula veris/elatior

cold. Spruce boughs are placed on first, then birch leaves with netting on top. Rocks hold it all down. Hopefully it will snow to give protection from the cold, but in some winters the dust just blows around.

Father also collected many books: *Propagation of Alpines* by Lawrence D Hills (1959) is invaluable in how to raise plants from seed. Even though we can never keep up with the weeding, seed lists are always tempting. We keep our packets of seeds in plastic bags and in a freezer when we are not planting them. We plant our seeds in 3.5 inch (9 cm) square plastic pots using a sterilized soil mix (1 hour at 180°F/82°C) with sterilized sand on top. Our soil mix is 1 part good topsoil: 1 course vermiculite:

Dwarf *Iris*

Contrived and practical plant protectors

1 sand: 1 part Cornell mix (peaty). We plant our seeds in January, and put most out to freeze in our never-heated perennial greenhouse. The pots are covered with plastic film to keep moisture in and undesirables out. After two to four weeks of freezing, they are returned to the daylight basement to (we hope) germinate at 50° to 55°F (10° to 13°C). Each pot gets a new piece of plastic wrap on top to keep moisture in. Some planted pots go outdoors under snow if their germination requirements are complex. The seed pots that do not germinate go out to a shade cloth area in May. The pots are checked and watered throughout the summer. In mid-April the flower beds are uncovered and we wait for the spring bulbs to bloom along with apples, ornamental pears and more.

The barn, with our essential moose fencing

Tropaeolum peltophorum Cultural Considerations

Jean-Patrick Agier*

Among all the annual species of the genus, *Tropaeolum peltophorum* is one of the rarest found in cultivation nowadays. The reasons for this might be the scarcity of seed and the cultivation requirements. *T. peltophorum* is an annual species from South America, known in the wild from Ecuador, Bolivia and northern Peru. This tropaeloum was introduced to Europe by William Lobb in 1843 under the name *T. lobbianum*, later synonymized under *T. peltophorum*. Lobb (1809-1864) was a Cornish plant collector, employed by Veitch Nurseries; he was responsible for the introduction to England of *Araucaria araucana* (the Monkey-puzzle Tree) from Chile and the massive *Sequoiadendron giganteum* (Wellingtonia) from North America. Although this tropaeolum has been used in the past for hybridizing with the more commonly cultivated T. *majus* and *T. minus*, its involvement in cultivation nowadays remains insignificant.

The plant produces neither tubers nor identifiable perennial rootstock but may be grown under adequate conditions as a semi-perennial, just like *T. majus* and its hybrids. *T. peltophorum* does not seem to perform well outdoors in gardens or in pots. I personally grow it on a south-west exposed balcony, with similar results. This certainly explains growers' past lack of enthusiasm and thus the lack of seed availability.

Despite germinating quite easily from seed in either kind of compost or soil, the plant usually begins to bloom in our countries late in the season, from autumn onwards, and so needs to be protected in a heated (preferably) greenhouse or conservatory. Being tender, it cannot stand any degree of frost. Good light and warmth are essential for quick and optimal growth, which leads to the production of hundreds of showy flowers of quite a good size over a very long period.

At the Lyon Botanic Garden, *T. peltophorum* has been grown successfully in a well-exposed greenhouse since 2002. It receives all the strong light and warmth it needs and grows to several metres high each season. But after a few months the plant becomes less showy, partly covered with lots of dried dead leaves. It is then cut back and re-grows from fallen seeds. The Lyon accession was originally seeds that were collected in Azuay Province in Ecuador by Bruno Matter from the Basel Botanic Garden in Switzerland.

Young stems are purplish and all parts of the plant are slightly pilose. Flowers are widely open and of a conspicuous orange-red, but may vary from yellowish to (rarely) bicoloured. The flower pedicels are usually quite

long, often more than ten cm. The three lower petals are clawed and the two upper ones have undulate margins. The calyx and spur are light orange. The spur is quite long (about 25 mm) with dark streaks and greenish tip. Leaves are green and somewhat truncate at the base. Each flower produces two to three seeds. The plant is a strong climber but it can scramble when there is no support available.

Being an annual, *T. peltophorum* can be propagated by sowing the seeds in warm conditions or by cuttings. These are best rooted in late summer or autumn in an adequate medium or in water. Unfortunately, seeds are rarely available in the trade or even through the seed exchanges. Even more worrying - and disappointing - is that some seed companies distribute items which, although labelled as *T. peltophorum*, turn out to be forms of *T. majus*.

As with most *Tropaeolum* species *T. peltophorum* may be attacked by aphids, and Spider Mite may sometimes also be a problem. In my experience I don't know of any other serious disease.

A complete taxonomic description of *T. peltophorum* can be found in Sparre and Andersson's 1991 publication (*A taxonomic revision of the Tropaeolaceae, Opera Botanica, 108*). The species is one that is nicely rewarding when good growing conditions are provided. It is not difficult and deserves to be more widely grown.

The Perspective of a Newcomer

Claire Peacocke

As a relative newcomer, I am often asked how to attract new members. I myself was influenced in many ways. I joined up after attending events with my parents, hoping to build up my horticultural knowledge from talks and trips, and to learn more about alpines, which have an unfair reputation as fussy cousins of the ornamental plant families. I have been delighted by the warm welcome, generosity and encouragement from members and at regular events; I've enjoyed the friendly atmosphere, high-quality speakers and – of course – garden visits. I have even germinated seeds from free packets and the reluctant seedlings now survive on my shed roof-garden. The SRGC and AGS annual shows and competitions are a completely new experience for me; the myriad classes, rules and high quality presentations seem inaccessible and, although always enjoyable and educational, are not something I could realistically aspire to with my urban and diminutive back yard.

As a mature student of horticulture, I have been exposed to trends in the gardening and horticulture industry, and some of these facts and forecasts make grim reading – posing challenges for professionals, clubs and societies alike. The average age of gardeners is reported to be increasing; people are settling down, buying homes and raising children later in life, pushing up the age at which there is much time to spend in a garden. Home ownership is decreasing and is reported to be increasingly out of reach for many 20- to 39-year-olds. How will this "*Generation Rent*" develop an interest in gardening and what form will this interest take? Are they likely to develop their interest into more specialized areas such as alpines and what could convince them to do so? Access to a garden and garden size has also been decreasing over the past number of years; there are fewer new houses being built, and gardens in new developments are small. If specialist interests such as alpines develop from a love of gardening in general, then the next couple of decades will prove particularly challenging in this respect.

There is hidden gardening potential even in the density of modern housing

That having been said, the good news is that gardening remains a popular leisure activity at present, and it is possible that new trends and preferences in how people spend their leisure time and money could potentially fit in well with club values and activities. There is increasing demand for experience-based leisure pursuits; all are centred around being active, learning new skills and knowledge, conservation and ecology, or improving health and wellbeing. Nostalgia- and heritage-based interests are also increasing, as are preferences for short trips and "*stay-cations*" over longer holidays. The methods by which people socialize and communicate have radically changed, with social media and the internet often being the first ports of call for advice and information. There is a growing trend for organizing things at the last minute, lower loyalty to any single brand and even a desire to leave electronic devices and social media behind for a few days. Keeping abreast of new trends in horticulture could also present new opportunities for promoting and growing groups and finding new audiences; therapeutic gardening is a growing sector, as are community gardens. Fashions and trends in gardening have moved towards a naturalized, wild look and feel; however, the natural look of rock gardens appears to have been overlooked by the glossy gardening press and the influencers in favour of prairie or woodland themes.

Alpines themselves are resilient and used to dealing with extremes, thriving on the uncomfortable margins of the natural world (aren't they fantastic?). As our weather and climate are modified and the range of successful plants in UK and Irish gardens changes, alpines and their survival skills will surely become increasingly relevant as a plant group for gardeners, in urban environments and also for scientists and ecologists studying plant adaptation. They are perfect for a small site or a portable container garden and should have great future potential as housing and gardens change. I think the key to continued long term success for garden societies is to gain publicity and relevance in an accessible way, aligned to these changing lifestyles and preferences, and to build connections that are based on intersecting common ground and projects with other community and social groups.

(*A version of this article was first published by the AGS Ulster Group*)

There is much that can be done within a small space. I Call this "Yardening"

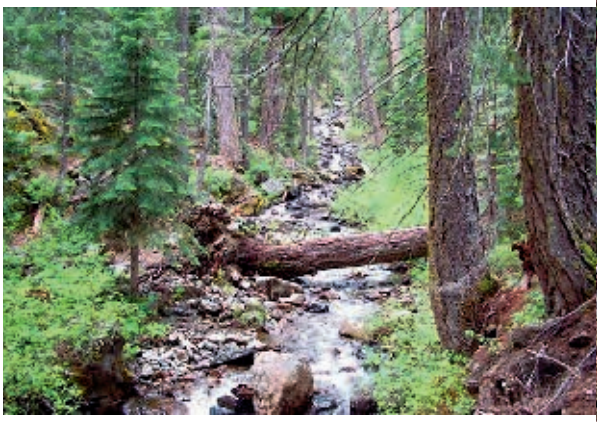
High Mountain Trilliums

Larry Neel

Having been pulling weeds and splitting and stacking next winter's wood for a couple of weeks I decided to take a hike in the Big Meadows and Shackleford Creek drainage to see if the *Trillium albidum* were still blooming. This area is in the Marble Mountain Wilderness that borders the north side of Scott Valley here in Siskiyou County, California. The trailhead is an hour from my house and the route I'm taking climbs from 1500 to 2500 metres (5000 to 8000 feet) in five or six miles. The trail starts in forest then breaks out into higher open country as below. *"Hey! … any trilliums up there?"* It sure doesn't look like *Trillium* country. The area I'm exploring is over the top of the ridge on the Shackleford side at about ten o'clock. This picture was taken from the Big Meadows side and this area is called Back Meadows.

Panda is ready ...

The trail I'm taking starts at the Shackleford Creek trailhead and is used to access several lakes, the Pacific Crest Trail, and the Calf Lake area where I'm headed. It winds up the drainage for three or so miles through big timber and meadows with occasional glimpses of the creek



After a mile or so the wildflowers start to appear

Aquilegia formosa

Clintonia uniflora

Pink *Dodecatheon alpinum* and yellow *Viola glabella*

A few *Trillium albidum* are still blooming along the trail. These look more like *T. parviflorum* than *T. albidum*, but we don't have *T. parviflorum* in our region

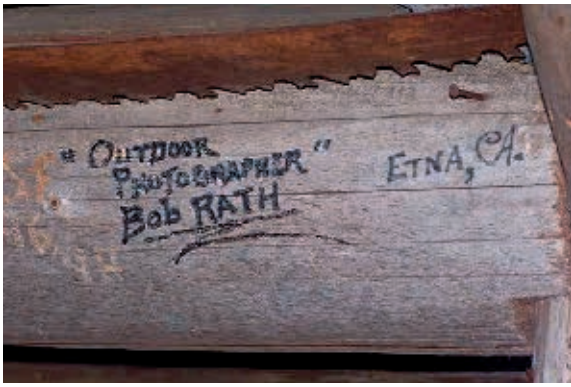
After about three miles the trail forks and I head north and start climbing

After a couple of hundred yards I hit a patch of deer-proof *Lewisia cotyledon* that is growing on top of a big rock

Another mile up the trail and I hit Pimentel's Cabin

The kitchen

Our mountains used to be full of these cabins which were built and used by local ranchers who ran stock up in the higher meadows in the summer. The Forest Service is slowly getting rid of them by not allowing them to be repaired or by burning them. It is common for backpackers to carve or write their names and dates on the logs when they pass through. I have seen cabins in the Salmon Mountains with as many as fifty or so names and dates carved into them



Bob Rath retired to Etna in the eighties and spent summers hiking the mountains taking pictures. He died some years ago but his work can still be seen at local banks and government offices

Another mile and a half and I break out of the timber

More wildflowers

Erythronium grandiflorum

Pyrola picta

A flat area that looks back over Shackleford Creek to the ridge that separates it from Mill Creek

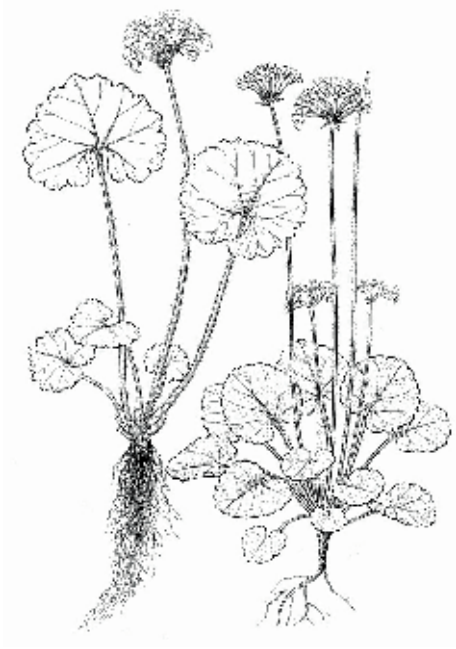
I start finding *T. albidum* up near the Spruce on the right. Can't you see them up there? You need glasses. The top of ridge is a little over 8000 feet so I'm guessing these are growing a little lower at around 7500 feet

A larger clump - a nice patch; I found what I was looking for and its starting to rain so it's time for Panda and I to limp back to the rig. I'll be back in August looking for seeds. Does it get any better than this?

This completes Larry's trilogy of plant hunting near his home in Siskiyou County. Previous articles appeared in issues 126 and 127 of *The Rock Garden*.

Androsace henryi

Kari Wang



I live just outside Oslo in Norway. In 2012 I bought a species of primula from Larz Danielsson in Sweden. When it flowered I realized it was *Androsace henryi*, which I had seen in China on the AGS Expedition in 1993. The species has tall loose heads and whitish flowers with large rounded leaves; it grows from about 1500 to 3000 metres and prefers the light shade of woodland margins, ravines and glade-like clearings in an area that stretches from China to Nepal.

My plant grew well and increased in size fairly quickly. I was able to detach good pieces and give them away. Nevertheless, I have not been able to collect seeds. I have only one plant, and good seed does not seem to form in the pods. However, in 2017 it sorted the problem out in a different way, as you see in the picture below, by forming plantlets on top of the flower stalk. I have checked the *Androsace* literature but cannot find anything about this way of propagation. I would love to hear from other members about their experiences with this delightful plant!

(email: k-wang@online.no)

Drawing from: *Flora of China* (www.eflora.cn/spfoc/Androsace henryi)

A Novel Way To Germinate Seeds

Robert Pavlis

The traditional and tried way of germinating seeds is surely well known to my readers. Take a pot of soil, add the seeds, cover them and wait optimistically for germination. For the most part this works well but it does have some limitations.

Try using this method to germinate a hundred different types of seeds, many of which either take a long time to germinate or need a cold treatment following a warm one. Pot up the seeds in late winter and wait. Quite a few pots will germinate during spring and they are easy to grow on. What about the ones that don't? I usually give them a warm summer because some types of seed naturally take longer to germinate. The following winter gives them another chill, which might just do the trick. The problem is that during the summer I have many little pots sitting around that need to be watered every day. But that is never going to happen – I am not that diligent. By the following summer there are unsprouted pots from the current year as well as the left-over pots from the previous year, and the number of pots just keeps growing. There should be a better way – and there is: grow in baggies.

The Baggy Method

Cut up some tough paper towels into rectangles about 5 cm (2") x 14 cm (5.5"). Take a snack-sized baggy (smaller than sandwich size) and insert a piece of paper towel. Place the seeds onto the dry towel. I like to spread them so the seeds are not touching each other. Add a bit of water – just enough to wet the towel. Close and label the baggy. I just staple the seed package label right to the baggy which is easier than writing out the plant information. The packages from SEEDEX work great for this and they even contain the germination information. Store the baggy at the right temperature for germination. I put some into the bar fridge for a cold spell. For a warm spell they either sit on my desk or they go into the sun room. If they need fluctuating temperatures, try the garage. If the seed needs darkness to germinate, put the baggies into a re-sealable envelope and then store them.

Seeds that are stored warm are checked every two or three days. Since the seeds are sandwiched between plastic and a paper towel you can easily see them, and the start of any germination. The ones in the cold

Above: a collection of seed on damp paper towel in a baggy ready for storage

Germinated seeds ready for potting up

might be checked once a month; I am always amazed at how many germinate at 5° C. Once you see germination it is time to pot up the new plants. If I have only a few seeds of a variety, or if the seed is very special and I can sell them to friends at ridiculously high prices, I pot them one or two to a pot. If I only want one or two plants, I put all seeds of one variety into the same pot. Transferring the germinated seeds takes a bit of practice but is fairly easy. Unlike those in my picture, which were over-sprouted for visual effect, the best time to transfer a sproutling is just as the root shows itself. If the root is already long, you need to be a little more careful not to damage it. I prefer to use a pencil or tweezers to lift it up gently. For very small seeds, I just take out the whole paper towel, turn it over and shake it over the pot of soil. Once the seeds are moved to the pots, carry on as usual.

Initially, I had a real problem with roots growing through the fibres of the paper towel. Using thicker paper towels helps but what works well is to keep the baggies lying so the seeds are under the towel. Remember that roots grow down and therefore try to grow into the plastic instead of the paper, making them easier to remove. If the roots get really tied up in the towel, you can cut it apart and leave bits of it on the root.

There are several reasons I like this system: I can see the germinating roots; if a seed gets put into a pot and it does not grow I know that it is not a germination problem; if the seeds never germinate, I don't waste time and space taking care of a bunch of little pots. Some seeds (such as various trees, peonies and hellebores) germinate over a long time and, in this case, I just take them out as they germinate. Watering is much less of a problem; instead of once a day, I might add some water every couple of weeks. In the fridge they can go a month or more without watering especially if you have a stack of baggies.

Experience has it that if my seeds stored warm don't germinate by July, they won't germinate unless I do something different. I usually put them into cold storage until the following early spring because I really don't want to deal with small seedlings in the fall.

Some seeds get mouldy, but most don't. I suspect that the mould is formed mostly on non-viable seeds. The chaff that accompanies some seeds also moulds easily. Spacing the seeds on the paper towel helps prevent the spread of mould to viable seeds. I am also trying various pre-treatments to disinfect seeds such as (hydrogen peroxide, or bleach). Pre-treatment may also help speed up germination in some varieties that are

tough to germinate. Because the germination process is visible it is much easier to evaluate pre-treatment experiments. My germination trials with *Baptisia australis* were all done in baggies (http://www.gardenmyths.com/germination-of-baptisia-australis-seeds).

As I write, it is late July and I currently have about a hundred baggies in the fridge and some are as old as three years. I don't see a lot of germination after two years, but I have had some germinate in three. The good thing with baggies is that they take up very little space and require very little effort.

Easier Watering

The seeds have sprouted and they have been conditioned to spend time outside. Perennial or tree seedlings tend to grow much slower than annuals and will likely need to spend from one (perennials) to four (trees) years in a pot before being planted into the garden. Watering becomes a real problem because tiny pots need to be watered daily all summer long. Here is a trick I use – I plant the pots in the ground using my vegetable patch and a spare corner of my shade garden. The easiest way to do this is to dig a trench, insert the pots so that the rim of the pot is just above soil level and then fill in around the pots with soil. Pots may be organized by size, with the same size in each row, and I leave enough room between rows so I can place my foot between them. This spacing helps with weeding and makes it easier for me to check on the plants. You could mulch between the rows, but I don't bother.

There are several benefits to this method. All my little pots are in two places - one in full sun and one in shade. That makes it easier

Baptisia australis (Photo: Denis Prévôt, Wikimedia Commons)

to take care of them. The pots dry out slower because they are in contact with the damp soil. They remain cooler, which reduces evaporation, and water wicks up from the wet soil below. In consequence, I only need to water about every four days in hot sun and less in shade. The roots are happier because they are cool below ground. However, every good system does have problems. Roots are more likely to grow out of the bottom of the pots and into the soil below. To combat this, I dig up all pots at least once a year to check the roots. Any seedlings with roots growing out of the pots are moved to larger pots or I just cut them off and tell them firmly not to do that again!

Early sping - potted seedlings from previous years starting to grow

Potting On

Each type of plant grows at a different rate. Their are small alpines that seem to take years to put on any bulk whereas some trees spring up quite quickly. Each pot of seedlings will also contain a different number of seedlings. Sometimes, most of the sprouted seedlings have died in the process of getting them to grow larger. On other occasions, there are too many seedlings in a pot and crowding limits their further growth. Each pot of seedlings needs to be treated differently. A couple of times every summer I look over my seedlings and treat them in different ways depending on their progress. Some seedlings like drabas grow slowly and each seedling makes a small plant. You might divide the pot and place each plant in a separate pot, but then it takes years to get a decent sized clump for the garden. What I do instead is leave quite a few seedlings in the same pot. Each seedling grows and as a group they soon look like a good-sized plant. When they fill a 10 cm (4") pot to overflowing they are ready to be planted out in the rock garden.

Seedlings that are growing well and filling their space are ready to be potted into larger pots. I usually only want one final plant in my garden – I just don't have room or time for more. I am also aware that not all of my transplants make it to maturity, so I take a 10 cm (4") seedling pot, break the root ball apart very gently into three or four clumps, then snip off the heads of seedlings in each clump until I am left with one or two heads. The clumps are now potted into the corners of a single 15 cm (6") inch pot and replaced in the ground to grow on. Out of four clumps three usually survive – one for me and two for friends.

Seedlings that will become large plants like trees and shrubs I usually pot into individual pots as soon as possible, trying to use an over-

sized pot. A seedling from an initial 10 cm pot may go directly into a four-litre pot. I believe it is a myth that seedlings benefit from being potted on through a series of slightly larger pots. Seedlings grow best if they are given lots of room as soon as possible. Bulbs need to be treated a bit differently. Most bulb seedlings look like grass, and many go dormant by mid-summer. Bulbs also like to be crowded and take several years to bloom. I keep these pots together so that I don't discard them in late summer thinking all the seedlings have died. I also grow them in the initial 10 cm pot for several years. When they are ready for a larger pot, the whole root ball just gets moved on without any division of seedlings.

Don't Rush Them to Your Garden

I have lost a lot of seedlings through making two major mistakes that relate to moving plants into the garden too soon. Most perennial seedlings are destined for my main gardens. Years ago, I would move small plants into the garden thinking that the sooner they were out of the pot the better. This is sound thinking - except that I lost the seedlings. They were easily weeded out because of their size. Neighbouring perennials ate them up and did not give them enough space. It just did not work well for me.

A couple of years ago I created a nursery garden. This is an area that is only used for new plants, especially young plants and maturing seedlings. The plants are organized in rows much like a traditional vegetable garden. Every three rows of plants I separate with a walking path. Plants are grown to a mature flowering size, at which time I evaluate them for flower power, colour, floppiness (I don't stakes or do windows), invasiveness, and sex appeal. It is just like dating; some make it to the main gardens and others don't. I no longer lose plants in the main garden and I have to rip out fewer undesirable specimens.

The second mistake I made was planting small trees and shrubs out into the wild part of my garden. I am developing a two to three acre shrub and tree garden from what was mostly weeds. I figured that trees should eventually out-compete the weeds and so my initial plantings were mostly small cuttings that I had collected. Between the triple menace of metre-high weeds, rabbits and deer they struggled or died. I now keep all trees and shrubs in the seedling bed in pots until they are at least a metre tall. They do much better once they are planted out. Keeping the trees in pots means that I need to keep a lot of pots around but, by digging them into the ground, watering is less of a problem. Weekly watering is plenty and only needed if it does not rain.

My seedling trees that are planted into the wild garden are now surviving very well. Their extra height allows me to find them easier in the weeds, makes it easier to protect against animals and ensures that they outgrow the weeds.

Growing plants from seed is so very rewarding. Why not give it a try youself? Speaking for myself, I can't wait for the excitement of the next SEEDEX!

In Search of *Meconopsis grandis* A Botanical Expedition to East Bhutan

Meconopsis gakyidiana (syn. *Meconopsis grandis ssp. orientalis*)

n the 20th of June 2015 we met at Delhi international airport. I was the only participant from Sweden, and my travelling companions were Julia Corden and Elspeth Mackintosh from Scotland, Martin Walsh from Ireland, and Ann De Rijke and Koen Van Poucke from Belgium. Anticipation was high: we were finally here! Our flight along the mountain range east to Guwahati in the state of Assam in eastern India was beautiful, with magnificent views over the Himalayas. At Guwahati we met Sonam Wangchen, our local guide for the next couple of weeks. Sonam seemed well prepared and had a small minibus waiting for us. After a five hour drive we entered Bhutan by the border town of Sandrup Jonkar, taking the route that Frank Ludlow and George Sherriff first took in 1934.

The main goal for the expedition, besides following in the footsteps of Frank Ludlow and George Sherriff and documenting every plant of interest on the way, was to track down the site where they came across the outstanding form of *Meconopsis grandis*, known as *M. grandis* LS600.

In 1975 Harold R Fletcher, Regius Keeper of the Royal Botanic Garden Edinburgh from 1956 to 1970, wrote *A Quest of Flowers – The Plant Explorations of Frank Ludlow and George Sherriff, told from their diaries and other occasional writings*, a truly fascinating book that is a must-read for anyone going to Bhutan. From *A Quest of Flowers* I quote "*On the Nyuksang La, Sherriff found a plant which surpassed in beauty all the primulas and every other plant on the pass – a most magnificent form of Meconopsis grandis (LS 600)*."

A second major goal was to visit the mountain Orka La, which according to Sherriff should be well worth botanizing. Fletcher wrote the following - "*In addition to the Nyuksang La Sherriff paid a fleet visit east to the Orka La (13,900 feet). I found some good flowers… and one could easily spend a month or so in that area*." On the 24th of June, after a night in a hotel in Trashigang, two jeeps took us up to Thraktee, the starting point of our trek. The rest of the crew with horsemen, helpers and cook had now joined and all our luggage, tents and food supply were from this point on carried by a team of packhorses.

Ascending no more than a couple of hundred metres each day, to ensure that nobody would suffer from the high altitude, gave us time to observe the gradually changing flora. . At lower altitudes, between 2500 and 2700 m, where the subtropical and temperate flora meet, the forest was lush and rich. We encountered trees of *Magnolia campbelli* (out of flower) and different genera of Gesneriads. The most striking one was the stoloniferous *Corallodiscus cooperi* that formed large colonies over moss-covered boulders. It was an eye-catching plant that would make an interesting addition to any rock garden.

Corallodiscus cooperi

An interesting dark-stemmed form of *Arisaema concinnum* was an ornamental feature along the path. On the steepest parts, either too high to reach or too dangerous to climb down to, we spotted *Lilium nepalense* var. *concolor*, one of the many species that Ludlow & Sherriff discovered in 1933. The trees were filled with epiphytes. Lots of different ferns and orchids covered the trunks. Where the slope over which the path passed was steep enough we could get relatively close to the tree canopies and spot species of *Agapethes* and *Rhododendron* among the branches. The large-flowering *Rhododendron dalhousiae* var. *rhabdotum* with red striped petals surely won the first prize in beauty. Another striking plant, now at a slightly higher altitude (3000 m), was a rather large-flowering *Roscoea*. At the time we thought that it was perhaps best treated as a form of *Roscoea purpurea* f. *alba*. It later turned out to be a new species and was described in May 2017 in the *Edinburgh Journal of Botany* (May 2017) as *Roscoea megalantha*. The cultivar known as 'Wisley Amethyst' is probably the same taxon, believed to have been brought into cultivation by Kingdon Ward from his 1938 expedition to the Assam Himalayas.

Having previously observed *Arisaema* species in the Sikkim Himalayas, I was surprised to find that the species here, just 300 km further east,

Lilium nepalense var. *concolor*

Roscoea megalantha

were mostly different, especially those within the *griffithii* group. While *Arisaema griffithii* and *Arisaema propinquum* seem quite common in Sikkim and west Bhutan, here in East Bhutan it was instead *Arisaema elephas* that was abundant. The most interesting *Arisaema* we met did not fit any of the known species of this region; an outstanding feature was the striking leaf nervation, which gave the plant a great ornamental value. In 2018 this was described as a new species, *Arisaema anatinum*, from material found in the Indian state of Arunachal Pradesh, which borders Bhutan in the east. Two other aroids that were rather common and often grew side by

Arisaema elephas

Facing: *Arisaema anatinum*

Arisaema concinnum

Above: *Arisaema anatinum*

Below: *Arisaema echinatum*

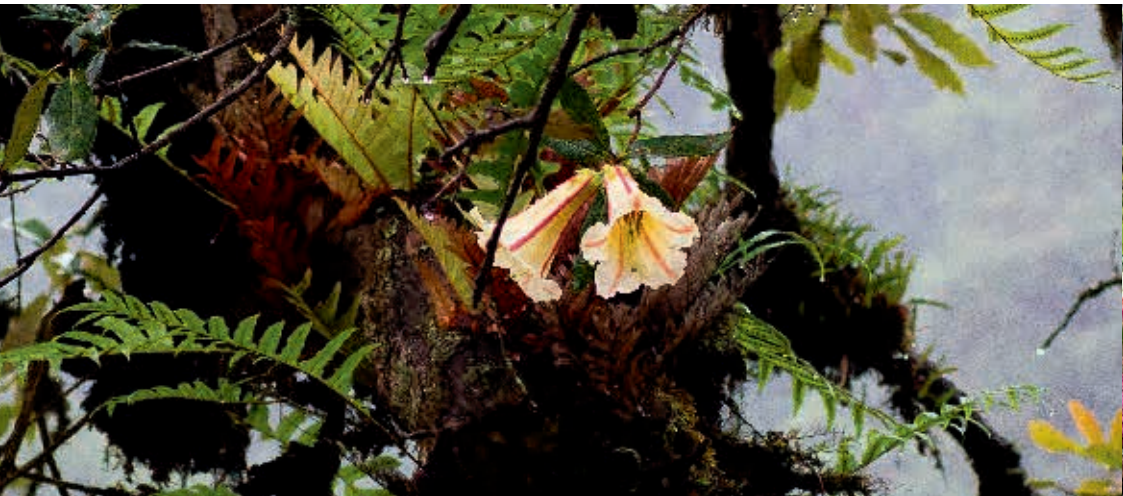
Sauromatum diversifolium

side were *Arisaema echinatum*, with its curiously spiked appendix, and *Sauromatum diversifolium* - with a strangely speckled spathe.

Moving up through the rhododendron forests, it was the orange-red tube-shaped flowered *Rhododendron keysii* covered in lichens that made the moment. As we continued our ascent, we saw *Rhododendron kesangiae* and *Rhododendron thomsonii*, but way past flowering. Along the mossy ground, rosettes of a primula of section Petiolares was occasionally abundant. Knowing from Ludlow & Sherriff records that *Primula bhutanica*

Rhododendron keysii

Rhododendron dalhousieae var. *rhabdotum*



(Probably) *Primula bhutanica* and *Cremanthodium palmatum*

Polygonum griffithii

was to be found here, we assumed that this was the taxon it belonged to. We took a lot of pictures to record the leaf size, toothing of the calyx, and different variations of these characters. Another plant of interest occasionally growing side by side the primula was a stoloniferous species of *Cremanthodium*, most likely the pink-flowering *Cremanthodium palmatum*. This late summer/autumn-flowering species, usually growing in alpine scree, was originally collected in this region on several occasions by Ludlow & Sherriff.

Continuing our route, we soon reached a rather wide stream across our path. Among rocks and boulders, big patches of the nodding pink-flowering *Polygonum griffithii* formed beautiful stands. On the same site the large flowered yellow *Gentiana* relative, *Megacodon stylophorus,* made its first appearance. This fascinating plant was originally described in 1883 as *Gentiana stylophora* and it does indeed show some similarities with *Gentiana lutea* of the Alps. This is a plant that seems almost impossible to cultivate and probably needs some type of mycorrhizal relation. I have not heard of it ever to flower in cultivation. We were lucky to encounter large colonies of this beautiful plant later.

More interesting at this location were two species

of *Primula* that we had hoped to find. Here was the purplish-pink *Primula waltonii*, growing side by side with yellow *P. sikkimensis*. We had been asked to document these two species side by side, to compare their morphological differences and similarities. Could it be that *Primula waltonii* in fact is just a pink colour form of *P. sikkimensis*? Besides their differences in colour, they were doubtless morphologically very similar. We noted the GPS position and the altitude. We were now at 3800 m.

In the late afternoon on the 27th of June, after four days of trekking, we finally reached the pass of Orka La (4059 m). The fine rain that had started a couple of hours earlier was now more intense. We

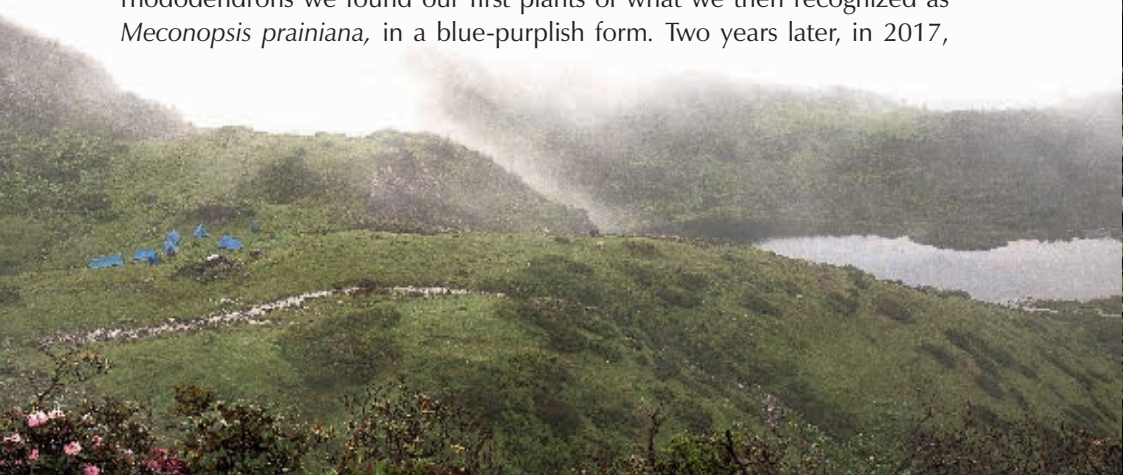
Megacodon stylophorus and habitat

Primula sikkimensis

Primula waltonii

Anemone aff. *polycarpa*

were all tired after a long day of walking, but also excited to have reached this site, one of our goals. From the top of the pass we could easily spot the valley where below our crew had already put up our tents. Before heading down to the camp for the night we took notes of the flora that indeed looked promising. On a rather steep slope between the prostate rhododendrons we found our first plants of what we then recognized as *Meconopsis prainiana,* in a blue-purplish form. Two years later, in 2017,



Below: *Rhododendron bhutanense & Rhododendron anthopogon*
Right: *Meconopsis merakensis*

this form of *Meconopsis prainiana* from east Bhutan was described as a new species, *Meconopsis merakensis* (Toshio Yoshida, Rinchen Yangzom, David Long). At the same site two species of *Anemone* were growing just a couple of metres apart. A rather small one with wine-red flowers could possibly be a form of *Anemone polycarpa*. The other was *Anemone smithiana,* with huge white flowers; this was a real gem which could easily fit into my 'top five plants list' of the trip. It was no problem at all falling asleep that night, head filled with thoughts of what next day might bring.

A species that we had hoped to find on Orka La was *Primula assamica*, described by Fletscher in 1941 and named after the Indian state of Assam. The type material

Anemone smithiana

Primula assamica

Primula munroi, *Primula dickieana* & *Caltha scaposa*

collected by Kingdon-Ward bears the following information: K-W 13715, Orka La, Flora of Assam, 1938-06-08. In Kingdon-Ward's 1938 *Assam adventures* there is no mention of his entering Bhutan or of finding this primula. Was this the right place for it? The last couple of days before leaving Sweden for Bhutan, in my search for Bhutan-related information, I came across a helpful article from *The Geographical Journal* dated July 1940 with the

Meadow with *Primula dickieana* & *Rhododendron fragariiflorum*

title *Botanical and Geographical Exploration in the Assam Himalaya* by F Kingdon-Ward. It describes the journey to Orka La, on the Bhutan frontier (3 - 18 June 1938). It was with great pleasure that we came across plants fitting its description the next day.

A stream ran through the wide marshy meadow below our campsite, keeping it waterlogged and creating a special habitat that a lot of plants seem to like. Here, scattered within an impressive sea of yellow-flowering *Primula dickieana*, small islands of *Rhododendron fragariflorum* added pink colours to the scene. Getting through without wet feet required rather good balance. Close to the running water, white-flowering *Primula munroi* was accompanied by yellow *Caltha scaposa*. Further up the stream, in a rockier part of the watercourse, *Pegaeophyton scapiflorum* thrived with its feet in the cold running water.

A most striking *Gentiana* relative that we had been seeing, *Swertia grandiflora*, was a beautiful element in the meadow. This large flowering species was described in 1970 by the Swedish botanist Harry Smith from material collected in 1949 by Ludlow, Sherriff and Hicks at Me La. The plant looked like a shorter version of the substantially taller central Himalayan

Pegaeophyton scapiflorum

Swertia grandiflora

Swertia hookeri. While the latter, 100-150 cm tall, bore big orange-white flowers, the 50-60 cm *S. grandiflora* had pink and white striped ones.

In more exposed situations and along cliff-ledges, we found large purplish-pink *Androsace adenocephala* side by side with a white-flowering saxifrage of section Porphyrion. Could this be *Saxifraga saxorum*? … a species Kingdon-Ward collected on Orka La in 1938 (KW 13723). Carpets of square-formed gentian rosettes, similar to those of the spectacular *Gentiana urnula* also grew amongst the wet rocks. It would be marvellous to return to see their flowers in autumn. Two other species of *Primula* were common up at the pass. One very small, only 3-4 cm tall, with purplish blue flowers was *Primula glabra*. The other, much taller, was *Primula gambleana*, a species closely related to the central Himalayan *Primula rotundifolia*. One distinct feature was its cordate leaf bases. It was quite variable in colour from light blue to an almost black purple.

On the morning of the 29th of June we left Orka La in warming sunshine and bright blue skies. Our next major goal was Nyaksang La where Ludlow & Sherriff collected their famous blue poppy in 1934. We soon spotted another gem, a truly blue

Rosettes of *Gentiana* species

Androsace adenocephala and *Saxifraga* species (combined image)

corydalis. This was identified by *Corydalis* expert Magnus Lidén as *Corydalis ecristata*, a species closely related and very similar to *Corydalis cashmeriana*. The main difference between the two is found in the lip (lower petal) which in *C. ecristata* has much broader wings. The best plant we saw that day had more than fifty flowers. We continued through beautiful meadows filled with white-flowering *Primula hopeana*. This form had rather small leaves and beautiful red stems. A remarkable patch with hundreds of large cushions of *Androsace globifera* made us stop for quite a while; white flowers in an icy-bluish tone covered the large cushions.

Primula gambleana

Primula glabra

It was late and almost dark when we reached Nyaksang La on the first of July and made camp about 2 km south-east of the pass at 4050 m. The next day we woke to a beautiful surrounding with two small lakes close by. The bigger and deeper of the two was named Mo Tsho – the female lake, while the smaller quite shallow one was named Pho Tsho – the male lake. *Primula munroi*, *P. dickieana* and *Caltha scaposa* dotted its shoreline. The short walk down to the female lake turned out just as exciting and interesting as one could have hoped for. Big stands of both blue and yellow *Meconopsis* shared the rocky slope leading down to the lake's south shore. The yellow poppy was the tall monocarpic *Meconopsis paniculata*, this form bearing rather large flowers. But the real excitement was of course seeing the other *Meconopsis*, the one we had been hoping to find. Here it was in big stands, the big blue 'Betty's Dream Poppy'

Corydalis ecristata
Primula hopeana

Androsace globifera

or GS600. It was in all aspects everything one could have hoped for. It was *Meconopsis grandis* ssp. *orientalis* in the most beautiful forms: some with larger flowers than others; some with more wavy petals; and some in a more purplish lilac tone. There were also forms that carried more petals than the otherwise normal four. But that was not all; during the next day's excursions we came across colour forms ranging from sky-blue to dark burgundy red. This large flowering form of *Meconopsis*, found in east Bhutan, is morphologically distinctly different from *Meconopsis grandis* of Nepal and Sikkim and was in 2017 described as a species of its own, *Meconopsis gakyidiana*. *Meconopsis merakensis* and *Meconopsis gakyidiana* were both published in the article *Dancing butterflies of the east Himalayas – New Meconopsis species East Bhutan, Arunachal Pradesh and South Tibet* (*Sibbaldia* 14).

I most sincerely thank the Scottish Rock Garden Club Exploration Fund for supporting my participation in this expedition. I am hugely grateful to Pam Eveleigh (see www.primulaworld.com), who provided so much valuable information to make our primula hunting very successful!

Facing: *Meconopsis paniculata*

Forms of *Meconopsis gakyidiana* (*Meconopsis grandis* ssp. *orientalis*)

The SRGC contains members from all around the world, each with their own various enthusiasms, passions and even obsessions. Among the joys of belonging to the club are our friendliness, our generosity of spirit and our cooperation. Uniting us all is the love of beautiful plants. This love often transcends national barriers, individual pride and even institutional divisions. It brings with it a sense of belonging to a largely selfless community of individuals, a community in which the giants of botany, the amateurs, and keen individuals meet in mutually respectful appreciation, exploration and research into the beauties of Nature. Why this eulogy? Read on …

Many readers will be familiar with the work of Jānis Rukšans through his pursuit of Crocus, and his magisterial account of the species, *The World of Crocuses*. The SRGC is proud to have been associated with the publication of this book and recommends it to all our readers.

Equally well known to the world's bulb and corm lovers and to all club members - especially online readers of *The International Rock Gardener* and the long-running weekly *Bulb Log* - are Margaret & Ian Young, respectively vice-president and ex-president of the club.

It is therefore a particular editorial delight to be able to present our readers with an account of a new Crocus species that depends on explorations and on careful taxonomic and horticultural work of Jānis Rukšans, Henrik Zetterlund and others too numerous to list. It is a tribute to cooperation and mutual respect that the new species has been most generously named for the SRGC's two Youngs!

Crocus youngiorum – A New Crocus (Liliiflorae, Iridaceae) Species from the Anatolian Diagonal

Jānis Rukšans & Henrik Zetterlund

The genus Crocus ranges from Portugal and the north-western coast of Africa as far as the north-western corner of China. Today, more than two hundred and forty species are recognized. The greatest number is in the Balkans and Turkey, which might be regarded as the centre of origin and development of the genus. In Turkey, many crocus species are found along the Anatolian diagonal. Brian Mathew (1982) earlier regarded the majority as belonging to the extremely variable *Crocus biflorus* ssp. *tauri*. This name hid several very distinct species (Kerndorff et al., 2013). In numerous expeditions to this region that began in the 1990s, we and other researchers gathered samples from many different populations; some of them were later recognized as individual species by Helmut Kerndorff, Erich Pasche (2013) and others.

Facing: *Crocus munzurense* (HKEP-9911)

Several of these samples still have not been further researched and remain unnamed for various reasons.

Eight samples from our collections in Tunceli Province have blue or purplish tinted flowers and corm tunics with basal rings. In 2013 Kerndorff and Pasche published *Crocus munzurense* from this region, although the type locality (HKEP-9347) is reported as the more northerly Erzincan Province; the species is named after the Munzur mountain range, which separates the two provinces. Kerndorff and Pasche had mentioned *C. munzurense* for the first time in 2003, when they gave specific details that distinguished it from other similar species. Subsequently, one of these authors sent Jānis Rukšans a sample of *C. munzurense* (HKEP-9911), most likely gathered at the same type locality. In 2007, another specimen of the same gathering came from Michael Kammerlander, who gave the locality of origin as the Munzur Dağları, Tunceli Province.

All but one of our eight samples look very similar to *C. munzurense* (HKEP-9911) in respect of their flowers and some other features. We found none similar in Erzincan Province; as a matter of fact, all those grown by us from the area of the province north of the Munzur Dağları more or less resemble *C. sakaltutanensis* (Rukšans, described in 2016), which is very different from *C. munzurense* in many features. Of course, it cannot be denied that *C. munzurense* also grows on the northern slopes of the Munzur Dağları. Unfortunately, the exact localities of the type specimen HKEP-9347 and the sample HKEP-9911 are unknown and unavailable to other researchers. One exception is HKEP-9910 which was collected near Kaplıkaya Tepe, but this population, representing another species related to *C. munzurense*, was later reported by Kerndorff & al. (2013) as being destroyed (probably by farming).

One outstanding feature that allows the separation of *Crocus munzurense sensu lato* from other related species is its hairy and papillose leaves, rather uncommon in the genus, especially among the so-called 'biflorus' crocuses; all the plants in our collections from Tunceli Province have similar leaves. There are two other characteristics not mentioned in the original publication of *C. munzurense*: the presence or absence of hairs or papillae on the stigmatic branches; and the quite special character of the corms – they produce pea-sized cormlets at the base of the replacement corm. We saw this latter feature in cultivation but can say nothing about wild populations.

According to Kerndorff & al. (2013), the *Crocus munzurense* group comprises two different species (the other population HKEP-9910 having been later destroyed, it was impossible to gather more data on it). The flowers of both species were very similar, making it easy to distinguish them from other crocuses. Both are easily separable by the length of their filaments, which in *C. munzurense* are on average 3 mm long and in sample 9910 are 5 mm. This statement prompted us to take a closer

Facing: *Crocus munzurense* (HKEP-9911)

look at the crocuses from this region in our collections (the Rukšans collection now contains more than 1650 different crocus samples). We mapped all the known localities and discovered that all those whose flowers were similar to *C. munzurense s.l.* came from the valley of the River Pülümür to the North of Tunceli. A last group of three samples came from around 50-60 km south-east of Tunceli along the road to Erzincan. These three samples (KPPZ 90-186A, -186B and one from Jim Archibald) have narrow leaves and form cormlets at the base of the replacement corm. The single feature separating them from the plants collected in the Pülümür Valley is the presence of sparse papillae or minor hairs on the stigmatic branches; this feature was not mentioned in the description of *Crocus munzurense*.

Corm and seed heads of *Crocus youngiorum*

Two other samples with exact known collection localities are SASA-211 (north of Kirmizi Köprü village) and KPPZ 90-223. SASA-211 is very similar to typical *Crocus munzurense* but plants with slightly feathered exteriors of the flower segments are more common in this population, and corms do not form cormlets around the base of the new corm. Sample KPPZ 90-223 is more distinct: its leaves are up to 3 mm wide; its corms look somewhat different. The stigmatic branches in both (SASA-211 & KPPZ 90-223) are distinctly glabrous – as in sample HKEP-9911. There is a sample from Jim Archibald (17870) with darker blue flowers, from "*north of Tunceli*", but more detailed data are now unavailable. The only trait separating it is the slightly darker flowers, but they are still within the colour variability reported by Kerndorff & al (2013). All the aforementioned match to some extent the original description of *Crocus munzurense*, only KPPZ 90-223 falling somewhat outside the general concept, according to the width of its leaves.

Sample KPPZ 90-209 is quite otherwise, differing significantly from typical *C. munzurense*. Two features push it out of the range of variability of *C. munzurense s.l.* Firstly, its leaves are up to 4 mm wide; although the leaves in KPPZ 90-223 are up to 3 mm wide they are still narrower than in 90-209, while typical *C. munzurense* is characterized by Kerndorff et al (2013) as having narrow (1.5 mm) leaves. Secondly, *C. munzurense* is described as having *"strange sky-blue to lilac colour of the flowers without any stripes outside of the segments, a white zone above the yellow throat"*. The latter feature is not mentioned anymore in the later publication and the colour range is broadened to *"Few individuals have violet feathers"* (Kerndorff et al., 2013) – but this characterizes all the other samples regarded by us as *C. munzurense s.l.*

Contrasting with *C. munzurense s.l.*, flowers of sample KPPZ 90-209 are distinctly striped and feathered purplish and their colour represents a completely different kind; the flowers are in purplish shades and not in the bluish ones of *C. munzurense s.l.* The stigmatic branches are distinctly and densely papillose, even hairy. There are admittedly some papillae on the stigmatic branches of *C. munzurense s.l.* from south-east of Tunceli, but none equals the plants from the Munzur Valley in this trait.

Facing: *Crocus youngiorum* KPPZ-209

All these indicated features make sample KPPZ 90-209 special that support its classification as a new species. Its range is separated from the Pülümür valley (whence typical *C. munzurense* was most likely described) by the Karasakal Dağları and Karaoğlan Dağı. It was found in 1990, when an international group (M Kammerlander, E Pasche, J Persson, H Zetterlund – hence KPPZ) was led here by the Gothenburg Botanical Garden. *Colchicum munzurense* was described from the same place. In 1990, when the KPPZ expedition visited the Munzur Dağları, it was a peaceful and popular tourist region, with no restrictions on entrance to the mountains alongside roads, plenty of roadside restaurants, petrol stations and other facilities. The very spectacular road from Tunceli to Ovacik through the Munzur Vadisi Milli Parkı (National Park) was open to tourists and explorers. Some years later the Kurdish revolt against discrimination and suppression of their culture started and everything changed dramatically. When our team wanted to visit the Pülümür and Munzur valleys in 2004 and 2005, we were rigorously questioned by gendarmes at a checkpoint long before the valley – why we wanted to use exactly that road and so on. When at last we were permitted to enter, it was only to pass through the Pülümür Valley, and we were warned not to make any side turns or stops and not to converse with the locals. The entire tourist infrastructure had been destroyed and abandoned.

The impossibility of revisiting the locality whence *Crocus* sp. KPPZ 90-209 came forced us to use cultivated plants when describing the new species. It had been demonstrated by earlier research on *C. rhodensis* (Rukšans, 2018) that there are no significant morphological differences between cultivated plants and plants in the wild. Observations were therefore made both in the Rukšans collection and on plants grown in the Gothenburg Botanical Garden. Our description is based on the observations of ten plants made during three seasons.

The authors. Do heavy boots characterize *Crocus* hunting?

Crocus youngiorum Rukšans & Zetterlund **species nova**

Type: Ex culturae in hortus Janis Rukšans, 11-03-2018. Plants collected in Turkey, Tunceli Province, 27 km from Tunceli along the Munzur River towards Ovacik, along a roadside S of the river in a narrow ravine on a south-facing slope at 1000 m alt., leg. H. Zetterlund, 11-04-1990 (KPPZ 90-209). Holotype: GB (Gothenburg). Ic.: World of Crocuses, p. 351 – as *munzurense* aff.

Habitat and distribution – known only from the type locality, growing in light deciduous oak forests and scrub based on calcareous rocks, together with *Colchicum munzurense* KPPZ 90-208 (a form with stoloniferous corms) in Tunceli Province, the Munzur River Valley.

Flowering time – March.

Corm – slightly flattened, up to 15 mm in diameter, forming pea-sized cormlets around the base.

Tunics – more or less papery (membranous), with a few splits at the base, subsplits absent or occasional.

Tunic neck – up to 3-5 mm long, formed by broad-based triangles with the tips turned outward.

Basal rings – mostly 2, poorly developed, papery, without teeth, but with a distinctly uneven, somewhat pronged edge.

Prophyll – absent.

Cataphylls – 3, the upper cataphyll slightly greenish in the topmost part.

Leaves – dark green, 4-5-7 and (3-)4 mm wide, distinctly hairy along the edges and keel, with 3 ribs in each lateral channel, at the start of blooming poorly developed, during the anthesis quickly elongating and reaching the middle of the flowers, at the end of blooming even overtopping them; the white stripe less than 1/3 of the leaf width.

Perianth tube – light to deep purple, without stripes.

Bract and bracteole – well developed, of the same length, but somewhat subequal in size, silvery, mostly ending slightly above the cataphylls, rarely reaching the middle of the perianth tube.

Throat – glabrous, medium-sized, deep yellow, in the upper part a diffused whitish zone followed by the lilac of the flower segments.

Filaments – 5-6-7 mm long, light yellow, with minute and sparse papillae or glabrous.

Anthers – 8-9-11 mm long, yellow, on average 1.5 times longer than the filaments, occasionally almost equal in length.

Connective – white.

Style – light greenish yellow becoming orange near the top, the very tip yellow, divided into 3 orange, distinctly papillose, (4)5-6(8) mm long branches, gradually widening at the top with a fringed edge, sometimes subdivided into short secondary branches, mostly more or less equal with the tips of the anthers, rarely shorter; in 2018 the same plants almost invariably had stigmatic branches overtopping the anthers, in 20 % ending below the tips.

Flower segments – the inside light lilac, on the outer segments translucent outer striping.

Outer segments – 36-39-44 mm long and 11-14-16 mm wide (n=10), obovate with acute to subacute tips, the outside light lilac to whitish with 3 very distinct deep purple median stripes feathering towards the outer rim, at the base confluent into a dark purple basal blotch. Length to width ratio: 2.8.

Inner segments – 33-37-42 mm long and 10-15-17 mm wide, light lilac with a small deep purple basal blotch. Length to width ratio: 2.5.

Capsule - up to 23 mm long and 9 mm wide, deep purple with greenish to greyish stripes, something spindle-like, gradually narrowing from middle to pointed tip with around 1 cm long appendage, carried at ground level at maturity.

Seeds – fresh seeds up to 4 mm long and 2.5-3 mm wide. purplish brown, with 1-1.5 mm large, prominent caruncle and distinct raphe.

2n = unknown.

Etymology – named after Margaret and Ian Young from Aberdeen, Scotland, the United Kingdom, moderators of the Scottish Rock Garden Club plant forum, editor of the monthly online magazine The International Rock Gardener and writer of the weekly Bulb Log.

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Ian & Margaret Young at home in Craigton, Aberdeen, May 2018

Show Reports 2018

Arisaema amurense var. *robustum*

Edinburgh & the Lothians, 7 April

Caltha polypetala x *leptosepala* 'Moonshine'

A bright, cold morning and lasting patches of the previous Wednesday's snowfall across the Lothians greeted exhibitors arriving at Fairmilehead. The late winter weather and some missing friends contributed to the sparsest show benches seen at Edinburgh for many a year. However, though entries were fifty percent of the average, a wide range of alpines and bulbous plants was on display to give a warm spring feel. This was exemplified by the wonderful gold medal display of spring bulbs by the Royal Botanic Garden, Edinburgh, which included a range of narcissi, scillas, muscaris, fritillaries and erythroniums. The competitive classes too had many different bulbs, from the luminous red *Corydalis solida* 'Craigton Red' to the understated charm of *Tristagma leichtlinii*. Among the dwarf narcissi were *NN. pallidiflorus, jonquilla* var. *henriquesii*, 'White Petticoat', 'Douglasbank' and 'Betty Mae'. The Henry Tod Carnethy quaich for best bulb, corm or tuber and a certificate of merit went to your correspondent for his pot of about a hundred flowers of *Narcissus obesus* 'Lee Martin'.

Primulas, particularly European varieties, featured strongly, as in many past years. Mike Hicks (Ratho) won the Midlothian Bowl for best plant in Section II with *Primula elatior*. Well-known forms included 'Broadwell Milkmaid' and a massive dome of 'Stradbrook Gem', some 30 cm across, but there were also newer varieties such as 'Lindum Sweet Charity', 'Lindum Moonlight' and *P. allionii* 'Janet Burrow'. The

Rhododendron 'Lucy Lou'

Hepatica x *media* 'Millstream Merlin'

last plant accompanied a recently discovered primula as part of Cyril Lafong's (Glenrothes) winning Class 3 entry for the Elsie Harvey memorial trophy; 'Renate', the very floriferous white cultivar of *Primula hirsuta* ssp. *valcuvianensis* was discovered in 2015 on dolomite mountains around the valley of Valcuvia in northern Italy. After some debate, the judges voted Tom Green's (Rowlands Gill) *Primula* 'Clarence Elliott' as the best American or European primula and winner of the K C Corsar

Soldanella 'Spring Symphony'

Fritillaria michailovskyi
Pulsatilla vulgaris ssp. *grandis* 'Papageno alba'

Dionysia 'Tess'
Primula Krakatoa gx 'Wheatear'

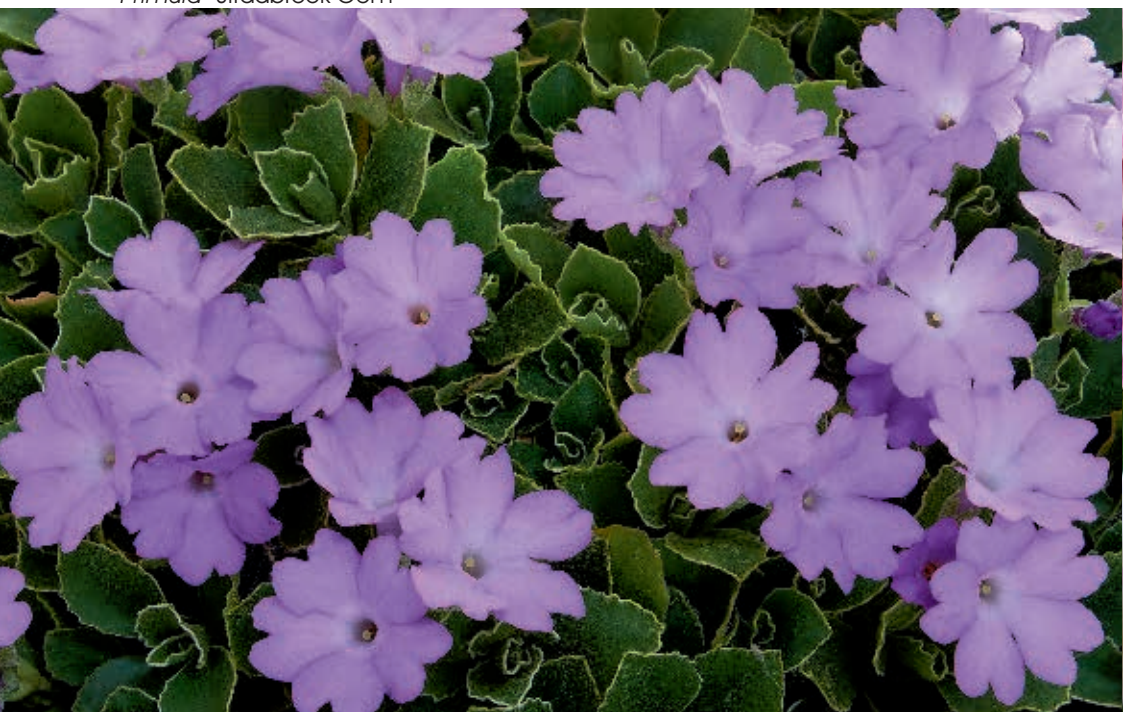
challenge trophy. The best Asiatic primula was the white form that is referred to as *Primula odontocalyx* and for this Ian Christie (Kirriemuir) was awarded the R E Cooper Bhutan drinking cup.

Dionysias have not been common at Edinburgh in recent years and so it was timely that *D*. 'Bernd Wetzel' (*D. tapetodes* x *aretioides*) was judged the best plant in a pot less than 17.5 cm diameter, winning the Kilbryde cup for Jim Watson (Stocksfield). The tight cushion was smothered completely in deep yellow flowers. Although it had fewer flowers, the larger cushion of *Dionysia archibaldii* grown in tufa gravel by Nick Boss was much admired and this considerable achievement was recognised by the judges with a certificate of merit.

Dionysias, primulas and saxifrages formed Sue Simpson's winning small six-pan entry in class 1. Included were *PP.* 'Joan Hughes' and 'Lindum Aria', *DD*. 'Marika' and 'Tess', and *SS*. 'Allandale Jinn' and 'Windrush'. Sue's class 2 entry of *Saxifraga* 'Cranbourne', *Hepatica nobilis* var. *japonica* 'Anju' and *Primula* 'Oberau' gained her the Henry Archibald rose bowl. She was also awarded the Alpines 2001 trophy (aka the dinosaur coprolite) for best cushion plant, with an immaculate and rock-hard specimen of *Anisotome imbricata* var. *imbricata*, the Midlothian vase for best rhododendron, *R*. 'Lucy Lou', and the Reid rose bowl for most points in section I.

Local group members also fared well with Annelie Banks (Heriot) displaying a range of distinctly marked and colourful pleiones across many classes, earning her the bronze medal for most points in Section II. The Boonslie cup for a miniature garden with a wide range of small

Primula 'Stradbrook Gem'



plants in flower went to Watt Russell (Tranent). Though Stan da Prato was unable to be present, his *Calluna* 'Stockholm Skyline' was judged the best of Ericaceae excluding Rhododendron, for the Alf Evans trophy. The A O Curle memorial trophy (winner class 5) for three pans from seed went to Cyril Lafong. His entry included *Raoulia eximia* x *hectori, Draba acaulis* and an unnamed white-flowered hybrid saxifrage. The last is a chance seedling from 'Coolock Gem' but differs in its neat cushion, compact slower growth rate, and it was completely smothered in small white flowers. This was considered the best saxifrage in the show for the Bill Mackie quaich.

One particularly keenly contested class was that for one pan Ranunculaceae. This included the very striking yellow *Caltha* 'Moonshine' from Graeme Butler (Rumbling Bridge), a stunning *Callianthemum anemonoides* with pale pink fronts and dark pink backs to the petals from Ian Christie, and *Hepatica* 'Millstream Merlin' from Jane & Alan Thomson (Edinburgh). The Hepatica won the class and contested with Cyril Lafong's *Trillium rivale* 'Purple Heart' for the accolade of best plant in the show. The latter won by a whisker giving Cyril his 59th Forrest Medal and his 10th at Edinburgh, thus surpassing the previous record of nine by Harold Esslemont.

Many thanks are due to the Edinburgh team for their efforts in making the show such a great success in challenging circumstances.

Dave Millward (Photos by Liz Cole)

Corydalis solida 'Frodo'

Perth, 21 April

The sunny and cool weather was good for both plants and people and, as usual, the Bell's Sports Centre was cooler inside than out. The presence of runners and gymnasts made it difficult to park in the car park, and a vintage car event in Perth meant that the town was also very busy. Setting up on the Friday night was made easier by the fantastic number of helpers from the Perth and Angus groups and from the early-arriving holders of nursery stands.

The judges were Mike Dale, John Lee, Carole Bainbridge, David Millward, Cyril Lafong, Sandy Leven and Ian Christie. Stewards were Lynda Crouch, Hazel Crow, Jens Nielsen and Dick Salvin. Julia Corden was in charge and, this being her last show as show secretary, she was thanked by all of us for her efforts over the years.

In section 1, the Forrest medal was awarded to Francis & Margaret Higgins from Berriedale. Welcome invaders from the North, they did not fail to disappoint us with their interesting and well-grown plants. The Forrest plant was their *Soldanella minima*, planted in a deep bowl that was top-dressed with light coloured grouse grit that showed off the tiny leaved and pale violet flowered *Soldanella* very nicely. Has a *S. minima* with so many flowers ever been exhibited before? I did not count them all, but I estimated around two hundred. Francis "*pulled it apart*" last year and re-planted it in a 50:50 mix of John Innes and Seramis. They plunge the pot in an outside frame and put glass over it in winter. It must have been a hard choice for the judges between the *Soldanella* and their very large and perhaps showier pan of *Pleione* 'Tongariro' – and there were plenty of other plant contenders for the Forrest medal.

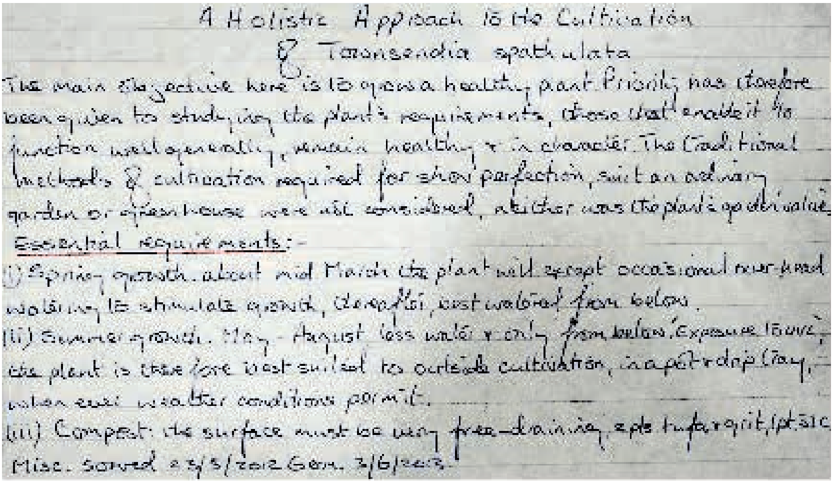
The Alexander Caird trophy for the large six-pan class was awarded to Stan da Prato, *in absentia* owing to a hip operation. Luckily for us, he had sent some plants to swell the show benches, transported by a friend. Stan also won the R S Masterton trophy for the best Asiatic primula with his *Primula petiolaris* 'Sheriff's Form', and the E H M Cox trophy for the best dwarf rhododendron. This was for the deep-mauve flowered *Rhododendron* 'Drake's Mountain'. This is a useful small rhododendron for planting where there is limited space available. I wondered if the plant had been bred by Jack Drake of Inshriach nursery, or named after a mountain in British Columbia, but information from a friend of Stan at the RBGE suggests that in fact it was probably named after an Ed Drake from the Olympic peninsula in Washington State.

The Bainbridges, Carole & Ian, won the bulb trophy with their large *Erythronium helenae*, one of the showiest of the erythroniums, which covers itself in large numbers of creamy yellow flowers.

Sue Simpson brought some stunning plants and had the most first prize points in section 1, for which she was the worthy winner of the

Facing: *Erythronium multiscapideum* (Photo: Peter Maguire)

The Forrest medal plant from Frances & Margaret Higgins:
Soldanella minima


A Holistic Approach to the Cultivation
of Townsendia spathulata
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 & in character. The traditional methods of cultivation required for show perfection, suit an ordinary garden or greenhouse were not considered, neither was the plant's [illegible] value.
Essential requirements:-
(i) Spring growth. about mid March the plant will accept occasional over-head watering to stimulate growth, [illegible], best watered from below.
(ii) Summer growth. May - August less water & only from below. Exposure [illegible], the plant is therefore best suited to outside cultivation, in a pot [illegible], when ever weather conditions permit.
(iii) Compost: the surface must be very free-draining, [illegible]
Misc. sowed 23/3/2012 Germ. 3/6/2013.

Nick Boss's notes on how to grow *Townsendia spathulata*

L C Middleton Challenge trophy. Among the dwarf shrubs were a couple of wonderfully showy tiny ones: from Sue, a lovely *Correa pulchella* 'Pink Mist' with long pendent salmon pink bells, in perfect condition; from Tom Green, another dwarf was *Chamaecytisus hirsutus* var. *demissus*, a showy prostrate legume with yellow to orange flowers.

The Joyce Halley award for the best plant grown from seed went to Peter Semple for his terrifically large pan of *Narcissus bulbocodium* ssp. *obesus*. This was originally grown from seed from John Lee and was sown by Peter on 25th January 2010 … so only eight years in the growing. Another plant from seed was Margaret & Henry Taylor's *Fritillaria meleagris*, dark form, grown from wild seed from the Dordogne. It is always fascinating to see a plant grown from wild seed and to know its provenance.

Barry & Cathy Caudwell, Perthshire Group members, were awarded the Perth trophy: their plants in the three pans from one country (North-American) included another *Erythronium helenae*, *Erythronium multiscapideum* and *Dicentra cucullaria*.

The coveted Major-General Murray-Lyon trophy was won by Ian Christie of Westmuir for his pan of large-flowered pink *Shortia uniflora* (photos show it labelled *Shortia soldanelloides*). As a killer of shortias, I was interested to quiz Ian on his growing technique: the plant was grown round the back of Ian's house and has been in a pot for six or seven years. That makes it sound very easy! In the wild it grows in Japan in woodland in the lower mountains.

There were plenty of other plants that deserve mention, for instance Cyril Lafong's *Trillium rivale* with lovely deep purple shading of much of the flowers, David Millward's large pan of primrose-coloured *Primula* 'Coy' and the Bainbridges' *Arum creticum*. The latter is a particularly attractive form with red stems and more compact habit than the usual

form; it also flowers a week later. An interesting Asteracean was Nick Boss's *Townsendia spathulata* from Wyoming. Not an easy genus to grow, Nick's method is to water from overhead in March, early in the year to stimulate growth. Thereafter watering is from below. It is cultivated outside in summer and in very free-draining compost.

Certificates of merit were awarded to Peter Semple's *Tecophilaea cyanocrocus*, Sue Simpson's *Saxifraga* 'Allendale Bonny', *Pleione* 'Tongariro' from Francis & Margaret Higgins, David Millward's *Primula* 'Coy' and Ian Christie's *Shortia uniflora*. My apologies if I have missed anyone!

In section 2, entrants were Pete Moore, Sheila McNulty and Lilian Chapman, whose entries were all very welcome. Peter was awarded the Bronze medal as well as the Perth salver for the most points (230) in section 2. His plants included *Fritillaria meleagris* and *Primula frondosa*. He was closely contended by Sheila McNulty who had the best plant in section 2, a large example of *Hacquetia epipactis*, an attractive member of the Apiaceae and tiny relative of the Giant Hogweed (*Heracleum mantegazzianum*). But where were our local members' entries? Why not have some fun exhibiting some of your own plants next year, help to swell the show benches, and you just might win the Bronze medal!

Trillium rivale (Photo: Liz Cole)

Visitors to the show also enjoyed a wonderful bench covered with bulbs, which had been brought up from the Royal Botanic Garden in Edinburgh by Elspeth, Scott and Petra. It deserved its gold medal. Seeing the more unusual bulbs in really well-grown condition is a great inspiration to us members in growing our own so we thank the staff who could find time to bring them up so generously to Perth.

Sandy Leven has provided more pictures and information online at the club website

http://files.srgc.net/showreports

Cathy Caudwell

Arum creticum and its red stems

Hexham 14 April

The cold spring had made the most difficult of starts to the show season for many a year. Several AGS shows in the south of England had to be cancelled and our own Edinburgh show had severely reduced entries. However, a few days of warm sunshine in the week before the show at Hexham provided a welcome surge in plant growth and entries were good though far from record levels. It was pleasing to see a good number of entries in the intermediate and novice sections. First-time exhibitor, Bob Braithwaite (Penrith) won the Northumberland cup for *Bukiniczia cabulica* in Class 170.

Scilla rosenii

Primula renifolia

Having lived in the North-East of England for some years, your correspondent always enjoys a return there for the annual show, held this year under SRGC rules. It is also a chance to celebrate that great grower and supporter of the SRGC and AGS, David Boyd, whose presence was sadly missed. He grew so many wonderful plants, but one group that comes to mind is the genus Hepatica and it was good to see plants of *H.* x *media* 'Millstream Merlin' across all sections. This year the David Boyd award was won by Fred & Pat Bundy (Hensall), the winners of Class 46 for six varieties of cut alpines grown by the exhibitor.

The large sports hall at Hexham provides abundant space for non-competitive exhibits to inform and educate the public. This year there were three such displays. The RBGE gold medal collection of a wide range of bulbous plants included various forms of *Iris bucharica* and *I. vicaria*. On behalf of the NE England Rock Garden Group, Mike Dale (Felton) staged a gold medal display of photographs of habitats and native plants from along the 'North Coast 500', a tourist route around the north of Scotland. The wonderful photography was augmented by pots of *Primula scotica* and *P. vulgaris*. A silver award went to the North Pennine Partnership for their display 'Plugging the gaps', describing their Heritage Lottery funded project aimed at restoring rare wildflower meadows in the area.

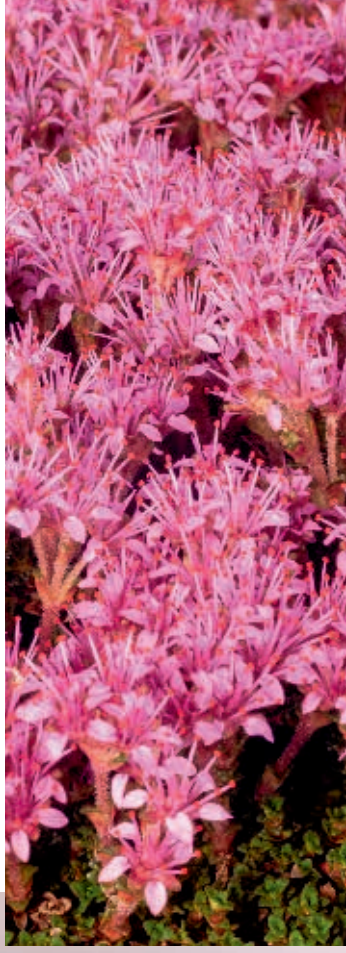
Though there were no entries in the large six-pan class, many in the open section were very competitive, with ten entries for example in each of the

Pyrrosia drakeana

small one-pan Europe, Asia and Japan or China classes, and 11 entries in one-pan bulbous plant, excluding Fritillaria and Narcissus. The classes for primulas and rock plants were packed with great specimens, with 12 entries for example in the one-pan P. *allionii* and hybrid class. There were well known primulas such as *PP. juliae* (Brian Burrow), *elatior* (Mike Dale), *elatior* ssp. *pseudoelatio*r and 'David Valentine' (both from John Richards), 'Broxbourne' (Clare Oates) and 'Coy' (David Millward) as well as some of the perhaps lesser known ones: *PP. albenensis* (Ian Kidman), *darialic*a ssp. *farinifolia* (Brian Burrow), 'Loisach' (Alan Spenceley) and 'Matthew Evans' (Tommy Anderson). I particularly liked *P. renifolia* (Ian Kidman), a plant rarely seen on the benches. Well flowered specimens of *PP.* 'Aire Mist', 'Broadwell Milkmaid' and x *pubescens* 'Lilac Fairy' formed Christine Boulby's three-pan rock-plant entry in the intermediate section, helping her to gain most points for the Gordon Harrison cup and the bronze medal. There were fewer Asiatic primulas, but these included *PP. henrici* (Peter Hood), 'Netta Dennis' (Joan Bradbury) and 'Johanna'. The last plant was exhibited by Iain Matthewson (Dumfries), the winner of the Cyril Barnes trophy for most points in the novice section.

With so many plants in the less than 19 cm diameter pot classes, the choice of best plant for the Sandhoe trophy was something of a challenge for the judges. Tommy Anderson (Kendal) narrowly won this with a fabulous *Androsace idahoensis* x *laevigata*, just beating Lionel Clarkson's (Blackpool) *Daphne modesta*, which was awarded a Certificate of Merit. Tommy Anderson also showed a very beautifully grown *Scilla rosenii*. This bulb is from snow-melt regions of the Caucasus and NE Turkey and needs to be grown cool to ensure that the flowers are not dwarfed by the leaves. Also of interest here was *Fritillaria yuminensis* var. *roseoflora* shown by George Young (Stocksfield). This bulb, with its tendrils gently supporting adjacent stems, grows on open gravel slopes in Xinjiang province of China.

Don Peace (Yarm) won the R B Cooke plate for the most points in the open section. One of the top exhibitors at AGS shows, Don grows a remarkable range of plants, including many beautifully presented androsaces, primulas, fritillaries, pleiones and ferns. One unusual and attractive fern shown by him was *Pyrrosia drakeana* from China. The dark green fronds with brown reverse were on this occasion accompanied by many newly emerged, brown-headed croziers.



Saxifraga retusa ssp. *augustana* (Forrest medal)

However, the day belonged to Alan Furness (Wooley) who received the E G Watson trophy for class 103 (three pans from seed), the Ralph Haywood memorial trophy for the best shrub with a superbly flowered *Rhododendron dendrocharis* and the Forrest medal for his *Saxifraga retusa* ssp. *augustana*. Out of flower, this last plant resembles its cousin *S. oppositifolia*; by contrast in the spring, up to five dark rose-red flowers are held in corymbs above the foliage. The subspecies grows on calcareous rocks in the French and Italian Alps. Some sages opined this saxifrage was the best Forrest plant they'd seen at a show – quite an accolade and unanimous winner.

Dave Millward (Photos: Peter Maguire)

Facing: *Fritillaria yuminensis* var. *roseoflora* 🍁 *Rhododendron dendrocharis*

Polygala chamaebuxus 'Grandiflora'

Volume 34 – Issues 138 to 141

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Full details of the programme will be published later in the year.

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