THE ROCK GARDEN 142

January 2019

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Family (Two adults and up to two children under 18 on 1st October)	£23	£28

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No card details whatsoever are retained by the Club after the transaction, whether sent by post or through the web site.

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Electronic subscriptions

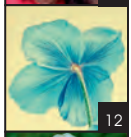
Electronic subscriptions are available at £11 per year to individuals, valid from the date of payment. Payment may only be made via the web site using Paypal. No printed material is sent for such memberships. All journals and documents are made available for download from **www.srgc.net** as pdf files. Any seed exchange charges will be payable at the time of ordering via the web site.
Further information about this form of membership is available only at **www.srgc.net** (and not from the Subscription Secretary).

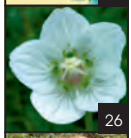
The Rock Garden

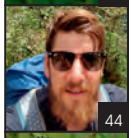
The Journal of the
Scottish Rock Garden Club
January 2019

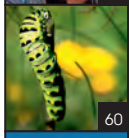
Number 142

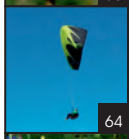
Cover: *Gentiana* 'The Caley' (Developed by Ian & Beryl McNaughton. Photo: Peter Maguire)

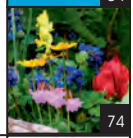












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The Editor welcomes articles, photographs and illustrations on any aspects of alpine and rock garden plants and their cultivation. Authors are encouraged to submit material electronically but articles may also be submitted in manuscript. Digital images 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).

Enquiries about advertising should be made to:
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Annual General Meeting 2019
The AGM will be held in the Old Church Hall at Burnside, Scone from 11 till 3.30 on Saturday 9th November. There will be talks, the Clark memorial lecture, photographic competition, 50/50 plant sale and display. There is ample parking. Full details will be given in *Dryas*, in July.

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

President's Introduction

Our president and our club emblem, *Dryas* octopetala, at Kleine Scheidegg

Last November I had the great privilege of being elected the president of the Scottish Rock Garden Club. I felt this to be a huge honour and an exciting responsibility, but it is also a terrifying thought for someone who so often focusses their attention on plants.

My very first alpines that I bought at the age of eleven came from Will Ingwersen's nursery in West Sussex, just one hour's drive from my childhood home. I had spent time studying Ingwersen's book and had chosen *Soldanella alpina*, *Dodecatheon media*, *Gentiana acaulis* and *Androsace alpina*. Will himself served us but there were only three species to be had from my list - and no *Androsace*. Despite such an early setback, my enthusiasm grew and I went on to join the AGS in 1978, four years before transplanting myself to Scotland.

I became a member of the SRGC in 1982 when I arrived at the Royal Botanic Gardens in Edinburgh (RBGE) to work for those two encouraging and great plantsmen, Alf Evans and Ron McBeath. I worked on the rock garden and the alpine house and finally was able to complete the RBGE course. In those fondly remembered years I would often travel with Alf or Ron to visit noted plant people like Mrs Knox-Finlay and Bobby Masterton – these were formative times for me and it was my great good fortune to learn from these remarkable plant growers. As I write, I have been fortunate to build a career sustaining the Explorers Garden in Pitlochry, travelling the world, leading garden or botanical tours and showing clients many amazing flowers in the wild.

I have held many jobs in the SRGC and have found it a very friendly and supportive club. Now the time has come for me to give something back. Over the last year I have had the good fortune and privilege to speak in New Zealand and Canada and to visit our members there. In the next three years I look forward to meeting many members and to visiting as many club activities as possible, enjoying the thrill of encountering old and new friends.

I believe that the Scottish Rock Garden Club has a great many strengths in the learning and friendship that it offers through our lively international network around Scotland, the United Kingdom and the whole world. It is a particular pleasure to me that, during my time as president, the club will be holding the decadal international conference *Alpines 21* in Perth in 2021; our plans are well on the way!

Julia Corden

The Discussion Weekend, 11 – 13 October 2019

Four years on from our last visit to Grantown-on-Spey, the Perthshire Group of the SRGC invites you here again for the Highland hospitality of the 2019 Discussion Weekend. Grantown is a 'planned' town built in 1766 by Sir James Grant. It features a broad high street with the square at its northern end and is perhaps unique in Scotland in that it has no chain stores, just a range of independent shops, cafés and bars. The town is small and, with little by way of modern housing developments, still enjoys a peaceful woodland location alongside the River Spey.

The Grant Arms Hotel sits in the middle of the square and was recently refurbished to a very high standard. All our club experience of the hotel has been friendly and welcoming; that is one of the reasons for our moving to Grantown for 2019 and 2020. At the hotel we will also be guests of the Bird Watchers and Wildlife Club (BWWC, www.bwwc.co.uk), whose facilities and informative help are available to us . The hotel is cosy, with forty-eight rooms, two of which suit disabled guests, while six are available as single rooms. When all rooms in the Grant Arms have been filled, delegates will housed in the equally agreeable eighteen-bedroom Garth Hotel just a hundred metres across the square. If arriving by car, leave the A9 at Aviemore and follow the A95 to Grantown. If coming by public transport, we recommend the scenic train journey through the Grampian mountains to Aviemore, then onwards by the frequent bus service to Grantown. Saturday morning is, as usual, free time for delegates and organizers to enjoy some arranged visits.

There is a great deal to recommend. The Grant Arms, as the base for the BWWC, can provide guides to take you on wildlife walks in the neighbouring Anagach Woods and by the River Spey; both long and short walks are planned. There is a native plant garden at 600 metres on Cairngorm mountain and the gardener may be able to tell you all about it, after which you might enjoy the funicular to the Ptarmigan Station to see the views and to enjoy their world-famous hot chocolate. Grantown may be a place for a longer break, with the Discussion Weekend as the 'jewel in the crown'; there is so much to see and do. If golf appeals, Grantown has its own magnificent eighteen-hole course, or you may drive up to Nairn to try the two links courses, or even the home of the Scottish Open at Castle Stuart.

Provisional Programme

Friday 11 October 2019

15.00 Registration
16.00 – 17.00 Plant staging
18.00 Dinner
19.45 President's welcome
20.00 The Jim Archibald Bulb Lecture:
Dimitri Zubov (subject to visa agreement) 'Bulbs in the Wild'
21.00 Small Bulb Exchange

Saturday 12 October 2019

7.00 – 9.00 Breakfast
8.00 – 9.00 Plant staging
9.00 Optional activities
9.30 Guided walks in the area, organised by the hotel
12.15 Lunch
13.45 The Harold Esslemont Lecture:
Anne Wright 'Growing Bulbs'
14.45 Peter Korn 'Inspiration from the Steppe'
15.45 Tea and coffee
16.15 Steve Newall 'Growing Plants for Seeds'
18.30 Drinks reception
19.00 Gala dinner
20.15 Presentation of show trophies
20.30 Plant Auction

Sunday 13 October 2019

7.00 – 9.00 Breakfast
8.00 Show opens
9.30 The William Buchanan Lecture:
Christopher Bailes 'Gardening with Shade Perennials'
10.30 Tea & Coffee
11.00 Steve Newell 'The Alpine Gems of Te Waipounamu'
12.15 Lunch
13.15 Show closes
13.30 Peter Korn 'Creating Conditions'
14.30 The John Duff Lecture:
Kevin Hughes 'Cally Gardens – my First Year'
15.30 Closing address
15.45 Tea & Coffee

We are delighted to be able to offer the weekend at the cost of £237 per person for the weekend for two persons sharing (see the *Dryas* for full price details and order form). The preceding Thursday or following Sunday nights are available at £71.50 per person per night for Dinner, Bed & Breakfast. Outside this period the Grant Arms will welcome your company at the normal rate.

The closing date for applying is 31 August 2019.
If you have any further queries, please contact
Julia Corden at julia.corden@icloud.com or phone 07976849666
We look forward to seeing you all in October 2019.

2021 International Rock Garden Conference

Perth Concert Hall Scotland

8 - 11 May 2021

Booking Opens Spring 2020

Understanding *Primula petiolaris* Wall

Pam Eveleigh & La Dorchee Sherpa

The plant explorers of the last two centuries had the luxury of seeing great quantities of Primula species in their wild habitat and could distinguish them by sight. However, the plant material they brought back was limited to a few herbarium specimens or sometimes live, but often short-lived, plants. It was up to botanists at home to make sense of this sometimes-inadequate material. Today, one of the benefits of social media is the abundance of images taken in the wild so that we may once again view species much as those explorers did. We two, La Dorchee Sherpa and Pam, the creator of the Primula World website (www.primulaworld.com), met on Facebook and have jointly been able to shed light on the misunderstood species *Primula petiolaris*

***Primula petiolaris* in literature**

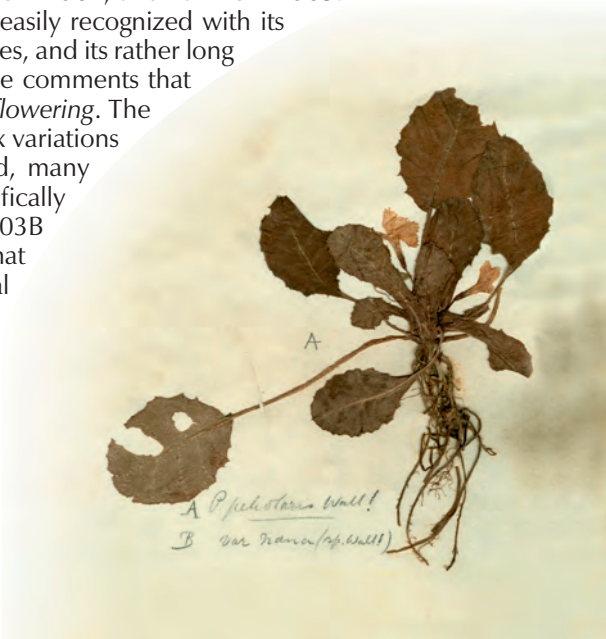
Nathaniel Wallich, superintendent of the Honourable East India Company's Botanical Garden at Calcutta, visited Nepal in 1820-1821. For political reasons, he was confined to the Kathmandu Valley, which is bounded to the north by "Sheopor" (Shivapuri mountain, 27°48'43.75"N 85°23'4.27"E). Wallich wrote the original description of *Primula petiolaris* in *Flora Indica*, published in 1824. In this description he says "*I have had frequent supplies of specimens of this very distinct Primrose from the vicinity of Kathmandu and from Gossain Than.*" The name *petiolaris* is derived from the slender and naked petioles, which are seen in the outer leaves.

Unfortunately, two years later, Wallich modified his definition, which started confusion about this species. He specifically cited "Sheopore" and F Hamilton plants (under the name *Primula cushia*) from the source of the Bagmati river that originates at Baghdwar, Shivapuri. However, he also cited R Blinkworth collections from Kamaon (Kumaon, now part of Uttarakhand, India). In Wallich's numerical list, number 603 is *Primula petiolaris* with entry: 603A – Napalia 1821 and 603B – Kamaon RB (RB being Robert Blinkworth). Because Blinkworth collected in Kumaon in 1826 or

At Baghdwar, source of the Bagmati River, Shivapuri National Park

1827, this material was not available to Wallich when he wrote his original description. An added confusion is that 603A and 603B are mounted together on some herbarium sheets without clear labelling.

In 1882, J D Hooker significantly enlarged the definition of *Primula petiolaris* in the *Flora of British India*, so that six variations were defined, with a wide distribution from Himachal Pradesh to Bhutan. At the time of the second Primula conference in 1913, W G Craib asserted that species in section Petiolares required more study. Four years later he wrote *Primulas of the Petiolaris-Sonchifolia Section*, after having gathered all the relevant specimens from the herbaria at Calcutta, Kew and Edinburgh. In this paper, he discussed the views of G Watt from 1904, and Pax from 1905. He wrote that *Primula petiolaris* is easily recognized with its outer, elliptic and long petioled leaves, and its rather long and finely attenuate calyx lobes. He comments that the outer leaves are *fully formed at flowering*. The result of Craib's work was that all six variations of *Primula petiolaris* were removed, many becoming distinct species. He specifically excluded Blinkworth's collection 603B from *Primula petiolaris* and what remained was Wallich's original 1824 definition of plants only from



Part of Wallich 603A
http://specimens.kew.org/herbarium/ K000750226

Primula petiolaris, Shivapuri National Park

Nepal. In the Kew herbarium, we can see that Craib's determination for collection 603B is *Primula sessilis* on K000750233. The next significant account of *Primula petiolaris* was by Smith & Fletcher in 1944. They concluded that the true species had only been collected in Nepal and that it had not yet been in cultivation.

In 1949, Ludlow and Sherriff made collection #19856 on the Tseli La, Bhutan (or Sele La, 27°14'7.32"N 89°14'56.14"E); field notes identify it as *Primula gracilipes* but it was subsequently identified in 1953 by H R Fletcher as 'true' *Primula petiolaris*. It was introduced into cultivation from a single plant and grown under the cultivar name 'Redpoll'. Modern images from this location show that *Primula gracilipes* grows there and is 'Redpoll' as it is grown today. Certainly, this incorrect determination by Fletcher influenced and confused later perceptions of the species.

Primula gracilipes - 'Redpoll', as it is grown today (Photo: Gunhild Poulsen)

In 1977, J A Richards wrote *An Account of Primula Petiolares Section in Cultivation* and a subsequent book in 1993 (2nd ed. 2003) on the genus Primula. He says of *Primula petiolaris* "*This is a widely misunderstood species, as the original type material is very untypical…*", and that "*Wallich's type was collected in the summer with a few off-season flowers, so it has summer leaves with long petioles untypical of the usual flowering condition*". Richards also included collection 603B within the species. We now refute this view with our current field research.

Basak and others, in their 2014 the book *The Genus Primula L. in India (A Taxonomical Revision)*, list many herbarium sheets, from Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Bengal, Sikkim, Arunachal Pradesh and Nepal, as being *Primula petiolaris*, but they are unavailable for study online. Nevertheless, from the wide cited distribution, it seems that they are endorsing an expanded definition of *Primula petiolaris*.

Pam's experience

When La Dorchee contacted me on Facebook in 2017 asking for identification of some of his *Primula* images, I recognized that they were of a species belonging to the Petiolares section. After consulting reference material, herbarium images and my catalogued images of species from Nepal, I concluded that the images were of *Primula petiolaris*. This surprised me because I had never seen images like those and it all did not fit with my perception of the species. La Dorchee had independently come to the same conclusion and was looking for confirmation. Over the course of the next year we discussed the species and La Dorchee revisited the plants. In Spring 2018, I went to Nepal and La Dorchee took me to Shivapuri National Park to study it in the wild. We were lucky that a few plants were still in bloom in late March. For a Nepalese primula, this species grows at a low altitude (up to 2475 m) and is evergreen. A visit to the Kathmandu herbarium revealed other collections of *Primula petiolaris*, all collected in Shivapuri National Park, with the exception of one intriguing collection from Simbhanjyang in Nepal, which requires further analysis.

La Dorchee's experience

I am originally from Bhojpur in Eastern Nepal and moved to Kathmandu about ten years ago. Five years later, I became interested in plants and for the last three years I have been photographing the plants in Shivapuri National Park, among other places, for a new *Flora of Kathmandu* book that I am co-authoring. Although I have friends who are also interested in plants, I usually hike by myself, to allow me extra time to photograph.

My first encounter with *Primula petiolaris* was in 2017 near Shivapuri peak, at Baghdwar. It was growing in moist banks in oak forest (*Quercus semecarpifolia* and *Q. glauca*) mixed with bamboo (*Thamnocalamus aristatus*

Above: the minutely pubescent scape, with thrum flower detail
Left: calyx detail

and *T. spathiflorus*) and further shaded by shrubs (*Viburnum erubescens*, *Neolitsea pallens* and *Ilex dipyrena*). Other plants nearby included *Tiarella polyphylla*, *Ranunculus diffusus*, *Rubus calycinus*, *Ajuga lobata*, *Ellisiophyllum pinnatum*, *Rumex nepalensis*, *Elsholtzia flava*, *Arisaema nepenthoides* and *Sarcopyramis nepalensis*. I have only seen *Primula petiolaris* growing in Shivapuri National Park, but at multiple locations. One site at elevation 1850 m north-west of the main Shivapuri-Nagarjun Park gate, and two sites at 2475 m near Shivapuri peak. Normally the plants bloom April - May, but the winter of 2017/2018 was abnormally warm and I found plants blooming as early as January. A large dam project is proposed on the upper reaches of the Bagmati River in Shivapuri National Park, but so far this has not affected their habitat.

Outer (top) and inner (bottom) leaves

The authors, either side of diminutive *Primula petiolaris*

What does *Primula petiolaris* look like?

The key to understanding *Primula petiolaris* is to realize that it produces dimorphic leaves, and that both types are present at flowering, which field observations have confirmed. Wallich clearly described the two leaf forms of the species: the inner (younger) leaves are "*strongly crenate*" (scalloped) and "*crisped*" (in the archaic sense meaning curled into short, stiff wavy folds or crinkles); the outer (older) leaves are spreading on the ground, margins unequally notched and toothed with subulate teeth, smooth on both sides, pale green above and whitish beneath; and the petioles are distinct, slender, from seven to fifteen cm long. Of the numerous herbarium sheets of collection 603A, both inner and outer leaves are present and nearly every specimen is flowering. Collection 603B does not have the same distinctly petioled leaves and therefore represents a different species. The flowers of *Primula petiolaris* were initially described as pale blue, but this is the colour of dried plants, the fresh flowers being pink. This colour may differ from light to dark, but all flowers have a white eye and a yellow zone at the centre which may vary from five small spots to a thick ring. The petals may have a tridentate apex, but most flowers produce a less tidy end that is irregularly dentate. There is no indication that this plant produces stolons. In general, plants have a floppy look.

Seed capsules

Primula petiolaris

Description
An evergreen, efarinose, perennial plant, with a long rhizome from which grow numerous, long fibrous roots. Lacking bud scales at anthesis. Leaves dimorphic, both types present at flowering. Outer leaves 5-15 cm long, including the petiole, lamina obovate, 2-7 x 1-4 cm, truncate to cuneate at the base, margin repand-denticulate, apex rounded. Petiole 2-3 times the lamina, slightly winged. Inner leaves spathulate to oblong-spathulate, tapering to narrowly winged petiole, 3-6 X 1-2.5cm, margin repand-denticulate, apex rounded. Scape obsolete. Pedicels numerous, minutely pubescent, 2-5cm. Bracts solitary, ovate, acuminate. Calyx tubular, 5-10mm, conspicuously 5-ribbed, parted to the middle; lobes lanceolate, apex acute. Flowers heterostylous. Corolla pink with a white eye, tinged greenish-yellow in the centre; exannulate or faintly annulate; limb 1-2 cm wide, lobes obovate, apex tridentate or irregularly dentate; tube 2 x the calyx; ampliate above insertion of stamens; Pin flowers: stamens at middle of corolla tube, long style reaching mouth of corolla-tube. Thrum flowers: stamens toward apex of corolla tube. Stamens with anthers 1.5 mm. Capsule subglobose, shorter than the calyx, disintegrating at maturity. Distribution: Nepal.

Literature (*The Rock Garden* does not usually quote so much literature but this list also reveals the great amount of work needed for such articles. Ed.)

Flora Indica (Carey & Wallich ed.) 2:22. 1824 https://biodiversitylibrary.org/page/34213495

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H R Fletcher, Some Recent Primula Introductions, J. Roy. Hort. Soc. 78:24. 1953.

J A Richards, An Account of Primula Petiolares Section in Cultivation, J. Scott. Rock Gardening Club V15(3):177. 1977.

J A Richards (2003) Primula. Portland, Oregon: Timber Press. p168.

Herbarium sheets of Wallich 603A: K (K000750228, K000750229, K000750230, K000750232, K000750234, K000639658), BM (BM000996875), BR (BR0000005297276), E (E00024633, E00024632, E00024631, E00024630- pro parte), G (G00440588, G00440589, G00138549, G00138567, G00138583, G00138513, G00138633, G00138734), HBG (HBG508206), M (M0173552, M0173553), P (P04544665 -pro parte, P04544664, P04544649, P04544653), PH (0022102- pro parte), S (S09-47197), CAL (272794, 272795, 272796 not online or seen)

Paintings of Lawrence Greenwood (1915-98)

Ian Young

Anyone who attended the SRGC shows through the 1980s and 1990s will remember the wonderful displays of Lawrence Greenwood's watercolour paintings, portraying the very plants that we loved both then and now. Lawrence and his wife Lillian were regular supporters of the shows and many who attended them were tempted into a purchase by the beauty and artistic quality of these charming images. They had such an appeal that it was difficult to stop at just one purchase. Through the years, many regular visitors and exhibitors – including Fred Hunt – acquired collections of these works.

Lawrence was especially skilled at capturing his subjects' true colours in his paintings, many of which go beyond typical or conventional botanical studies on a white setting, on to full portraits of the plants complete with their real background. His faculty of acute observation worked in combination with his artistic talent and draughtsmanship, enabling him to capture the very essence and character of the plants. He much preferred to paint "from life" but was also very skilled in creating images from slides of the fabulous plants photographed in the wild by such well-known plant hunters as Pete Boardman, Brian Halliwell, Ron McBeath and George Smith.

The quality of Lawrence's work was recognized by the award of a highly coveted RHS gold medal for his paintings, many of which are very well represented in such collections as that of Shirley Sherwood, now famous for the gallery that bears her name at Kew. He also had work included in Shirley's book *Contemporary Botanical Artists* in 1996.

Not surprisingly, the paintings now kindly donated to the SRGC by the great grower Fred Hunt for auction are mostly those of iconic plants. A number of them portray the actual plants that Fred grew and showed.

The Auction - 16 February 2019

The SRGC Early Bulb Day will be held in Dunblane on 16 February 2019. There will be an auction of all the paintings donated by Fred Hunt, in aid of club funds. This article shows many of the paintings to be sold, together with images of the real thing.

In addition to Lawrence's paintings described here, the auction will also include his paintings of *Cypripedium guttatum*, *Cypripedium macranthos*, *Fritillaria latifolia*, *Primula falcifolia*, *Rhododendron leucaspis*, together with a painting of *Rhododendron yakushimanum* by M Wilson.

The dimensions of all paintings are given in millimetres (*width x height*). Please note that the colour reproduction is not accurate in this article (Ed.) Members who cannot be at the sale and wish to bid for paintings are asked to arrange for someone to bid at the sale on their behalf.

Aquilegia jonesii
(1993): 266x197 (443x387)

Aquilegia jonesii is one of those desirable plants that challenges the skills of the best of growers. It is not difficult to germinate the seed and even to get a flower or two but few, if any, have been able replicate the beauty this majestic plant displays when growing in its native Rocky Mountain habitat, mostly in Wyoming, where it may be seen in limestone rubble, often at the roadsides. In this painting Lawrence captured perfectly the colour of the flowers and glaucous foliage; he rendered exquisitely the shape and form of the rocks, bathed in the intense Alpine light.

(Photo: David Sellars)

Arisaema elephas
(1994): 225x355 (355x520)

It is often written that you either love or hate *Arisaema* plants. However, anyone who takes the time to look carefully at the form of these plants in detail, especially at the flower cloaked from view by the spathe, will be amazed by their structure.

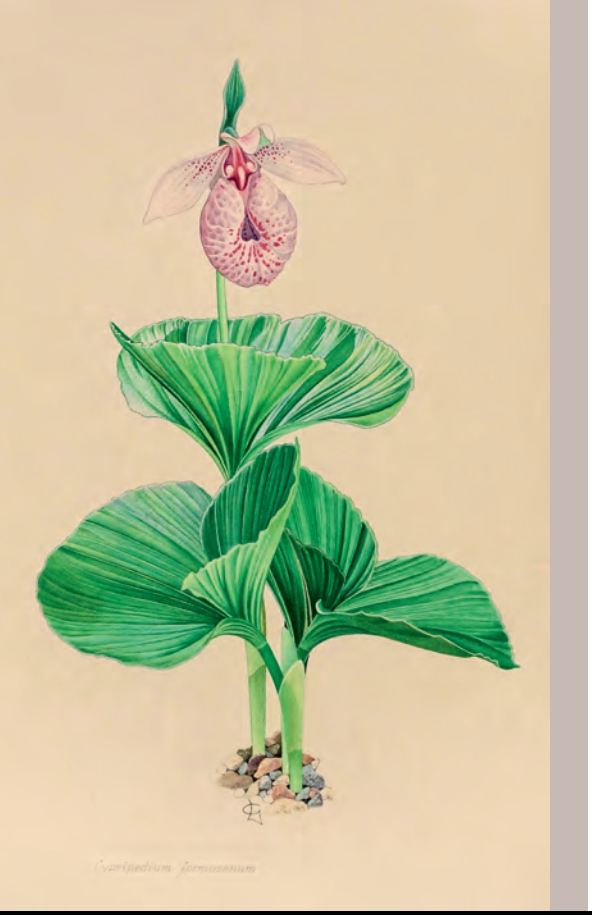
Lawrence certainly spent time studying this plant, faithfully reproducing it in a watercolour where he captures accurately the wrinkles on the expanding leaf, the twisting spadex reaching out towards the viewer, also adding a vignette of the background.

(Photo: Johan Nilsson)

Cypripedium calceolus
(1992): 200x290 (330x432)

Cypripedium calceolus is an iconic and highly desirable plant that was collected to the brink of extinction in Britain and other countries before conservationists stepped in to protect it. Fortunately, there are still good wild populations in some parts of Europe. Fred Hunt regularly won the top awards for his pot of *Cypripedium calceolus*. He was one of the few growers who at that time had the skill and dedication to grow this wonderful plant to the size shown in this painting.

(Photo: Peter Maguire)



Cypripedium formosanum *(1987): 215x315 (330x470)*

There was a time when it was very unusual to see *Cypripedium*, the Slipper Orchid, being grown in gardens, let alone on the show benches. Great advances in the selection, breeding and cultivation methods of cypripediums in commercial horticulture have resulted in their becoming readily available, with many people now able to grow them successfully in their gardens. In this painting the artist has perfectly matched the delicate colours, skilfully capturing the sculptural form of the fan shaped leaves as they emerge and expand, to create a remarkable image.

(Photo: Peter Maguire)

***Fritillaria hermonis* var. *amana* 'Sunglow'**
(1993): 215x175 (380x355)

In 1986 Fred Hunt received some small bulbs of *Fritillaria hermonis amana* (NS2333) from Norman Stevens of *Cambridge Bulbs*. When they first flowered in 1990, Fred recognized they were of an unusually yellow colour. At one of the shows in 1991 Fred put the plant up to the Joint Rock Plant Committee, who awarded it a preliminary certificate.

Fritillaria hermonis var. *Amana* (but not 'Sunglow') at the Stirling show, 2012

Fritillaria michailovski *(1972): 170x250 (300x400)*

From 1972, this is an earlier work by Lawrence of a bulb that at that time was relatively new to cultivation, still expensive and only grown by a few of the top growers such as Fred Hunt. Since then the cultivation of this bulb has been accelerated and it is now grown on a large commercial scale, so you can now get twenty bulbs for the price you would have paid for one back in those days. The attraction is the colour contrast between yellow and brown, well represented in this painting.

(Photo: Liz Cole)

Lilium souliei *(1990): 175x250 (291x381)*

Margaret & I raised *Lilium souliei* from the AGS ACE seed collection sown in 1994, flowering it for the first time in 2003. It remained as a single bulb, flowering for a few years but never setting seed, then we lost it; it remains rare in cultivation. The gorgeous flower smells strongly of guava and is a burnished dark mahogany brown outside. The same colour turns gradually into a yellow throat on the interior, all this on a stem of about fifteen cm high. We were all charmed by the pictures we were shown of this small lily growing in its Himalayan home of Yunnan and this painting was based on some of those photographs.

(Photo: Cyril Lafong)

Meconopsis grandis
'Slieve Donard'
(1982): 298x520 (465x730)

It is not surprising that *Meconopsis* 'Slieve Donard' is one of the most sought after of the Himalayan blue poppies. Its large stunning blue flowers give all the appearance of being made of silk as they flutter on the tall leafy stems. This plant is soundly perennial in the cool growing gardens of Scotland. The flowering stems die back as the flowers fade but side growths develop around the base, which, if given a rich moist organic soil, grows well into the autumn – these growths provide next year's flowers. Lawrence's skills are evident in the way that he reproduces the translucent blue petals and somehow, without showing the whole plant to the ground, he manages to give the impression of its stately stature.

(Photo: Ian Christie)

Primula reidii* var. *williamsii *(1978): 173x247 (270x385)*

When Margaret & I were show secretaries, we referred to this fabulous primula as a "beginner's plant" not because it was easy but because the best plants were always exhibited in Section II. It seems that the longer you grow it the more difficult it becomes to keep it healthy and so, despite having been in cultivation for many years, it remains a relatively rare plant. Lawrence's skills are in evidence in this delightful portrait, notably in the way he represents the delicate farina on the flowers.

(Photo: Jim Jermyn)

Gentiana acaulis *(1980): 240x190 (380x330)*

Gentiana acaulis is one of the archetypical plants associated with the mountains of central and southern Europe from Spain eastward to the Balkans. Despite the length of time this species has been in cultivation and its wide geographical range it still remains a challenge to grow and flower this wonderfully beautiful plant in most gardens. Lawrence has once again captured the allure of this plant, accurately recording the intense blue of the large trumpet-shaped flowers with their green spotted throats reaching up over the loose rosettes of shiny green leaves. His skills as a draughtsman are also displayed in the way that he manages to give the illusion of three dimensions on a flat surface.

(Photo: Michael Almond)

Trillium discolor *(1993): 240x190 (368x324)*

In this simple composition of just two stems Lawrence effectively illustrates the decorative appeal of the patterned leaves of the much sought-after yellow-flowered *Trillium discolor* from the upper drainage of the Savannah River, on the border between South Carolina and Georgia. If you are lucky this trillium will settle and form clumps in your garden.

(Photo: John Lonsdale)

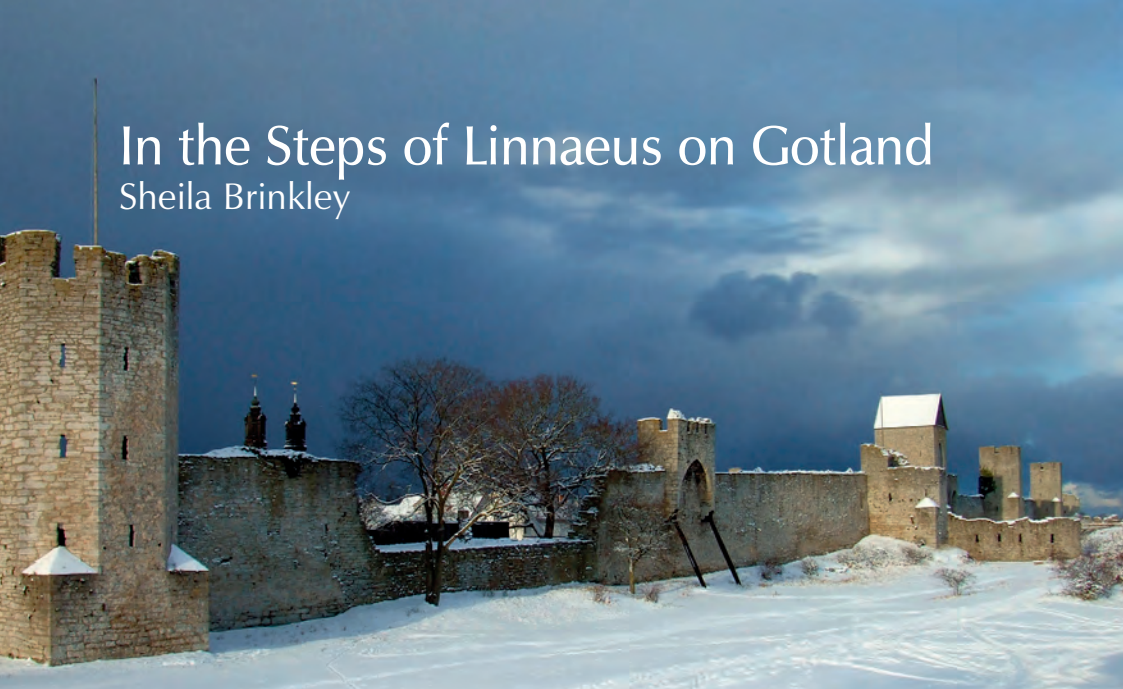
***Pulsatilla halleri* 'Budapest Seedling'** *(1984): 190x240 (355x430)*

The subject of this painting was a plant that Fred Hunt showed with great success. The original plant named 'Budapest' dates back to 1920 when Dorothy Garton purchased some pulsatilla plants in Budapest. The true form of this plant is now very rare but a number of seedlings have been selected that share the stunning blue colour. The portrait of this plant captures the colours and character of this plant as grown by Fred Hunt.

(Photo: Cyril Lafong)

In the Steps of Linnaeus on Gotland

Sheila Brinkley



In 1741, Carl Linnaeus visited the islands of Öland and Gotland off the south-eastern coast of Sweden. The journey was made at the request of the Parliament to seek items of economic benefit such as clay to produce porcelain and plants for food, medicine, dyes or other purposes. He reported on limekilns and cattle that he came across and, of course, being a naturalist, he investigated and noted everything he saw. Linnaeus first visited Öland, and then set sail for Gotland on 21st June 1741. I had the opportunity to follow in his footsteps (June 2003) and jumped at the chance. Our arrival was slightly earlier in the month and very comfortable in comparison with Linnaeus, who always seemed to be unlucky with weather in his sea crossings. A short local flight from Stockholm took us to Visby, the capital, where we quickly boarded two minibuses, whereas Linnaeus had to wait around interminably for horses. He was amazed by the city, which seemed to him "*like a miniature Rome*". Visby was an important Hanseatic port in the eleventh and twelfth centuries, on a par with Antwerp, and it still retains much of its early character. Today, Linnaeus would see little change in the cobblestone streets, fine merchant

In the modern age, my own photographs have been superseded and I am grateful to many who have allowed me use of their digital photographs, some of which were submitted to *The Rock Garden* and all of which are credited in the captions: Ian Christie, Michael Almond, Michael Scott; Bukowski's Auction House in Stockholm; Pål Asgeir Olsvik in Norway; Gotland Tourist Information Centre www.gotland.com; Magnus Melin; Karen Woolley in England; gilaflora.com; naturegate.com. I particularly appreciate the help of the owners of the excellent Netherlands site (http://www.freenatureimages.eu/), who have so generously allowed me to use many of their wonderful images, all marked here with •.

Visby walls, little altered since Linnaeus (licensed: Wiki Creative Commons)

Echium vulgare (www.luontoportti.com)

houses, and the sturdy mediaeval city walls. He would be delighted that the tall, vivid-blue spires of Viper's Bugloss, *Echium vulgare*, still grow vigorously everywhere, even on the roundabouts.

Öland and Gotland are islands of limestone on which over eleven hundred and fifty species of plants have been recorded. There are areas of limestone pavement known as *Alvar*, which constitute one of the many special and varied habitats. With the presence of so much lime, one could expect to find orchid species, but I believe Linnaeus was unprepared for the plethora of these plants that he was to find, as indeed

was I. He commented that the Fly Orchid, *Orchis insectifera*, *"bears such a resemblance to flies that an uneducated person might well believe that two or three flies were sitting on the stalk"*. On Gotland, Linnaeus and I both shared the delight of encountering the Military Orchid, *Orchis militaris*, for the first time. Growing in grass, often at the roadside, these flowers are quite magnificent. The hooded crown really does resemble a helmet. The pretty Burnt-tip Orchid, *Neotinea ustulata*, was also new to him.

For me, the highlight of the whole trip was the walk through the large Kallgatburg Nature Reserve, where stately Lady's

Neotinea ustulata (Michael Almond)

Cypripedium calceolus (Peter Maguire)

Cypripedium flavum

Slipper Orchids, *Cypripedium calceolus*, grow. As we moved along the footpaths, I could not help noticing that the soil conditions were extremely dry. Would the blooms be over and shrivelled up? However, my fears were groundless, for the flowers were at their best. There were great clumps of plants growing in dappled shade under a canopy of yew trees. Our cameras worked overtime and I could not help recalling Farrer's remark of "*Proud Margaret*" used when observing the appearance of *Cypripedium flavum*, which he found in northwest China. It could also apply in this case!

Linnaeus and his party were to spend over a month on Gotland. They travelled north from Visby along the west coast and soon reached the village of Martebo where they found Adder's Tongue Fern, *Ophioglossum vulgatum*, growing by the wayside.

Ophioglossum vulgatum
(• Jan Willem Jongepier)

Forms of *Anacamptis morio* (Michael Almond)

Linnaeus records that it was used to make a healing ointment but he does not mention whether it was in company with the green winged orchid, *Anacamptis morio*. These two are strange bedfellows and I certainly located them together in pasture at Stockvicken. In the past, I had noticed this same phenomenon in a field in Somerset, where the ancient arable land is only grazed once a year. The eighteenth-century tradition of erecting May poles as a celebration of Spring is still maintained in Martebo. These structures are decorated by farm girls, with flowers and white chips of horn.

Linnaeus listed no less than one hundred species previously unrecorded in Sweden. He believed at the time that Ramsons, *Allium ursinum* (Wild Garlic), was one of these; it was just that he had never seen it on the mainland. Farmers told him that milk and butter were tainted if cows ate Ramsons, whose Swedish name is *Rams*. The modern affectionate nicknames that Swedish people give their wild flowers give me great pleasure. Hence, the ubiquitous Woody Cranesbill, *Geranium sylvaticum*, is *Midsommarblomster* (mid-summer flower), and *Andromeda polifolia* is

Geranium sylvaticum
(• Willem van Kruijsbergen)

Allium ursinum (• Willem van Kruijsbergen & Jasenka)

Rosling (little rose) – perfect. Linnaeus recalls that cornflowers were locally called *Sailors' Hats*, and it was on Gotland that I was to see these flowers growing naturally along with arable crops. It would be good to see them reappear in Britain on set-aside strips.

Travelling to the far north, Linnaeus and his party enjoyed a night at the farmhouse of Hau, and it was there that he penned the words *"A farmer with eight cows and a horse, who lives in the forest, free from many a guest, he of all lives best!"* I found the sturdy farmhouse, well preserved; it still boasts original stone flag pathways and impressive out-buildings. Although unoccupied when I visited, it was obviously being tidied up to open for visitors. By peering through windows, I could make out antique implements, wooden chests, smocks and a cheese press, all to go on display.

Moving through Fårö and crossing Farsund, Linnaeus and his party encountered a large area of shifting sand dunes. These have been stabilized by pine trees and Marram Grass, which prevent the sand

Andromeda polifolia (Above: Edinburgh Show 2014. Below: Michael Scott)

encroaching further inland, reminiscent of Culbin forest on the Moray coast in Scotland. Linnaeus was gratified to find the beautiful fragrant creeping honeysuckle, *Linnaea borealis*, known as the Twinflower; it was his favourite flower and was named after him. He had first found it on his

Linnaea borealis (Karen Woolley)

Raukar (Gotland Tourist Centre)

Arenaria norvegica (Pål Asgeir Olsvik)

early journey to Lapland in 1732. He commented that the plant grew in the forest and that the place had not been burnt in living memory. This association continues today in Scotland, the species not growing where the heather has been burnt.

The north coast is one of several shores where it is possible to see the *Stone Giants* or *Rauks*, post-glacial limestone rock features that remain little changed since the eighteenth century. Some resemble grotesque statues. This is an area where Linnaeus found *Arenaria gothica* (now *A. norvegica* ssp. *anglica*), but it eluded me.

Linnaeus found Bearberry, *Arctostaphylos uva-ursi*, to be more plentiful, growing in every bare patch of forest more than in any other place. This is particularly true on the east coast, where pine trees grow on raised shingle beaches and Bearberry carpets the stones in large patches. Here, the acid soil layer above the limestone is a perfect

Arctostaphylos uva-ursi flowers (• Marijke Verhagen)

habitat for two special helleborines to flourish: *Cephalanthera rubra* and *Cephalanthera longifolia* were both at their best. So many Birds-nest Orchids, *Neottia nidus-avis*, stood proudly in one glade that it was obligatory to count them; there were seventy-three. This is also the favoured area for the wintergreens, *Pyrola minor*, *Orthilia secunda* with its green one-sided inflorescence and – most important of all and new to me – *Pyrola chlorantha*.

Linnaeus also travelled to the southernmost tip of Gotland and, high on the top of the promontory of Hoburg there is a placard inviting visitors to notice *Vincetoxicum hirundinaria*. This Swallow-wort is an extremely poisonous plant, especially to cattle. It manages to exist on the most desiccated areas of limestone pavement and tolerates drought. It was recorded by Linnaeus on this headland and is common throughout Gotland. His friends caught a couple of hedgehogs close by at Vamlingbo

Arctostaphylos uva-ursi berries (• Marijke Verhagen)

Neottia nidus-avis
(• Willem van Kruijsbergen)
Right: *Cephalanthera longifolia*
(• Jan Willem Jongepier)
Facing: *Cephalanthera rubra*
(• Bart Wastenhouw)

Pyrola chlorantha &
Orthilia secunda (• Marijke Verhagen)

Vincetoxicum hirundinaria
(• Jan van der Straaten)

Leonurus cardiaca (www.gilaflora.com)

Prunus mahaleb (• Marijke Verhagen)

and were amazed to discover that they were meat eaters, devouring the carcass of a fieldfare. They also took the animals to the shore and found out that they could swim! By coincidence, a tame hedgehog greeted me in the evenings at the bottom of the outside steps when I returned to my apartment.

A beautiful day of sunshine was chosen for our visit to the island of Stora Karlsö, a highlight of the trip. Sea spray caught the sun as it was flung over the bow of the boat and sparkled like diamonds. The island has long been well known for its colonies of seabirds, especially razorbills and guillemots. There is an excellent museum with guides who show visitors the species of wild life and keep an eye on their activities around the island. The rarest plant on this island is Motherwort, *Leonurus cardiaca*. This

Isatis tinctoria (• Jan van der Straaten)

Cynoglossum officinale (• Marijke Verhagen)

The Karlsö Ash (Magnus Melin)

plant, as may be surmised from its name, was used to treat heart disorders, so might relate to the parliamentary object of the expedition.

There have been changes since Carl von Linné visited in 1741; this Swedish version of his name is still uttered with reverence on the island. A Karlsö Club was started in 1880 and the buyers were encouraged to use the land for their own hunting. Three hundred sheep were removed that year, and the founder introduced many plants in his eagerness to restore vegetation. Many of these were alien but, perhaps fortunately, only the St Lucie Cherry, *Prunus mahaleb*, still survives today.

Landing at the north harbour, one is greeted by two fishing huts – the remains of a cluster of sixty that existed in the nineteenth century – and large specimens of Woad, *Isatis tinctoria*, and Hound's Tongue, *Cynoglossum officinale*. Linnaeus recognised the importance of Woad to produce blue dye and writes of the stem's being half to one ell tall; this old measurement is

round about forty-five centimetres, so they are tall plants. As sheep had been grazing the island before Linnaeus arrived, it was easy for him to spot a lonely tree growing on the highest point of the moor (52 metres). This ash, now about four hundred years old, had grown up through the stones of a Bronze Age cairn and had thus been protected from grazing sheep. He described its dimensions in his book, *Öländska och Gotländska Resa*, and it is not much bigger today. It has served as a marker for seamen and, in the sixteenth century, pirates looked out from this tree for their unfortunate merchant vessel victims.

Patches of blue *Globularia vulgaris* and variants of Kidney Vetch, *Anthyllis vulneraria*, in many colours of red, pink and orange, made a colourful carpet on the bare and stony ground near the ash tree. Directly below here, Linnaeus found a plant that he considered to be the rarest of all he saw on his journey. It was *Artemisia rupestris*, with the distinguishing feature of flowers that are large and globose, resembling pills. He took a specimen to the University garden

Anthyllis vulneraria (• Jeroen Willemsen)

Adonis vernalis (• Annemiek Bouwman)

Lactuca perennis (• Jasenka)

Lactuca perennis
(• Marijke Verhagen)
Pinguicula alpina (Michael Scott)

at Uppsala, where it survived the winter but failed to set seed, much to his disappointment.

Two other plants took him by surprise on Gotland. The first, *Adonis vernalis*, I was excited to see and photograph for the first time. Linnaeus said this flower adorned the finest gardens, and he had never thought to find it growing wild in Sweden. It only occurs on Öland & Gotland and is a relic from a warmer era. The second, a blue lettuce, *Lactuca quercina*, falls into the same category. I have yet to locate it, although in warm Provence in May 2004 I saw masses of its sister, *Lactuca perennis*, which

gives a good idea of its flower colour and structure.

To return to Gotland itself, there are, by contrast, several plants of tundra-like flora that migrated south just after the last ice-age and managed to survive in the Calcium-rich flush fens. These open and treeless areas are cool, fed with spring water, and provide a habitat for such plants as *Bartsia alpina*, *Pinguicula alpina*, *Pulsatilla pratensis*, *Tofieldia calyculata* (the German *Tofieldia*), *Primula farinosa* and *Parnassia palustris*. Linnaeus was therefore faced with the extraordinary phenomenon of relic

Tofieldia calyculata (• Marijke Verhagen)
Parnassia palustris (Ian Christie)

Medicago falcata (• Jan van der Straaten)

plants from two extremes of habitat, living together on the comparatively small island of Gotland.

Linnaeus and his party endured a terrible return sea crossing from Visby to the mainland on 25th July 1741. Back in Stockholm, he was too busy for a while to write an account of his expedition and it was not until 1745 that *Öländska och Gotländska Resa* finally appeared. It was his first publication in Swedish, rather than in the Latin of the past, and was also the first in which he used his now universally adopted Binomial System of classification for naming the plants.

He had failed to find china clay or any new and important vegetable dyes, but he reckoned that the discovery of a new crop plant, *Medicago*

Bartsia alpina (• Jeroen Willemsen)

Primula farinosa (Michael Almond)

falcata, was of such value that it paid for the cost of his journey. He was not a man given to modesty and stated that *"altogether by this journey I have discovered in the field of natural history more than anyone could have believed possible"*! However, I do like to think that he enjoyed the orchids as much as I did.

Öländska och Gotländska Resa (Bukowski Auktioner AB, Stockholm)

The Last Paradise – An Expedition through the Remote Hidden Kingdom of Bhutan

Christopher D G Brown

I left Kathmandu early and headed to the airport. Finally, the months of planning and anticipation were over. I boarded a small twin propeller-driven plane with twelve other passengers. The air hostess went through the usual air safety rigmarole and then the captain's voice came "*Mount Everest will not be visible today due to thick cloud cover*". Luckily the captain was wrong. After forty-five minutes in the air, there it was, protruding through dense clouds, truly a magical sight to behold and one that will stick with me forever. As the aeroplane descended, Bhutan began to reveal itself. Dzongs and terraced rice paddies adorned the forest-covered Himalaya and the mountains seemed to go on forever. I had made it to the Shangri-La, the land of the thunder dragon, the last paradise. The sheer beauty of what lay before me brought a tear to my eye; it was like landing in the Garden of Eden.

Usually, travellers go straight to their hotel from the airport before exploring, but not in Bhutan. I met my guide, Kesang Tenzin, and we drove straight to Paro Dzong, a traditional fortress converted into a Buddhist monastery. The ancient architecture is massive in style and spectacular in form, with towering exterior walls surrounding a complex of courtyards, temples, administrative offices, and monks' accommodation. After exploring the Dzong, Kesang and I had a short two hour walk along the sides of the Paro valley. It was my first chance to experience the forests of Bhutan and I was not disappointed. The hills were densely dressed, with *Pinus wallichiana* and *Cupressus himalaica* as the main canopy providers. They were accentuated by an understorey of spectacular shrubs and herbaceous plants, including *Rosa*, *Berberis*, *Bergenia*, *Mahonia*, *Juniperus*, *Cannabis*, *Zingiber* and *Arisaema*, along with a

Above: Mount Everest (left) and Kangenchunga (right) from the aeroplane

We are accustomed to tales of the dangers and hardship endured by early plant hunters in various parts of the world. Chris Brown was supported by the SRGC Exploration Fund in this expedition to Bhutan. In his account he makes it dramatically clear that dangers and hardships still accompany the traveller in a way that the armchair explorers among us do not always appreciate. There is an audio-visual account at https://youtu.be/JXMAPo7UcOk (Ed.)

huge array of mosses, lichens and epiphytic ferns. We made our way to the local green, where we sat and watched a game of archery. Out of nowhere a group of Bhutanese girls dressed in beautiful hand-woven silk began to sing. The sound of their combined voices was astonishing and truly humbling. Kesang and I then headed to a local restaurant for lunch and then onto the hotel. It was an amazing and inspiring first day.

I awoke early, packed, and we set off. I had long been looking forward to this day, the trek to the Tiger's Nest monastery. Hidden amongst the cloud forest, perched on the side of a huge vertical cliff, this is one of the most iconic images of Bhutan and a sacred pilgrimage for Buddhists. Nothing prepares you for the sheer magnificence and beauty of this place. The surrounding mountains are covered in dense forest from which clouds form continuously and then drift across the landscape. The trek was long, steep and arduous and it took four hours to reach the top, but what a trek it was. We started around 2000 m and the monastery lies at around 3000 m. Along a path of only four km, this makes for a very steep climb. We started in Pine forest, predominantly *Pinus wallichiana*, but as we headed uphill the vegetation began to change. We passed through glades of *Rhododendron* species, *Pieris japonica*, *Cornus capitata*, several *Arisaema* species, *Leycesteria formosa*, many *Quercus* species, *Berberis* and many more. Amongst the understorey were boulders like miniature gardens of lichens and mosses, perfect breeding ground for many the different species of ferns that sprouted from them. A mountain goat high on a cliff edge and a Grey Langur jumping through the canopy were both high above us.

As the monastery grew ever closer, occasionally revealing itself through the dense forest, it became more and more astounding. We reached the final push, turned a corner and there was a huge waterfall cascading down the cliff. The drift had kept part of the cliff face permanently moist, creating perfect conditions for a remarkable vertical garden of ferns and mosses. We passed the waterfall, whose power was harnessed to turn a prayer wheel stuffed with thousands of hand-written prayers; every time the wheel turned it rang a bell, adding to the atmosphere. The final ascent lay dauntingly before us.

Eventually, we arrived, put on long-sleeved shirts and removed our boots. We left our valuables including phones and cameras at the entrance (sadly, no photos from inside). We ascended very steep paved stairs to a tiny dark room where we made offerings and were blessed with holy water infused with saffron. We continued up more steep steps to another dark room where the air was thick with potent incense smoke. Monks sat all over the floor, with shaved heads and dressed in red robes. They began to chant their mantras loudly and to play their long silver horns. The room was adorned with spectacular statues alongside clay carvings and painted from floor to ceiling in amazing scenes of nature and beauty; colourful textiles were draped everywhere. Words cannot do justice and, to understand, you must experience such things first-hand.

My next night was disturbed by anticipation of the day's trek. What would it be like? Would I be able to complete it? Am I fit enough? Will I be able to cope with the altitude? Nine days hard trekking in unknown terrain is a daunting challenge. After an early start, we loaded up the 4x4

and headed to the Paro valley. When you think the scenery cannot get any better, it does – around every corner – and Bhutan never ceases to take your breath away. Our driver ground to a halt at a gate and soldiers appeared from a small hut surrounded by barbed wire. Here we collected the permission papers to enter Jigme Dorji National Park. We then drove up the valley by the Paro River to Sharna Zampa, until we finally were met by our horse man, horses and cook. The trek had begun.

The path was a combination of protruding boulders and deep mud and was not easy. We hopped from boulder to boulder to avoid getting our boots wet. After roughly three hours of walking, Kesang and I stopped for lunch in a beautiful spot, on top of a huge boulder surrounded by dense forest and overlooking the raging Paro River. Little did I know of the long and gruelling trek that lay ahead that day. Rain began to fall, lightly at first, but gradually getting heavier. The path became more and more difficult until it eventually transformed into a fully flowing stream. Things got progressively worse, until I was thoroughly drenched. My waterproofs had failed me miserably, more rain was expected, and this was the beginning of the monsoon season. Wet clothes and trekking are not an ideal combination and it is impossible to dry anything. Luckily my boots held out and my feet were dry, if a little worn out.

The plant diversity was endless. Luckily, I stumbled across one of Bhutan's most senior botanists, Raling Ngawang, who has collected and pressed almost every specimen in the Bhutanese National Herbarium and was collecting when I met him. It was a pleasure to meet such a well-respected botanist in his natural environment and we chatted for ten

Primula geraniifolia

minutes, discussing the surrounding plants, Bhutan and the locations I would pass through. After this meeting I managed to see through the physical challenge I had set myself and began to observe the beauty and diversity that wild Bhutan has to offer: *Primula sikkimensis*, *Rosa webbiana*, *Primula geraniifolia* and *Rhododendron lepidotum* amongst many others. Kesang and I walked for nine hours through extreme rain and terrain, covering 28 km and climbing from 2870 m up to 3630 m. We trekked through many different forest types, including broad-leaf temperate with oaks such as *Quercus semecarpifolia* and a coniferous mix

Rhododendron lepidotum

Iris goniocarpa among meadow flowers

of *Pinus wallichiana*, *Picea smithiana*, *Abies spectabilis*, *Cupressus torulosa* and endless *Rhododendron* species.

That night, camp consisted of a stone shack with a wooden roof. False hopes of a comfy bed were quickly shattered; a rug on the floor was what I received. With the climb in altitude, sickness, headaches, dizziness and a loss of appetite quickly set in, all of which could not stop me from sleeping for eleven hours. I was extremely worn out – and it was only my first day.

The next day, Kesang and I again left the horseman and the cook behind and continued our slow ascent. The vegetation gradually began to change from the dense forest into open grassland grazed by yaks, surrounded by steep sided valleys

coated in conifers, including cypress and junipers. Along the river's edge were fantastic meadows of *Primula sikkimensis*, *Iris* and other alpine meadow species. When we arrived in a small settlement called Soe we were met by a young yak herder in traditional dress who was preparing to feed salt to his animals – a difficult and dangerous task, whereby the yak is tripped over, its horns pushed into the soil and salt poured into its mouth. The yaks do not enjoy it and they put up some fight; we watched in awe.

We left the young man behind and continued up the steep-sided valley. After around seven hours walking and a climb to 4090 m we had covered roughly 19 km. From our camp we had a spectacular view of Bhutan's second tallest mountain, Jomolhari. My altitude sickness began, worse than previously, and I was unable to stomach dinner. We discussed the implications of continuing the trek, because helicopter extraction would be the only means of escape should my condition worsen. A sleepless night followed and I woke up not feeling great, although better than the night before, with no headache and some appetite. I drank lots of water and forced myself to eat as much rice as possible. I would have to be rescued by helicopter before I gave up my dreams of seeing what natural spectacles this mysterious and remote region had to offer me.

Primula sikkimensis

With my symptoms gradually receding, Kesang, the horseman and the cook reluctantly agreed to continue. As we reached the summit of our first mountain pass at 4890 metres, alpine plants slowly revealed themselves from within the dense mist. I was eager to descend quickly because the symptoms of altitude sickness are often delayed and staying here was not a wise idea. We pushed on down the steep mountainside through huge swathes of *Primula sikkimensis*, *Rhododendron* species and a dense forest of *Betula utilis*. This forest was so very distinctive and unlike any I had ever seen. All the trees grew at an angle towards the sun and this was obviously the shadier side of the mountain.

The next day was to be long. Kesang and I climbed along the valley side and came across a community of around six households. Here was a medical dispensary, but not the sort we are used to back home. It consisted of a small shack that contained sacks of wild plants that had been harvested for traditional regional medicines. Western medicine is not accepted in these remote areas. Along a hazardous up-and-over route with fresh landslides and extreme drops we dropped down into the beautiful little settlement of Chebisia. Eagles circled above whilst yaks grazed around. At the far end of the valley was a dramatic mountain from

Rheum nobile on the mountainside and in the kitchen

which fell a sheer waterfall. It fed a shallow but wide river that meandered along the flat valley bottom, passing by the houses and providing fresh glacial water to its inhabitants.

In the distance I could see children playing and laughing. I dreamt what it would be like to grow up in such a remote and secluded setting, with no understanding of the rest of the world and its problems. Left alone to fend for yourself and to grow old with such a connection and reliance upon the valley in which you live and the nature by which you are surrounded.

Leaving Chebisia, another relentless climb took us into the clouds, then down into a dark and dense coniferous forest. The path twisted and turned below the dense canopy and the forest made me uneasy; it was like no other I had seen and reminded me of the remote areas where tigers had been filmed for the BBC documentary *Lost Land of the Tiger*. Tigers are known to frequent these high and remote forests because they receive very little, if any, disturbance from human beings.

The following day I was awoken by the sound of chopping wood and the smell of smoke. Fresh green branches of *Tsuga dumosa* were being burnt to release their strong coniferous scent and dense white smoke.

Lilium nanum

The horse man did this to appease the mountain deities and to ensure safe passage through the most remote parts that lay ahead. There was so much smoke that the whole valley became filled with haze. When it had cleared we saw two other visitors to the wild valley – Himalayan Black Bears. We stood and watched in awe as they migrated along the high valley side; they knew we were there, intruders. One retreated to a cave under a stand of conifers, the other sat outside staring down at us. These bears are predominantly solitary except during mating, when they become more territorial and pose a higher risk of attack. Our only route out of the valley led straight past them. Kesang and I first headed up the valley side, making lots of noise and giving as wide a berth as possible. We grew closer and my adrenaline began to flow; with no alternative route, this was our only option. Once within a hundred metres of the bear guarding its cave, it suddenly stood up and charged down towards us. I could clearly hear the thuds of its feet. We had agreed that if the bear were to charge we would stand our ground together as this is usually the safest option. However, I turned to Kesang and he had already begun to run so I turned and ran too. We escaped into dense *Rhododendron* scrub and scrambled up a very

Anaphalis nepalensis var. *monocephala*

Saussurea gossipiphora

steep slope of loose rocks. The dense vegetation hid the bear, but we could still hear it as it retreated. While clambering out of our sticky predicament I photographed some orchids for later identification.

As the ascent levelled out we met our first nomadic Tibetan yak herders, their tents perched at well over 4000 m. One was guarded by a Tibetan mastiff and the lady within did not want to interact. We came across another where a woman and child came to the entrance; this lady welcomed us with open arms, seated us, and showed us the traditional technique of churning yak's milk into butter. Her bucket was a hollowed-out trunk of *Pinus wallichiana* with a kind of plunger inserted into it. Nearing the mountain pass I spotted two men butchering a yak in a stream, a technique that keeps the flies off and washes the blood away. This is a rare sight because these nomadic communities only slaughter one yak per year. The meat is dry-cured and smoked over a fire; the hide is used for bedding and clothing, and no part of the animal is wasted. Above us were majestic but inaccessible *Rheum nobile*.

The next day began with a steep ascent and a long hard climb in thinning air and thinning vegetation. Here in the high alpine region we spotted fantastic alpine plants including *Lilium nanum*, *Saussurea gossipiphora*, *Anaphalis nepalensis* var. *monocephala* and *Eriophyton wallichii*. We I also glimpsed a small *Rheum nobile* high on the valley side. To reach it we needed to cross a fast-flowing glacial river.

Eriophyton wallichii

By the riverside a nomadic lady was collecting water. We went down towards her tent to say hello. She was a lovely person who invited us into her home, blackened with smoke and filled with curiosities. We sat together in the tent and drank yak butter tea. I took a photo of us with my phone; she said it was her first photo and the first time she had ever seen a camera. I was humbled by her presence; she had such a lovely character. We showed her a picture of the *Rheum nobile* and asked if she had seen any better specimens? Yes – if we went further up the valley we would find them. Higher still we turned a corner into a plateau with steep rocky mountain sides; it was spectacularly filled with *Rheum nobile* of all shapes and sizes. Surrounding the *Rheum* was flowering *Meconopsis grandis*. The two plants complemented each other in an otherwise almost barren landscape. After this we crossed the highest mountain pass of all at 5005 m. The ascent was hard, but the descent was even harder.

Nearing the end of our trek, we woke early on our next to last day in the mountains and admired the surrounding meadow: it was the last I would see. Our route now trended downwards into the dense forested valleys that came with the lower altitudes. We passed through coniferous, temperate and mixed forests towards the remote mountain settlement of Laya. This village, the highest permanent community in Bhutan at over 3000 metres, is unique in appearance because of traditional dress, and its people have been living an unspoiled lifestyle for centuries.

The first photo ever taken of this nomadic yak herder

These folk were banished from Tibet long ago when they were blamed for livestock plagues and crop failures, and migrated over the high mountain passes. It is said that when they set eyes on their present beautiful valley, they chanted "*Laya*", subsequently the name of their village.

The houses were of a traditional Bhutanese style but the people were dressed very differently. The women had conical woven bamboo hats and jumpers made from black yak wool. They wore beaded necklaces and other jewellery. Cows, horses and yaks roamed freely while the men and women worked the fields. A lot of time is also spent collecting Chinese medicines such as the intriguing *Ophiocordyceps sinensis*, which consists of a parasitic fungus and its unfortunate host the Ghost Moth larva. This ancient medicine has been used for over two millennia by the Chinese and Bhutanese to treat heart, lung and liver diseases. With pouring rain, the ground was so wet that there was nowhere to camp. We set about knocking on doors and eventually a very kind lady welcomed us in and offered us a room for the night, and a warm meal. Ironically, after our searching on mountainsides to find the *Rheum nobile*, she had one in a vase on her windowsill.

Our last day started as usual by loading the horses with all our gear. We said our goodbyes and I took a few black and white pictures of some of the villagers, one of whom gave me one of the traditional bamboo hats as a parting gift. I cherish it dearly as my favourite possession. Going back down into the dense forests it was not long before we were stopped by a huge landslide caused by the heavy rain. The path and forest around it had vanished. We navigated precariously across the steaming soil. In all, we must have traversed five or six landslides before we confronted the biggest of all. To cross it we had to jump into a raging glacial river and wade

up to our waists in the freezing water. The horses refused to cross so we had to turn back and use machetes to cut down trees to fashion a path across the crumbling earth. It was a great piece of team work and worked successfully. But it wasn't long before the heavy rain began again. The path became harder and harder to walk on and large cracks revealed themselves parallel to it – sure signs that the earth could give way at any moment. It was still too wet for us to set up camp anywhere, but the horse man knew of a solitary household hidden in one of the valleys. When we found it, we were welcomed by its lovely family, and once again we were offered a bed and a warm meal.

We woke early, thanked the family and headed off for the end of the adventure. As we walked on towards civilisation, I thought back through the fantastic and terrifying moments that we as a team had shared along the way. The horse man, the cook, the guide and I had become a close-knit team. Eventually, in the distance, we could see civilisation – we had done it! We completed over 156 kilometres along the Bhutan-Tibet border, through some of the roughest terrain I had ever experienced, the most magnificent scenery I had ever seen and the home of a huge and diverse flora. To date this adventure is the greatest achievement of my life. It genuinely was a life-changing experience and one I will never forget. It makes me want to explore the whole of Bhutan, the whole Himalaya.

I am immensely grateful to the SRGC and its Exploration Fund for their help in making my wonderful adventure possible.

The monastery of Paro Dzong

The Scottish Rock Garden Club at *Gardening Scotland*, 2018

Stan da Prato

The dedicated little team of SRGC volunteers won a Premier Gold award from the Royal Caledonian Horticultural Society at the 2018 *Gardening Scotland* show at Ingliston, near Edinburgh. The club is proud of the tireless efforts of Rob, Stan, Peggy, Ian, Richard and Sandy and is grateful to the others involved in lending plants for the display. The show ran for three days and our friendly members were on hand throughout to answer questions from the public on the plants and the club.

Our exhibit featured plants suitable for woodland, sunny scree and other garden positions, together with a feature of planted troughs to exhibit plants and give ideas about how they might be grown in combination with each other even in tiny spaces.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Love 'em or Hate 'em: Umbellifers in the Garden

Diana Pooke

After years of gardening I have realized that some of the most under-rated and under-used plants belong in the Apiaceae (the carrot family, or umbellifers as they used to be called). Other than in the vegetable bed (Carrot, Parsnip and Celery) and in the herb garden (Fennel, Dill, Coriander and Parsley), they have been largely ignored or snarled at by gardeners because of their self-sowing tendencies – their offspring spring up everywhere! It is a pity to condemn the whole family on account of a few black sheep, because it is large, diverse and includes such popular garden plants as *Astrantia* and *Eryngium* – neither of which looks at first sight particularly like a typical umbellifer.

Umbellifers, mostly the herbs, have been important to Mediterranean civilizations for over two millennia. Dioscorides mentioned over four dozen species in an early Greek herbal, and Dill and Cumin are famously referred to in the Bible as a means of paying taxes. They remain important herbal remedies in Asia and India, and their specific chemical constituents are widely used medicinally worldwide.

Despite reminders in gardening books that these plants only belong in naturalized and wild areas, I really find them quite ornamental and well worth the effort of grubbing out the seedlings that appear in places where I don't want them. I constantly remind myself that I shouldn't be so arrogant as to condemn a nice plant because it is successful.

I love that umbellifers are wild-life magnets. A joy of my garden is watching caterpillars of the Eastern Black Swallowtail on the Bronze Fennel, *Foeniculum vulgare* 'Purpureum'. Enormous numbers of small insects are attracted and bees, wasps, beetles and butterflies all gravitate to them. The reason is that larger insects can land on the flowers and pollinate them. They may also consume smaller and herbivorous insects. The umbellifers attract certain insects with nectar from their large stylopodium. Some even produce strong scents to mask insect pheromones, deterring them from the plants. The ability to deter harmful

Angelica pachycarpa
(Portuguese Angelica)

** A version was first published in the Journal of the Ontario Rock Garden and Hardy Plant Society*

insects while attracting helpful ones may benefit other nearby plants, so umbellifers are often used as companion plants to other crops. Some of the Apiaceae support various of the Swallowtail Butterfly species. The butterflies lay their eggs on the plants and the larvae use them as host plants while they mature. They are even able to live on and consume the poisonous hemlock species, because of their remarkable ability to detoxify the poison in the plant.

I have been fascinated, not to mention somewhat alarmed, by a yearly invasion of an oblong orange beetle, hundreds of which descend on my eryngiums for a bit of rumpy-pumpy. I have worked out that they do not in fact harm the plants, so I ignore them, reckoning that, at the very least, they probably make good bird food. Resorting to a Google search, I find they are (I think) Soldier Beetles, in which case they are 'Good Guys' that consume other peskier insects. What a relief!

The most distinctive feature of the family is their umbrellas of flowers, best illustrated by the ubiquitous Queen Anne's Lace that adorns many of our roadsides; I have spent endless hours trying to weed it out of our garden. A typical feature is a deep tuberous rootstock adapted to well-drained and sandy soils. The self-sown seedlings are difficult to remove because of these tap roots, leading to a love/hate relationship as we gardeners constantly try to weed the myriad of baby Fennel, *Eryngium* species, and Parsley. Many are highly aromatic, such as Sweet Cecily, Fennel and Dill. This has led to their cultivation as herbs, while some have a chemistry that led to use for medicinal purposes; for example, asafoetida was used for breathing and digestion problems. Many, such as Bronze Fennel, Dill, *Anthriscus*, *Chaerophyllum*, and *Myrrhis odorata* (Sweet Cecily) have finely cut and aromatic foliage. Those such as *Eryngium*, *Ferula* and *Foeniculum* prefer sunnier and drier situations .

Propagation

Self pollination is inhibited in many species by the stamens of the individual flowers maturing before the pistil, but the wide range of stages within an umbel commonly results in cross-fertilisation between closely adjacent flowers. Interspecific hybrids are almost unknown, and this poses a serious problem for breeding programs within the family.

One of the most infuriating things about umbellifers is that they

Cenolophium denudatum
(Baltic Parsley)

self-sow freely but often germinate slowly under artificial conditions. After trying unsuccessfully for three years to start Sweet Cecily early indoors, I just threw some left-over seed into the garden. A year later there was a sea of seedlings coming up!

Seed is best sown as fresh as possible from summer to autumn. If sown later in the year the seeds benefit from several weeks of warm (15° to 20° C) and moist conditions before going outside over winter. Germination normally occurs in spring following spells of milder weather, after the seed has experienced a sufficiently long cold period below 4°C. Older seed is erratic in germination but retains greatest viability if stored in low humidity in the refrigerator (see Timothy Ingram's *Umbellifers*, published by the Hardy Plant Society). Light also seems to be beneficial for germinating many members of this family.

Many umbellifers are tap-rooted and do not lend themselves to easy division (*Astrantia* is an exception). The tap-rooted members such as *Eryngium* may be propagated by root cuttings when they are dormant.

Some Favourites from the Apiaceae

Angelica: my only complaint about these gorgeous architectural plants is that they are biennial and in my heavy soil they do not self-sow easily. However, they are worth my spasmodic efforts to try and make them permanent members of the garden. The deep purple of *Angelica gigas* and the pure presence of *Angelica pachycarpa* keep me trying.

Astrantia (Masterwort): these are lovely species for partial shade, although they do not look much like umbellifers. They are plants for light woodland, often over calcareous soils. Although acquired as *Astrantia major* 'Roma', mine is rather a pale pink, but still very lovely.

***Anthriscus sylvestris* 'Ravenswing'**: the mounds of deep purple foliage and white flowers of this almost make it worthwhile weeding out the many seedlings; by only retaining those with the deepest purple foliage, and dead-heading before it goes to seed, it may be kept as a useful member of the shade garden.

Astrantia major 'Roma'

Margins: Eastern Black Swallowtail caterpillar

Myrrhis odorata (Sweet Cicely): this species displays mounds of ferny foliage and wonderfully aromatic leaves (anise scented). It has the most beautiful seed heads in shiny black clusters. I got my original seeds from Keppel Croft garden near Wiarton, Ontario.

Selinum wallichianum (previously *Selinum tenuifolium*): this is a lovely plant that you rarely come across in the garden. It has taken up residence in the hot dry gravel along my driveway, and with a yucca, providing mounds of beautiful ferny foliage before it flowers in late summer. It is long-lived, carefree and absolutely beautiful. E A Bowles called it the *Queen of the Umbellifers*. It has all the self-sowing attributes of the family.

Eryngium (Sea Holly): the sea hollies thrive in well-drained soil in full sun. Although I have grown the spectacular *Eryngium alpinum* several times, it has not proved to be a long time survivor. However, *Eryngium* x *tripartitum* and *Eryngium amethystinum* have turned out much more successful and enduring (if, unfortunately, self-sowing). *Eryngium giganteum* has also proved miffy. It is said that Ellen Willmott used to strew the seeds in all her friends' gardens, which is how it got the name of 'Miss Willmott's Ghost'. I wish her ghost could come and strew some in this garden because I have struggled with this plant; it seems to rot in winter in the heavier soil.

There are lots of other worthwhile members of this family and many that are grown as herbs and vegetables make highly ornamental plants. For example, I discovered that parsnips make lovely perennials. Being very fond of them as a vegetable in stews, roasted, boiled or mashed, I planted a row in the rather heavy clay of my vegetable bed. Under those conditions they never went nuts but they seeded politely around and provided me with tall and magnificent plants that were definitely ornamental in nature. This was just as well because the soil clearly did not favour the production of the fat and significant roots that I had hoped for – the reason for growing them in the first place.

Soldier Beetles on *Eryngium*

Alpines on Bjelašnica Mountain

Džana Bordanić

The mountain of Bjelašnica sits south-west of Sarajevo, the capital of central Bosnia and Herzegovina. It lies in the Central Belt or High Dinaric Alps with a predominantly northwesterly-southeasterly direction. To the North are the highland areas of Mounts Igman and Ivan, while the rivers Rakitnica and Neretva run along the south and west borders respectively. After the siege of Sarajevo from 1992 to 1996, some parts of the mountain were dangerous on account of the mines left by the war. However, numerous trails are now maintained by local mountain clubs and lead up the mountain to the higher peaks. Being quite close to Sarajevo, there is considerable recreational use of the mountain, with many people enjoying hiking, skiing, mountain biking and paragliding. The highest point is at the Observatory (2067 metres), where the weather station was built. The area has the biogeographic characteristics of the Holarctic, Eurosibirean-boreoamerican and alpine-high-nordic realms. It is a very heterogeneous region where habitats are determined by several different parameters: topography, geology and soils, climate, vegetation, landscape types and biodiversity.

Among the many types of ecosystems at Bjelašnica, I have been researching the high mountain zones such as alpine grassland, snow patches, alpine screes and rock crevices. These are very specific systems each with strongly characteristic climate, low temperature, snowy winters, strong winds and only short periods of growth for vegetation. Despite such harsh conditions these areas are habitats for endemic, relict, rare or endangered plant species and are also very well known for their high level of biodiversity.

Vaccinium myrtillus

Snow patches on *Bjelašnica*

I have worked in the three usual ways: literature, field survey, and laboratory processing of my data. The basis of my field research was to use a phytosociological approach. In the laboratory, I identified species, made analytical and synthetic tables, analysed statistically, determined the floral elements, and checked the IUCN (International Union for the Conservation of Nature) conservation status according to the Red List of Vascular Flora for the Federation of Bosnia & Herzegovina.

The alpine grasslands on Bjelašnica lie above the tree line of the Mountain Pine, from 1600 to above 2000 metres. The underlying geology is limestone-dolomite and the soil is a characteristic organic-rich calcareous material (calcomelanosol). I discovered a huge number of species around these grasslands, including: *Arctostaphylos uva-ursi*, *Erica herbacea*, *Juniperus communis*, *Vaccinium myrtillus*, *Vaccinium*

Antennaria dioica *Gentiana verna* *Anemone narcissiflora*

Potentilla aurea

vitis-idaea, *Acinos alpinus*, *Alchemilla hybrida* syn. *Alchemilla pubescens*, *Alyssum alyssoides*, *Alyssum montanum* ssp. *scardicum*, *Antennaria dioica*, *Anthyllis vulneraria* ssp. *alpestris*, *Centaurea montana*, *Cerastium rigidum*, *Euphorbia montenegrina*, *Globularia cordifolia*, *Hieracium glaucum*, *Hypericum alpestre*, *Knautia arvensis*, *Linaria vulgaris*, *Luzula campestris*, *Ornithogalum umbellatum*, *Ranunculus acris*, *Satureja montana*, *Scabiosa leucophylla*, *Sedum magellense*, *Thymus balcanus*, *Veronica saturejoides*, *Viola zoysii* and *Cetraria islandica* (a moss).

Primula veris ssp. *columnae*

Soldanella alpina

Veronica saturejoides

Around the snow patches that alternate with the alpine grassland, little ecosystems have developed at altitudes from 1800 to above 2000 metres. They have a northern exposure, and are found at the bottom of depressions where the snow lies for a long time. Their soil is a shallow and basic black earth, called buavice. The plant species I found around these snow patches were *Salix retusa*, *Soldanella alpina*, *Viola zoysii*, *Veronica aphylla*, *Veronica saturejoides*, *Euphrasia dinarica*, *Gentianella crispata*, *Homogyne alpina*, *Ranunculus montanus*, *Gentiana verna*, *Crocus vernus*, *Plantago atrata*, *Carex laevis* and *Alchemilla alpina*.

Vertical clefts and crevices in limestone on Bjelašnica

Euphorbia myrsinites
Gentianella crispata

In the vertically profiled rock crevices in the sub-alpine and alpine zones of Bjelašnica, the geological substrate is a limestone with very shallow and poorly developed soils. Some specific plant species (chasmophytes) with endemic and relict character grow in the fissures of the limestone. I found *Asplenium ruta-muraria*, *Asplenium trichomanes*, *Saxifraga adscendens*, *Asarum europaeum*, *Sedum magellense*, *Hieracium glaucum*, *Dianthus deltoides*,

Asplenium ruta-muraria
Ceterach officinarum

Euphorbia montenegrina, *Ceterach officinarum*, *Urtica dioica*, *Acinos alpinus*, *Alyssum montanum* ssp. *scardicum*, *Arabis alpina*, *Galium anisophyllon*, *Vaccinium vitis-idaea*, *Arenaria gracilis*, *Asperula hercegovina*, *Cerastium dinaricum*, *Euphorbia montenegrina*, *Euphrasia dinarica*, *Micromeria croatica*, *Minuartia bosniaca*, *Saxifraga blavii*, *Scabiosa silenifolia*, *Scrophularia bosniaca*, *Silene sendtneri* and *Veronica saturejoides*.

On the screes

Cerastium dinaricum

Thlaspi species on scree

Helleborus hercegovinus

The scree ecosystems of the mountain are associated on steep slopes with those of the rock crevices, and on less steep terrain they merge into the Alpine grassland. Despite the extreme temperatures, unstable substrate and shallow soil (regosol), this is natural habitat for various plant species, most of them with endemo-relict status. One of the most preserved cirques on the northen part of the mountain is called Kotlovi. Here and elsewhere I came across *Veronica montana*, *Silene marginata*, *Senecio rupestris*, *Galium anisophyllon*, *Euphorbia cyparissias*, *Cardamine glauca*, *Alchemilla hoppeana*, *Achillea abrotanoides*,*Cerastium dinaricum*, *Gentiana lutea* ssp. *symphyandra*, *Minuartia bosniaca*, *Ranunculus scutatus* and *Scabiosa silenifolia*.

Valeriana montana

Hot air ballooning over Bjelašnica
Facing: *Dactylorhiza sambucina*

These high mountain environments play important roles in providing cultural services such as recreation, mental & physical health, tourism, landscape, aesthetic experiences and spiritual values. However, all these functions may be endangered and degraded by climate change and its associated extreme temperature variations, by habitat conversion, and by excessive development.

Because of the high diversity of geomorphology, biological forms, habitats and hydrological aspects of this area, as well as the opportunities and pressures of ecotourism, it should be given the status of a National Park as soon as possible. An initiative for establishing the Igman-Bjelašnica-Treskavica-Visocica National Park dates back thirty years but – unfortunately – lack of awareness, incomplete environmental protection measures and the complexities of administration leave this area still unprotected and sensitive.

Diary of a Landscape Architect

Ngaire Burston

I am not from a typical background in horticulture – even if one exists. I neither work daily with plants nor research their habitats and study their behaviours. I am a landscape architect, and planting is but a limited aspect of my industry. I consider myself very lucky in being a student of the University of Sheffield, where experts such as James Hitchmough and Nigel Dunnett are in the public eye. Three hours of planting lectures have never been so enjoyable or informative, as when seeing pictures flash across the screen of a meadow in Kazakhstan, a desert in South Africa or a rocky hillside in China. In the summer after my second year I was awarded an opportunity that snowballed into the expedition documented here. I was able to research and redesign a rock garden on the southwest edge of Sheffield, Whinfell Quarry Gardens. Through this project I met and worked alongside the team from Kevock Garden Plants, near Edinburgh, in summer 2015; six months later I was invited on an expedition to China with four other young horticulturalists. Finally, I had a chance to see for myself what had inspired these great plant designers and their passionate lectures.

On the tenth of June I had my final exhibition of university work, the culmination of three years of study and hard effort, and I said goodbye to friends I had made for life. On the eleventh I left for China, a few days later than my fellow expeditioners. I set off to the airport, alone and having never left Europe, ready(-ish!) to jump in at the deep end and explore.

I set out on the expedition hoping I would gain greater knowledge of plants and their habitats; I was particularly interested in the genera Primula and Meconopsis. Stella & David Rankin had previously rediscovered species in the wild, such as *Primula bullata* in 2014. I had beforehand studied the work of plant collectors such as Clarence Elliott (1881-1969) but the

A meadow with *Primula beesiana* and *P. poissonii*

trip opened my eyes to the works of others, including Armand David (1826-1900) and George Forrest (1873-1932), bringing their discoveries back to life. I also hoped to learn about new concepts in design. Hitchmough and Dunnett encourage their students to look to the wild for inspiration, recreating habitats in what Hitchmough describes as 'new naturalism'. All the plants interested me, but we focused specifically on the genera Primula and Meconopsis. With a much higher capacity to cope in wet conditions they are suitable and practical for the Sustainable Urban Drainage Schemes (SUDS) that are becoming increasingly prominent in landscape and flood management because of the threats of climate change. Similarly, I hoped for a better understanding of the role of the landscape architect in China. Because China is developing at such a rapid rate, and with such very highly urbanized schemes, it was valuable to see the impact and mitigation of these changes, especially in Yunnan.

I wanted to develop a longer-term working relationship with other members of the group – which, I'm glad to say, I did. We made links with people in China with whom we hope to collaborate, share future projects and meet again for future expeditions. This all contributed to my improved knowledge of the processes of organizing an expedition, gaining grants, writing up field work and using GPS technology. My first couple of days were some of my favourites of the whole trip. On the first day we came across a meadow full of *Primula beesiana* and *P. poissonii*, the first I have seen. I remember the astonishing colour that shone up from a dip in the valley beside the road. The plants colonized around the damp areas, thinning where the land became drier.

Our second day at Ganheba was filled with walking and new discoveries. We set out in our vehicles to the northern end of the Yulong Valley where Lijiang sits. We walked from there up to the mouth of the valley; this sounds easy but we got slightly lost and had to regroup, go back and take a new path where, luckily, we didn't end up in the wrong place. It was all worth it when we reached the flat valley bed, created by annual flooding from the glacier above. The scale was indescribable. The valley walls seemed to reach up for ever above its floor, strewn with limestone, with the vegetated woody edges hiding gems of plants, from *Cypripedium flavum* to *Meconopsis delavayi* (see Peter Edge's account in *The Rock Garden 141*, pp 26-35). We walked in the sun and the rain and had a beautiful day. Eventually we reached the end of the valley, where it began to climb steeply in the shadow of the Jade Dragon Snow Mountain (Yulong Xueshan). We were far away from anyone else. It really hit home that we were in a phenomenal place, able to take in the scale of everything in China. Here you can truly be so far into the middle of nowhere – something that is very hard to find in Britain. We explored the woodland beside the scree, at last finding the orchid *Phaius delavayi*, a plant that our contact Xiao Wu from Lijiang Field Station had not seen here before.

Phaius delavayi (Photo: Peter Edge)

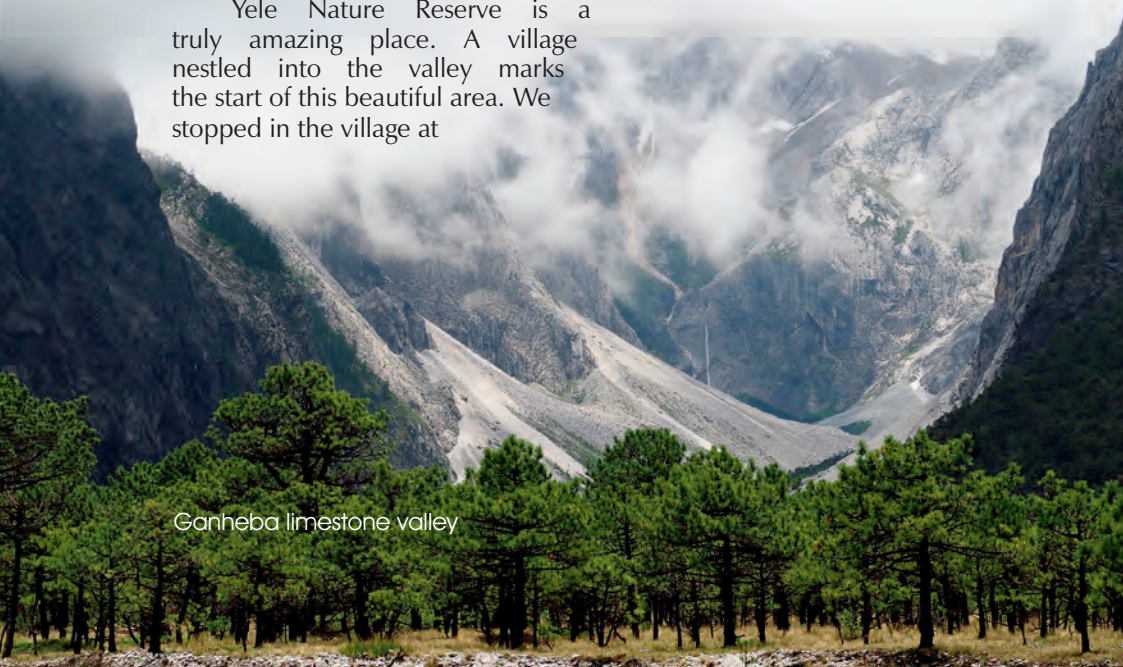
We returned down the valley floor, which turns into a river whose scale completely confuses me ... where can so much water come from to fill it? Apparently, it comes from the combination of the monsoon rain with the melting of snow and ice, both reaching their peak in summer. The amount of snow has reduced in recent years, perhaps because of climate change, and this has allowed trees to start growing on the flood plain. In a few years much of the valley may become forest. We walked down a slightly different way, seeing *Cypripedium tibeticum*, *Calanthe tricarinata*, *Ephedra likiangensis* and *Hemerocallis forrestii* along the way before finding our vehicles again. Then we were ready for our final night in Lijiang, where we went to the Old Town and experienced the true culture of the city; another amazing experience, just much louder and busier.

Travertine pools at Baishuitai

The drive to Lugu Lake was long and so we split it into two. Although much less plant-orientated it was equally as impressive, if somewhat alarming from a landscape architect's viewpoint. The natural travertine pools at Baishuitai are at a small village. There are proposals for expansion, adorning the entrance way with vast car parks, concrete and high-rise buildings, all unsympathetic and seemingly with no concern for the environment to be lost or the capacity of the environment to absorb the unprecedented numbers of proposed visitors. From the eyes of a landscape architect or even of most people, development in China is just unfathomable. The United Kingdom has many restrictions and regulations; although at times they are frustrating, we are lucky to have them to preserve some of our surroundings. China is obviously very different from Britain, as we have significantly less space and fewer people, but with seventy percent of China's population predicted to be in urban areas in the next twenty years the problems that demographic shift poses do not seem a world away. Whilst approaching the village at Baishuitai we stopped at a *Primula poissonii* meadow, which came right up to the road edge where water trickled into roadside drainage ditches. Beside the pools were other interesting plants that included *Epipactis* species and *Leycesteria formosa*.

We next moved on to Tiger Leaping Gorge (Hu Tiao Xia), where the Yangtze River passes between huge cliffs and falls dramatically; the roads became windier and the drops below steeper and longer. It was a truly impressive place, despite being hot and busy with tourists. It gave a definite sense of the power of Nature, with the water crashing unrelentingly through the dramatic gorge.

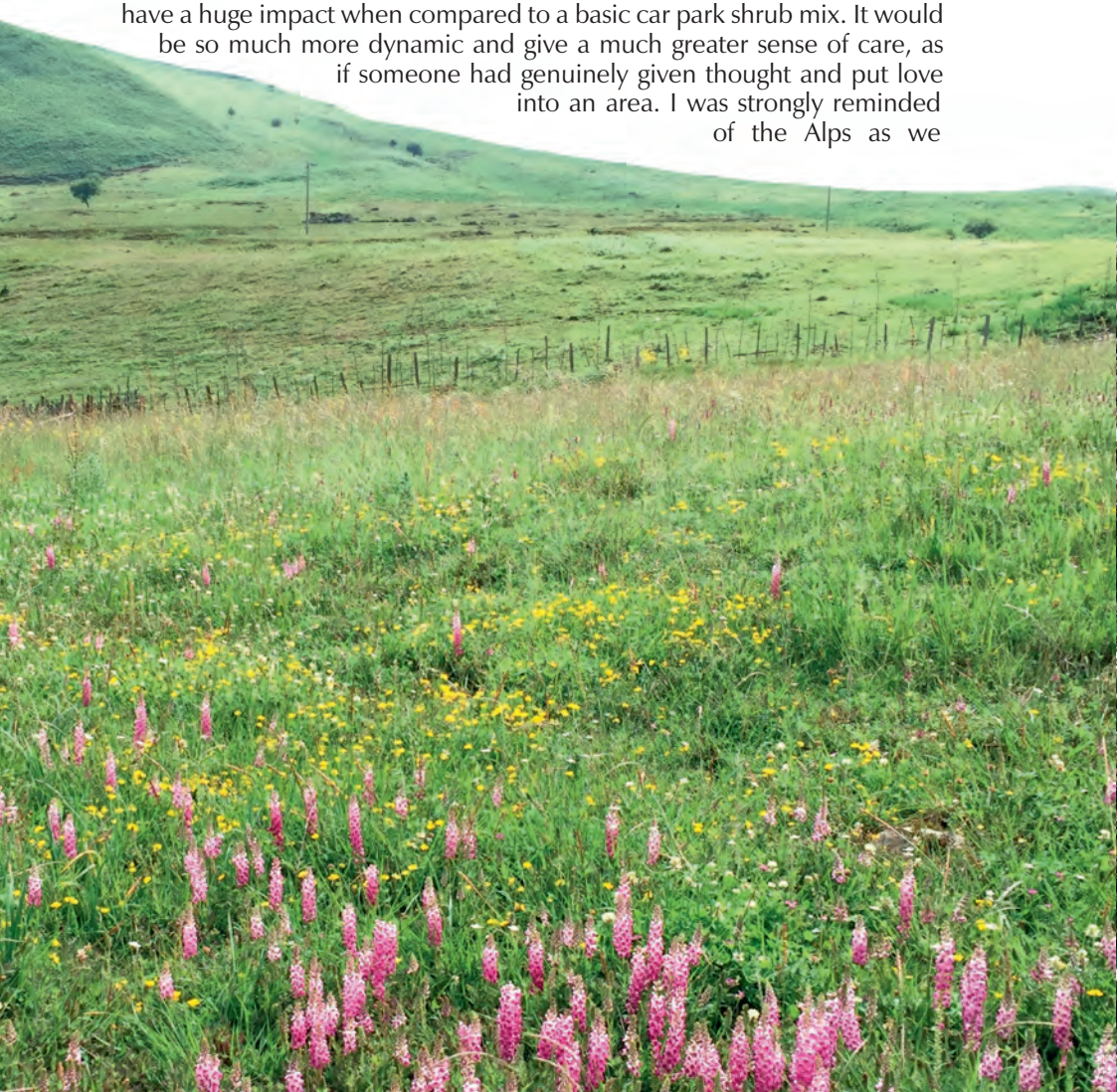
Yele Nature Reserve is a truly amazing place. A village nestled into the valley marks the start of this beautiful area. We stopped in the village at



Ganheba limestone valley

A *Pedicularis* meadow

a field earmarked for hay cutting, which held the most amazing meadows with *Pedicularis* species. The combinations of plants were delicate and beautiful, set in grassy meadows in the temperate zone. The colours were amazing. A farmer, somewhat befuddled by the fascination we had in the soon-to-be animal fodder, allowed us over the fence to take photos. For me personally this was an exciting find. I truly felt as if the slides in my university lectures were coming to life, seeing true natural planting combinations with my own eyes and feeling the inspiration that I could take from them. Meadows that occur naturally and the effect they could have on bringing them into a more urban and developed setting would have a huge impact when compared to a basic car park shrub mix. It would be so much more dynamic and give a much greater sense of care, as if someone had genuinely given thought and put love into an area. I was strongly reminded of the Alps as we



moved up the valley through the meadows and grazing cattle into a wooded gorge with glades of *Rhododendron* and *Philadelphus* species. We were on the look-out for *Meconopsis wilsonii* var. *wilsonii*, which we found scattered in a fabulous glade, reaching almost two metres high. The forest itself was a wonderful sight to see, the old trees towering up above the new growth. A truly amazing day of plant hunting.

Our day up the Zheduo Pass was amazing. We had a morning of stops along our drive and saw primulas including *Primula munroi*, *P. cockburniana* and *P. sikkimensis*, as well as *Meconopsis henrici* and *M. integrifolia*. We reached the top in rather inclement weather but went in search of the famous *Primula melanantha*, all of us slightly apprehensive; the valley seemed so industrial, as Ed Shaw described in his article (*The Rock Garden, 141*). The plant was scattered along hillside tracks above the road alongside

spectacular corydalis species. It seems understandable why mixed planting schemes are so successful because, they come straight from Nature. Plants take naturally to places that are best suited to them, giving swathes of colours and natural combinations born from this adaptation and colonizing.

After taking countless photographs we rejoined our drivers, who suggested a different route back to Kangding, where we were staying that night. The roadsides came as a complete surprise. Alpine meadows adorned the rocky hillsides with combinations of *Lilium lophophorum*, *Anemone* and dwarf *Rhododendron* species, their colours and mixes so very complementary and so delicate, seemingly undisturbed apart from the minor issue of a road that cut through the centre, although little traffic seemed to pass this way. We drove on further, coming to a breath-taking viewpoint with *Rheum alexandrae* scattered along the hillside in the foreground and distant snowy mountains beyond. Further down the valley we came to another amazing *Primula* meadow on the edge of a small village. The combinations had the most remarkable effect along wet areas of land, interspersed with all kinds of other species, making a remarkable little haven.

Our day on Jiajin Pass was memorable for many reasons. The completely unexpected Brexit decision was slowly trickling through to our group, but our minds were taken off this at a roadside stop as we witnessed about ten Himalayan Griffons gliding through the sky. Everyone went silent watching these majestic creatures sailing round above us, making a truly special moment as we tried to take in the news from back home. We drove on a little further, still in awe at what we had just seen, before coming across a phenomenal meadow mix – *Paeonia veitchii*, *Primula sikkimensis*, species of *Veratrum*, *Pedicularis*, *Euphorbia*, and much more; this was possibly the best meadow we saw on the expedition. Despite numerous leeches that attached themselves to us, we returned to the vehicles in awe. Driving further into a belt of mist and fog, the increase in altitude made the weather much colder. Suddenly, we all came to a halt: a huge swathe of red *Meconopsis punicea* was blowing on the hillside in the mist and wind. It was very atmospheric when interspersed with *Paraquilegia anemonoides*, *Meconopsis balangensis* and *Meconopsis punicea* var. *alba*. I felt lucky to see them on such an impressive scale and shared the excitement of Stella & David in their seeing such quantity and condition for the first time.

The second day we spent on Balang Pass was dominated for me by the planting combinations that we saw. A woodland edge just near the roadside had species of *Veratrum*, *Iris* and *Meconopsis*, and there were *Primula polyneura*, *Aconitum hemsleyanum* and *Corydalis pseudobarbisepala*. The colours were so vivid and jumbled that it almost felt as if it had been designed. The second combination came in a meadow amongst rocks and scree with its grass kept low by grazing. The combinations again had the most amazing colours and comprised exciting species: *Cypripedium tibeticum*, *Lilium lophophorum*, *Omphalogramma vinciflora*, species of *Fritillaria*, *Anemone*, *Caltha* and *Veratrum*, with many orchids and ferns. We stopped once more at the top of the Balang Pass. The roads make everywhere so accessible but the rubbish beside them is so worrying and concerning, especially when combined with so many special plants only metres away down the hillside.

I landed home tired, hungry and shocked that just 48 hours earlier I had stood on a mountainside, miles from civilisation, with seven people who had become my true friends, laughing at jokes, marvelling at our surroundings and realising how special our trip had truly been.

This is the fourth 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, Ed Shaw (issue 139), Graham Gunn (issue 140), Peter Edge (issue 141) and Ngaire Burston (this issue). Readers who would like to see a map of the areas visited should look at the map presented in issue 139.

Miniature Daffodils

Keith Blundell

I write to tell you about advances in the world of miniature narcissi and to mention a few alternatives, in the hope of increasing the variety of types that are grown. I hope this will be a quick and useful guide to what is available now or in the near future.

These bulbs have become popular with enthusiasts who grow daffodils as well as those who favour *Narcissus* in flower shows. At present a lot of important work is under way, with Anne Wright, Brian Duncan and John Gibson working in this country, the Freys and Steve Vinisky in America, and Rod Barwick in Australia, although this is by no means an exhaustive list of what is going on. I concentrate here on hybrids because the species list, as well as the genus, is undergoing revision on several fronts. Having glanced at these it looks like we in for some lumping, and also for the renaming of several well-loved species.

I start with bulbocodiums. A lot of work has been done here with the release of Rod Barwick's 'Detective' series: 'Kholmes', 'Smarple', 'Spoirot' and 'Mitomoto' (the first reverse bi-colour bulbocodium of this group). I grow 'Mitimoto' and it seems quite happy in normal pot conditions. 'Spoirot' I at first found a little difficult to flower but it now seems to be flowering properly. Possibly the biggest advance has been in the hexaploid cultivars bred by Walter Blom in Oregon, who crossed, re-crossed and selected the best bulbs such as 'Classic Gold', 'China Gold' and 'Oxford Gold', all of which are strong-growing plants. Another that looks worth having is Brian Duncan's 'Limey Lass' with its green-yellow colouring. I wonder if some of the others may in time find their way into the catalogues.

It was evident in 2015 in our local garden centres that several cultivars had been added to the usual selection of 'Hawera', 'Minnow' and 'Sundisc', with 'Scabrosa' and 'Little Gem' listed as new to that section, implying that they are being grown in larger numbers. The time between the naming and the introduction of a new cultivar has shortened, thanks to the introduction of twin-scaling and chipping. As example, you need only know that all 'Jetfire'

Above: *Narcissus* 'Oxford Gold'

emanate from one bulb's being imported from Grant Mitsch; it was then chipped until natural increase took over. The miniatures I mention are spread across all divisions but are more prevalent in the higher divisions from 5 to 9 (a look at a good bulb catalogue will explain the classification system and colour coding). The lower divisions have some new cultivars coming along together with some old favourites. 'Gipsy Queen', a division 1 bi-colour, is now being used together with 'Candlepower', while another - 'Jim Lad' - is proving to be a very popular favourite for showing. Turning to the higher division '*triandus*' hybrids, a rare one from New Zealand is 'Dainty Monique'; my own bulbs split after flowering, a typical behaviour for this variety. Nevertheless, after repotting in 2015 they have grown to full size. The other '*triandus*' hybrid is 'Angels Whisper' which to me always seems a little undersized but has two or three flowers on a stem.

Narcissus has produced many hybrids over the years; some have become firm favourites and there are more on the way. Two that seem to be attracting attention are 'Englander' and 'Hummingbird'; both are sturdy growers and increase well. The other favourites are 'Mitsy' and 'Snipe'. 'Mitsy' may become more popular after winning a Farrer medal last year but a little caution is needed as there is some miss-naming of these two, despite which both are worth growing. It is in the jonquils that we find the most miniatures and many of those which have appeared are becoming firm favourites. One I particularly like is 'Medway Gold' - still a little expensive but it grows and increases well. Rather than 'Sundisc', I prefer 'Little Sentry', as being a bit more refined, or 'Sundial' - a nice twin flower which comes a little later. For those of you who like something a bit unusual in this section you might try 'Edged in Gold', scented with three to six flowers per stem, all creamy white with a vivid yellow margin. There are people who like to grow something different and this might be catered for by Brian Duncan's 'Galantoquilla' group that resulted from a cross of *Narcissus lagoi* and *N. jonquilla*. As David says, '*they flower and look like snowdrops*', so you can have white and yellow at the same time.

My cultivars, apart from a few exceptions, are grown in the North-East of England in a bulb frame 4.20 m x 1.50 m where the bulbs are in clay pots plunged in 20 cm of sand. One last thing I can recommend with bulbocodiums is to grow them next to crocus, because their growing cycles coincide roughly. When they die down, a false side may be fitted to the frame to keep them dry but the rest grow on naturally before being covered for their summer baking.

Highland, 28 April 2018

My first year as show secretary! It is always worrying taking over something that has been well run and successful. At least Carol & David Shaw left me with a well-established structure and clear records to enable me to work out the tasks I had to take on. Not least, is the need for a team of willing helpers. Much as I hoped, members of the Highland and Moray rock garden clubs rallied round to help in all the areas needed to make the show a success. My grateful thanks go to everyone for doing such a great job. I must also include thanks to the Nairn Athletics Club for doing such a good job with the catering.

When everything is in place, there is still the worry of whether there will be enough entries to make a good show. My heart sank when I learned that Stan da Prato would be unable to attend with his 'tardis' full of plants. His usual contribution to the overall effect made by the full and colourful benches is significant. Additionally, show secretaries and exhibitors throughout Scotland will have missed the contribution made by Hamish Mackintosh. In 2017, Hamish won the Rutland salver (awarded for the highest aggregate of section II first prize points in SRGC shows in a year). Very sadly, Hamish died in March 2018. His contribution to our show and to the Highland Rock Garden Club will be very sadly missed. However, local exhibitors excelled, much as we have come to expect. section II was again very well entered, with almost as many entries as section I. The judges commented that many of the entries would have held their heads high in section I. There were still quite a few entries from further afield, despite a particularly difficult growing season. The honours went to plants from all over Scotland and deservedly so.

It is very reassuring when the judges pick out as many as six plants as contenders for the Forrest medal. It is an interesting privilege to witness their deliberations, knowing that even to have been considered means the plants must be of an excellent standard. Judges are quite willing to withhold any award if they deem no entry is good enough: the eagle-eyed amongst you will have noticed several classes that had no first prize awarded. Eventually, David Millward's *Saxifraga* 'Snowcap', took the *Best in Show*. I did not attempt to estimate how many flowers it had, but the even mound of white was quite beautiful!

Other excellent plants included *Narcissus* x *cazorlanus* exhibited by Carole & Ian Bainbridge, gaining them the Askival trophy for best bulbous exhibit. It was a mass of flowers and several visitors commented on the great number of bulbs in the pot, and on how evenly they were flowering. The exhibit really emphasized the differences between 'normal' spacings used when planting bulbs in the garden and the need to 'crowd' bulbs into

the pot when growing for showing. Francis & Margaret Higgins always come down from Berriedale with some excellent plants, this time winning them a certificate of merit for a lovely *Bolax*, the Culloden cup for best *Primula* with *P.* 'Lismore' and the Highland trophy for most points in Section I, with a total of thirteen firsts and 660 points.

Jimmy Macdonald, another local plantsman, again thrilled visitors with some of his lovely plants. He won the George Roslyn-Shirras trophy for most points in section II and was also awarded his second bronze medal for more than 20% of section II points. Tina Finch confirmed her prowess as a grower with an amazing specimen of *Sanguinaria canadensis* 'Flore Pleno', which won best plant shown by a member of the Highland and Moray groups and won her a certificate of merit). She also had the Dunbarney salver for best plant in section II with her lovely pot of *Fritillaria meleagris*. It is nice to see a relatively ordinary plant being recognized; rarity is not always an essential character! How Tina kept the *Sanguinaria* in such good condition for so long baffled many, including me. Normally, even too severe a glance at it results in its shedding all its petals.

My thanks and congratulations go to all who took part. They did themselves and us proud!

John Owen

Glasgow, 5 May 2018

For some years the Glasgow show has been much enhanced by our friends from the south: George Young, Brian & Shelagh Smethurst, Lionel Clarkson, Tommy Anderson, Tom Green, Ian Kidman and others. 2018 was no exception and all went home with prizes but it was Ian who won this year's Forrest medal with his excellent *Cassiope lycopodioides* 'Beatrice Lilley'. Ian also won the Henry Archibald Challenge rose bowl (first in class 2, 3 pans alpines), the Diamond Jubilee (class A, best 6 small pans) and the 75th Anniversary prize for

Benthamiella patagonica (Sue Simpson)

the best small pan in the show and in this case another cassiope, *Cassiope lycopodioides* 'Rokujo'. If only the cassiopes in our soggy west coast garden were to look as good as these! Not unexpectedly, Cyril Lafong did well in winning the William C Buchanan cup (first in class 3, 3 pans alpines, new or rare), the Joan Stead prize for the best primula in the show – a perfectly grown *Primula henrici*, a certificate of merit for his *Lewisia tweedyi* 'Lemon' in class 40 and the Gothenburg trophy for the best plant grown from seed. The seed for his excellently grown *Jeffersonia dubia* 'Alba' was sown back in June 2003 but I am sure that Cyril's wait was worthwhile. There were two further certificates of merit, one to David Millward for his splendid *Saxifraga pubescens* 'Snowcap' and two to Sue Simpson for her *Saxifraga stolitzkae* and for her extremely floriferous *Benthamiella patagonica*.

It was great to see a fully functional Stan da Prato amidst us again. What an enthusiastic supporter of our shows he is with his Tardis-like vehicle and his generous photography, and he deservedly did well here at Milngavie. The Crawford Silver Challenge cup (most points in section 1), the William Buchanan memorial rose bowl (first in class 1, 6 pans) and the Edward Darling memorial trophy (1st in class 4, 3 pans

Facing: *Cassiope lycopodioides* 'Beatrice Lilley' (Ian Kidman's Forrest medal)
Cassiope lycopodioides 'Rokujo' (Ian Kidman)

rhododendrons) were all his. Watt Russell also won a trophy, the Ian Donald memorial trophy (best Scottish native plant) with a generously perfect pan of *Paris quadrifolia*. I did notice that Watt had several other successes including a first for his attractively presented *Erigeron aureus* 'Canary Bird'.

The best orchid in the show was judged to be *Calanthe brevicornu*, which earned Carole & Ian Bainbridge the Charles M Simpson memorial trophy. David & Stella Rankin presented an educational display centred upon certain hybrids of *Primula maximowiczii* and they were awarded a silver medal. Elspeth, John and Struan, from the Royal Botanic Garden Edinburgh (RBGE) put up an excellent display and were rewarded with a gold medal. Their support over many years has been very much appreciated by all who attend. Nurseries have also helped the success of the shows and this year were represented by Kevock, Hartside, Ardfearn and Rumbling Bridge. It was particularly pleasing to see that Hilary & Graeme Butler from Rumbling Bridge had brought along a favourite creation, *Primula* 'Bill Robinson'. Of course, we all know what really holds the Glasgow show together – it was good to find that our catering was up to its usual high standard, with thanks once again going to Katherine Cartwright and her dedicated team.

In another vein, section 2 has had its ups and downs but serves as an important indicator of members' attitudes. Of the 230 show entries, 42 were within section 2 – a heartening number indeed. Sue Simpson won the Wilson trophy for most points in Section 2. One of the section's enthusiastic supporters is SRGC's treasurer, Richard Green, who won a bronze medal for most points in the section.

It is impossible to cover every successful plant but a few entries that caught my eye included *Astragalus argophyllus* with its quiet beauty, *Primula petiolaris* Sherriff's form, Tommy Anderson's *Cyclamen persicum* 'Karpathos', the generously large pan of *Trillium grandiflorum* 'Flore Pleno' by Steven McFarlane, Ian Christie's *Erythronium revolutum* and

The editor offers a small prize for the most amusing caption to this image

Meconopsis integrifolia (Ian Christie)

his outstanding *Meconopsis integrifolia*. I do admit to lusting after Cyril's *Gentiana angustifolia* 'Rotling' but if I could have taken one plant away with me it would have been Alan Gardener's Painted Trillium, *Trillium undulatum*. This delightful woodlander grows in an area bounded by northern Georgia to Ontario and from Nova Scotia to Michigan. It is a difficult plant to source and a challenge to grow and therefore is a tribute to Alan.

Finally, we thank John Lee for his generous and long commitment to the Glasgow group and its show. He has been a very effective show secretary for the last twenty years, much of that with the excellent support of his good friend Bill Robinson. Thanks to Richard Green's volunteering for the role of show secretary, it looks as if we shall all enjoy a return to Milngavie in 2019.

George Watt

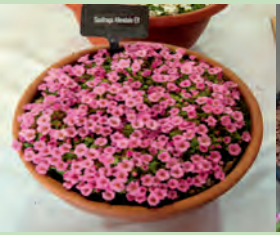
Trillium undulatum (Alan Gardener)

Stirling, 25 March 2018

When the Stirling show started in the early 1980s it replaced the SRGC's Dunfermline show, which had been abandoned with the dissolution of the group in West Fife. Hence the trophies from Dunfermline came to Stirling. Thereafter came the trophy names 'The Carnegie Dunfermline Trust Trophy', 'The Institute of Quarrying Quaich' and 'The Fife County Trophy'. Mrs Spillar, a former Stirling Group convenor who loved primulas, presented 'The Spillar Trophy'. Another local rock gardening enthusiast, Bernard Barker, who ran Ben Ledi Plants Nursery, presented 'The Ben Ledi Plants Trophy'. He asked that it should be presented to the 'Best European Plant in the Show'. Consequently, we decided that we should have a trophy for 'Best non-European Plant in the Show'; the Institute of Quarrying quaich was thus designated. Inevitably, the plant that won the Forrest medal would also win one or other of these trophies. Sometimes it challenges the judges to decide whether a plant is European or not! Thus, the best plant in Section I would receive a trophy. The exhibitor with 'Most Points in Section I' would receive 'The Carnegie Dunfermline Trust Trophy'. To encourage new exhibitors 'The Fife County Trophy' would be given to the exhibitor with 'Most Points in Section II'. Since the show attracts good entries of bulbs, local group member and past president of the SRGC, Glassford Sprunt, donated 'The Glassford Sprunt Trophy' for the 'Best Pan of Bulbs in a pan not exceeding 19 cm' You might ask, 'Why the restriction in pot size?' The answer is that 'This is what Glassford wants'.

This year the George Forrest memorial medal for best plant in the show was awarded to Cyril Lafong's superb pan of *Tecophilaea cyanocrocus* so, this being a Chilean plant, it also won the Institute of Quarrying quaich. Words are inadequate to describe Cyril's achievements at our shows. This win takes his total of George Forrest memorial medals to 58. Consider this for a moment: no-one has won as many as Cyril. That he can grow his plants, show after show and year after year, to a higher standard than all other exhibitors 58 times is astonishing. At all shows – and this Stirling show was no exception, other growers produce magnificent specimens but they rarely better his. Few members have won more ten Forrest medals. When they do they are awarded a silver Forrest. The club produced a gold Forrest to celebrate Cyril's 50th win. As he approaches 60 medals who would bet against his reaching 75 or

A dozen cushions at Kincardine


100? Is the SRGC investing in a wee chunk of gold or platinum? I am delighted that he still enjoys raising and showing a wide range of rock plants and bulbs to his high standards. In any class where his entry is beaten this is regarded as a major triumph by the upstart challenger. Well done Cyril! Like your plants you are *La Crème de la Crème*.

Ian Christie's pan of the yellow snowdrop, *Galanthus nivalis* Sandersii, was judged best European plant and consequently won the Ben Ledi trophy. Ian must be Scotland's premier galanthophile, or perhaps he is a galanthoholic? Yellow snowdrops are not easy to spot when growing in the wild among many 'ordinary' *nivalis* plants with green markings but when you see a panful like Ian's it takes your breath away. His clone produces strong plants, superior to some of the squinny forms in cultivation.

Primulas

Tom Green's fabulous *Primula megaseifolia* x 'Julia' was awarded a certificate of merit. This is a new cross to me – Turkish *megaseifolia* crossed with an old favourite, the low growing purple primrose of gardens, this is a superb plant with the floral appearance of a low-growing *megaseifolia* and the neat habit of 'Julia'. Nice one Tom!

Beautiful as Tom's primula was, it was beaten in the race for the Spillar trophy for best primula in the show by Anne Chambers and her petiolarid *Primula whitei* 'Arduaine' form. This Himalayan beauty with its soft powder blue flowers has been a favourite of mine since I first joined the SRGC. Because it sports a Scottish suffix it leads me to wish that with a bit of judicious form-filling it could be adopted as a Scottish native. Arduaine is a wonderful garden, south of Oban, which was rescued from neglect and overgrowth by the Wright brothers and is now cared for by the National Trust for Scotland. Both Anne's and Tom's winning primulas were in a two-pan class that Anne won with her *P. whitei*, paired with superficially similar *Primula nana*. Tom paired his with a small plant of *P. odontocalyx* but won the one pan Asiatic primula species class with another pink-flowered petiolarid, *Primula gracilipes*. The smallest primula in the whole show was Mike Dale's *Primula hoffmanniana*, and the Asiatic primula hybrid winner was Cyril's *P. whitei* x *bhutanica*.

Dionysias

In the early years of the show, few dionysias, cyclamen or androsaces were shown, so the Primulaceae classes were created to encourage members up north to grow more. Jim Watson won the two and three pan classes. His 3-pan showed the diversity of the genus Primulaceae with



Cyclamen coum, *Dionysia* 'Monica' (*D. curviflora* x *D. tapetodes*) and a *Primula allionii* raised by Brian Burrow. His 2-pan winners were another Brian Burrow *P. allionii* and a fabulous chrome-yellow *Dionysia* 'Bernd Wetzel' (*D. tapetodes* x *D. aretioides*). Tom Watson got his own back by winning the 1-pan Primulaceae class with his *Dionysia aretioides*, one of the first of the species to be grown and exhibited regularly on SRGC benches. The *aretioides* must have reminded Glassford Sprunt of his Forrest medal win many years ago with the same species.

Hepaticas

It is interesting how plants come and go in favour and fashion. When I started showing in the 1970s, both Asiatic and European primulas and then saxifrages were all the rage. *Fritillaria* and *Pulsatilla* afterwards came into vogue and caught the imagination. I surmise that the popularity of the plants we see in the shows is driven by specialist nurseries and that when a nursery closes its plants start to disappear until a new source is found. For this reason, it is important that growers maintain their plants in cultivation, especially the rarer species, propagate them regularly and pass them on to others who may grow them. One way to share is via the club's plant sales tables. This not only helps to secure plants in gardens but also reduces pressure on wild populations and helps the club funds.

Just now, hepaticas seem to be the flavour of the month, or perhaps several months if you get the right plants. One advantage to many people is that a large number of plants fit in a small alpine house. However, this simple idea is easily refuted when you see the pots needed by some of the big *hepaticas* plants shown today. Shelagh & Brian Smethurst won with their fabulous Japanese *Hepatica nobilis* var. *japonica* 'Gyousei'. It was also awarded a certificate of merit and was one of the plants that challenged for the Forrest medal with its wonderful cerise-pink flowers of a good size with a boss of yellow anthers, surrounded by piercing white stamens. You could hardly see a leaf! Two years ago, this plant won the Farrer medal at the joint SRGC/AGS show in Kendal. Described by Edrom Nurseries as being suitable for a trough, it is spectacular when grown in a cold greenhouse. Look out for it.

In its class, 'Gyousei' faced stiff competition from Jane & Alan Thompson's *Hepatica* x *media* 'Millstream Merlin', a deep blue cultivar raised by the late president of NARGS, Lincoln Foster, who lived in Falls Village, Connecticut. 'Millstream Merlin' has deep royal blue flowers with a central green to yellow boss and invisible or absent stamens. I liked the green bracts supporting the flower buds; they disappear behind open



flowers but reappear when the petals drop. Third in the class was Tom Green's *Hepatica nobilis*, which has big strong white flowers and excellent marbled foliage. In this class we had three fabulous hepaticas belonging to three species in three different colours, red, white and blue. The Queen would have been delighted. When you start to look at the smaller and younger plants in the show the diversity in flower form and colour can scarcely be believed. There is little doubt that hepaticas are on the up and up! Brian & Shelagh and Alan & Jane have shown us what can be achieved. I just hope when we see big plants of the varieties with intricate flowers that they do not lose their charm. In some cases, like show auriculas, the beauty lies in the delicacy ... a bit like your correspondent?

Pleiones have always entranced me. I love their delicate intricacy and colours. They may be be expensive (like hepaticas) but they multiply quite readily. Jim Watson won with his lovely pan of *Pleione* 'Shantung'.

Bulbs

The Stirling show has two 6-pan classes for bulbous plants, to encourage members to bring as many pans of bulbs as possible. One is for six pans of bulbs of 'different genera' and the other for 'bulbs distinct'. Winning both classes helped Stan da Prato towards winning the Carnegie Dunfermline Trust trophy for most points in section I. Stars of his dozen bulbs were *Corydalis* 'Beth Evans', *Crocus* 'Cream Beauty' and *Iris* 'Polar Ice'. The cold spring in 2018 caused some bulbs to flower just as they emerged from the soil as they would do in Nature when the snow retreats, whereas in Scotland in warmer years the same plants may grow tall and weak-stemmed. It is all a balance between light and heat. Peter Semple bucked the trend with big pans of the pale-yellow Caucasian *Iris winogradowii* and the yellow American *Fritillaria pudica* 'Richard Brittan'. Cyril Lafong's *Corydalis oppositifolia* was awarded a certificate of merit. The colour combination of yellow noses and long pink spurs is like *Corydalis popovii* in form and habit. Cyril's *Fritillaria gibbosa* was perfect, with its strong glaucous stems and leaves supporting open rich pink flowers with prominent nectaries on the outside of its petals. David Millward maintained his reputation for growing wonderful pans of bulbs, with a pan of strongly growing *Fritillaria aurea*.

While the judges were busy in the main hall, Matt Murray, dubbed *King of Bulbs* in his native Australia, gave a lecture on plants of Australia's Blue Mountains. This was the first talk I had heard on this area and I, like many others, will add a visit to the Blue Mountains Botanic Garden to my world trip when I win the lottery ...



Newcastle, 6 October 2018

The last of our joint shows in 2018 was held in the Memorial Hall in Ponteland under AGS rules. So, the premier award for the best plant and a Farrer medal went to the bright yellow *Empodium flexile* (above), a rather malodorous (in my opinion) member of the Hypoxidaceae family from Namaqualand in southern Africa, exhibited by Bob & Rannveig Wallis (Carmarthen). With 415 plants on the benches there was much to admire although, sadly, the number of entries in section II was disappointing. Overall there was a nice balance between flowers and foliage although among the latter autumn colour was a little sparse.

Maggie Duguid (Seaton Delaval), won both the Newcastle bowl for most points in Section II (3), and the Newcastle trophy for the best plant in section II, with *Saxifraga fortunei* 'Fumiko' (opposite). David & Liz Livermore (Barley) were awarded the Inner Eye and a bronze medal for the most points in section II (1, and 2). In the open section, Stan da Prato (Tranent) gained the Ponteland bowl for the most points, with entries that included many gentians and foliage plants.

Across the sections, foliage plants included impressive displays of ferns, large pans of Crassulaceae species, perfect cushion plants in both small and large pans, and cyclamen with varied leaf forms and patterns. Ian Instone's (Leeds) superb large cushion of *Arenaria alfacarensis* (below), a native of South-Eastern Spain, was awarded a certificate of merit. The judges debated long and hard about whether some of the

entries in the grey and silver classes were presented according to schedule, though there was no doubting the eligibility of *Tanacetum leontopodium* from Alan Newton (Ponteland) in class 81, a lovely furry silver-grey specimen. The best of the brilliant red autumn foliage was displayed by small pans of *Aruncus aethusifolius* (Alan Newton, class 73) and the dwarf form of *Berberis thunbergii* (Carol Kellett, class 83). Plants in fruit, cone or seed were also few, but the spectacular exception was Barry Winter's (Stockton-on-Tees) *Gaultheria mucronata* (class 35), which came adorned with many large deep-red berries. Somewhat surprisingly perhaps, the Millennium trophy for best foliage plant went to George Young (Stocksfield) for a perfect large specimen of *Ozothamnus coralloides* (above); it really did resemble a miniature coral colony.

Crocuses, colchicums, sternbergias, and cyclamen are the dominant flowers of our autumn shows. There were plenty but, unlike in

Cyclamen hederifolium 'Tilebarn Greville'

some years, there were few large pots of the first three. Crocuses included *CC. niveus*, *pulchellus*, *gilanicus* and *xantholaimos*, and for me the neatest was Don Peace's *C. cartwrightianus* (below), part of his 3-pan entry in class 46. The Patricia Furness vase for the best small pan (less than 19 cm diameter), excluding cyclamen, was awarded to Ian & Maria Leslie (Bangor) for the diminutive *Sternbergia sicula* ssp. *graeca*. There were numerous pots, large and small, of cyclamen. Many of the larger specimens were eclipsed by the neatness and shear flower-power of *Cyclamen maritimum* in the E B Anderson prize-winning small six-pan entry (class 45) from Bob & Rannveig Wallis. This won them the Ewesley salver for best small pan of cyclamen, said by some to have been the best cyclamen overall.

Plants of interest to your correspondent were the spidery flowers of *Narcissus obsoletus* and *N. viridiflorus*. The former is a lovely species,

whilst the latter is weird, with its green and, in some lights, inconspicuous flowers; neither is often seen in shows this far north. *Galanthus peshmenii*, by contrast, is becoming more available and, seemingly, amenable to cultivation. There were several pots of this exquisite Turkish species, and one small entry could be compared side-by-side with its Greek equivalent, *G. reginae-olgae*, in class 67. Bob & Rannveig Wallis included *G. peshmenii* Rix4010, Kastellorizo form in their E B Anderson prize-winning entry; their larger entry of the same form in class 19 was awarded a certificate of merit.

The gentians were wonderful but on close inspection many of the larger plants had small blemishes on the flowers from weather damage that excluded them from consideration for the show's premier award. However, Ian & Maria Leslie won the David Boyd award for the best gentian in a small pan with *Gentiana* 'The Caley', perhaps the best of Ian McNaughton's introductions. With such a wonderful range of blues and white on show, who wants to see a pink one? A young plant of *Gentiana rhodantha* was shown by Alan Newton in the class for newly introduced plants; it was interesting to see this although it probably won't replace the blues!

Gentiana rhodantha

Cyclamen in class 8

Autumn-flowering saxifrages have become rather popular in recent times with their exotic and strange flowers. In addition to Maggie Duguid's award-winning *Saxifraga fortunei* 'Fumiko', she also showed *Saxifraga* f. 'Sibyll Trelawney JP' in class 96, while Bob Worsley won class 14

Aylostera heliosa ssp. *cajasensis*

Cyclamen maritimum
(Winner of the Ewesley salver)

with *S.* f. *rubrifolia*, and Tom Green (Rowlands Gill) class 51 with *S.* f. 'Shiranami'. Mike Dale's display of fine photographs and the accompanying texts describing a floral road trip around the north of Scotland was highly commended by exhibitors and visitors alike. The quality of this educational exhibit was recognized by the award of a large gold medal. Local group members are to be congratulated for putting on a very successful show: the bacon butties were really recommended!

David Millward
(photos: *Peter Maguire*)

Discussion Weekend, 13 - 15 October 2018

The 2018 show was held in the Bow Lounge of the Atholl Palace Hotel, Pitlochry. With plenty of natural daylight and an opulent decor, the room provided a grand setting, with 115 entries in 60 classes. There was an excellent showing in class II and, given the time of year, a wealth of flowers on display - it wasn't all foliage and seasonal tints! Bulbs were well represented by many large pots of *Colchicum* tabled by Jacques Amand International, all of which were very generously donated to the plant auction. That's not to say that the conifers, ferns, sempervivums and silvery foliage were not appreciated, with many impressive and well-grown plants showing just how much variety and interest may be had in the rock garden at this time of year.

Above: class1 (Photo: Andrew Lafong) Below: *Senecio leucophyllus*

Working our way around the show benches beneath the crystal chandeliers, those autumn stalwarts – the gentians – were well represented, with Stan da Prato providing identical and equally impressive entries in two 3-pan classes, with beautiful specimens of *Gentiana sino-ornata*, *G.* 'The Caley' and *G.* 'Blue Silk'. These plants live outside and were only brought under cover prior to the show to prevent rain from spoiling the flowers. Both entries saw Stan pick up silverware, with the East Lothian trophy for winning class 3, 3-pans rock plants, and the Peel trophy for class 27, 3-pans *Gentiana*. Darren Sleep tabled some interesting bulbs from the southern hemisphere, with *Massonia pygmaea* (class 13), *Lachenalia ensifolia* and *Oxalis polyphylla* var. *heptaphylla* (2-pans in class 38) earning him well deserved first place tickets.

Massonia pygmaea ssp. *pygmaea*

Cyclamen are always well represented at this show, and there were some wonderful plants in class 18, 1 pan *Cyclamen hederifolium* 'group'. Mike Dale's neat, white flowered *C. hederifolium* caught my eye. However, the Jim Lever memorial trophy for best *Cyclamen* and a certificate of merit

Primula bullata var. *bracteata*

were awarded to Roma Fiddes for her *C. mirabile*. Roma was surprised at the admiration her plant received, given that it had been in flower for over a month and was nearing the end, but it is a sizeable plant with nicely marked foliage and is a credit to its grower.

This year the show played host to a travelling trophy, the AGS-Ulster Group quaich. On this occasion it was given for the best foliage plant in the show. Margaret & Henry Taylor's *Senecio leucophyllus* was a clear winner, a sizeable pan filled with delicate pinnate foliage of a most silvery hue, with first place in its class 41 (one pan rock plant with silver-grey foliage). A George Forrest memorial medal was awarded to Stan's *Larix kaempferi* 'Nana' which, with serendipitous timing, was showing beautiful autumn colour. This plant also stole the J L Mowat trophy for best conifer in the show. Adding to his haul of silverware, Stan won the Logan Home trophy with his miniature garden in class 48, a lovely mature display in a large round pan with well-established and healthy plants. Almost needless to say, Stan took home the Mary Bowe Trophy for the most points in section I. My special thanks go at this point to Susan da Prato, who polished the trophies that Stan (briefly) returned, saving me much elbow grease!

The number of entries in section II was encouraging, with some relatively new exhibitors taking their first steps into showing. A bronze medal was awarded to Liz & David Livermore for gaining the highest aggregate of points in this section. However, it was Maggie Duguid who took home the East Lothian cup for the best plant in section II with her delicate little *Saxifraga fortunei* 'Fumiko'.

Facing: *Townsendia exscapa*

Oxalis polyphylla var. *heptaphylla*

There were two excellent entries in the holiday photographic competition, won by Joan & Liam McCaughey with their beautiful images of a trip to see orchids in the Gargano peninsula in Italy. We were also treated to a superbly informative non-competitive display on *The Burren: A Rocky Place* from George Sevastopulo, which attracted much interest and earned George a gold medal.

Lachenalia ensifolia

Centaurea bagadensis

Colchicum byzantinum

Oxalis perdicaria Below: miniature garden

Having been allowed as a show observer at my first Discussion Weekend at Grantown-upon-Spey in 2013, this was my first stint as show secretary. I thank everyone who helped to make it a success, especially Julia Corden who organised the weekend, volunteers from the local group who helped with setting up, the judges and stewards and of course the many exhibitors who brought along their plants and displays for others to enjoy - without them it would all have been for nought. See you next year.

Matthew Topsfield
(Photos: *Peter Maguire* and *Andrew Lafong*)

Aberdeen, 19 May 2018

Despite the many advantages of holding a flower show in a greenhouse, there is one disadvantage, and that is if the day happens to be one of the hottest of the year so far. It isn't often that we have even a warm day in Aberdeen but this May Saturday was exceptional. The sun blazed on our participants and our plants, as the photographs show very clearly. Fortunately, the ever-present chilly sea breeze was for once very welcome. A few plants suffered a little but only after the judging was complete. Some plants, notably the oxalis and tulips, often disappoint on the show bench because of lack of good light, warmth and sun; this is not a problem at the Aberdeen show venue of the David Welch Winter Gardens in Duthie Park, Aberdeen. This, our third year here, was our best yet with over two hundred entries and with our usual and very good section II.

There was only one entry for class 1, the six-pan, and it predictably won for Stan da Prato, including no less than three impressive rhododendrons. Class 2 was won by Dave Millward with a Dodecatheon media, *Androsace* 'Snow Cap' and a magnificent *Ramonda nathaliae* JCA 686, which went on to win the Forrest medal. Class 7 displayed a *Paris japonica* by Ian Christie, something that I can't recall seeing in Aberdeen

Above: Ian Christie's *Paris japonica*

before, but this day produced two, the second being shown by Francis & Margaret Higgins in class 30. Two excellent raoulias, species not seen as much as previously, were *Raoulia australis* and *R. tenuicaulis* – displayed by Stan in class 14.

It isn't long in show reports before a mention of Cyril Lafong and he didn't disappoint us in class 24 with his phenomenal *Daphne calcicola*, which has graced the Aberdeen show every year so far at Duthie Park. Another of my personal favourites was shown in class 57: *Anchusa cespitosa* is not usually a very prolific flowerer but this one was particularly good, shown by Dave Millward. Yet another rare appearance was *Lewisia rediviva*, a most beautiful flower but unfortunately always accompanied by untidy herbage, here shown by Roma Fiddes in class 47.

It isn't often that sempervivums are mentioned in show reports, which is a shame, but I do concede that to do so they have to be exceptional, and that is just what happened in class 49, with *Sempervivum arachnoideum* 'Stansfeldii' and *S. borisii*, both shown by Tom Green. Roma astonished us again in class 51 with a magnificent

Above: Dave Millward's class 2 entry:
Dodecatheon media, Androsace 'Snow Cap' & *Ramonda nathaliae* JCA 686

Angela Townsley's *Cypripedium* 'Vintri White'

Gentiana acaulis, but what was particularly surprising was that there was a second one that was raffled off at the end of the show.

I remarked on *Oxalis* at the beginning and, for the very reasons that I have mentioned – lots of light, warmth and sun – the oxalis class 54 was a pure delight. But I would like to single out two plants: *Oxalis enneaphylla* 'Alba', shown by Francis & Margaret Higgins, and *Oxalis* 'Seven Bells' shown by Ian Christie.

We now come to trilliums. Aberdeen show time is trillium time and we have created a new class 57 just for them. Not only do they justify a class of their own but they also needed a whole section of bench to display the four enormous and truly majestic specimens. The judges had a very difficult time in deciding the winner but eventually settled on Cyril's *Trillium grandiflorum* 'Flore Pleno'.

Pleione grandiflora hybrid

Cyril Lafong's *Trillium grandiflorum* 'Flore Pleno'

Cornus suecica roasts in the Aberdeen sun

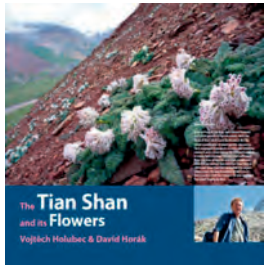
Here in Aberdeen we have been rightly proud of our section II, going right back to its Ian & Margaret Young days. This year was no exception, in fact probably the best yet. Section II classes were overflowing. Four entries were noteworthy, and each could easily have been entered in class I. The first were the wonderful cypripediums shown by Angela Townsley in classes 63 and 73, *Cypripedium* 'Vintri White' and *C. tibeticum*. Also, in class 63 was a perfect *Pleione grandiflora* shown by Sheila McNulty. In class 79 Isabel McWilliams displayed a splendid *Clematis marmoraria* and in class 87 Bill McGregor put yet another superb trillium, *Trillium grandiflorum* 'Flore Pleno', on the bench that – given a couple more years – will easily compete with those of class 57.

I must mention the extremely popular commercial nurseries who added considerably to the day by helping to encourage many visitors. Being a public park, there are very many casual visitors in addition to the members and people who would come anyway.

Our thanks go to all the staff at Duthie park who contribute a lot of hard work to give us the bench space and to all exhibitors and visitors who graced our show with their support.

Mike Hopkins

The Tian Shan and its Flowers
Vojtěch Holubec & David Horák



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A true tribute to Tian Shan flora!

A long-awaited book has immediately become a hit in all continents. It focuses on the beautiful plants of the Tian Shan Mountains and high-quality photos show them in their natural environment. A broad team of photographers shows the great international collaboration on the book.

Thanks to these breath-taking portrayals, we gradually pass through the mountains; the photographs give great information about the habitats and therefore the cultural needs of individual species. Each species has a botanical description, including its distribution area and synonyms. Valuable cultivation information results from the long experience of both authors and a broad network of rock gardeners; it encompasses a summation of successes and mistakes in various gardens. In the last decade, many new species came to our rock gardens from the Tian Shan. The ideal plants for our sunburned rock gardens where we face climate change the most in recent years have evolved in the hot and sunny steppes. So, this book comes at just the right time!

The book presents a wonderful introduction to the Tian Shan Mountains, with a botanical history and description of the mountains where Yaro Horáček has written a rich chapter of geology including maps and enriched with authentic photographs of the co-authors. There is a brilliant review of the climate of the area. A chapter on vegetation explains very clearly all the vegetation types and areas of Tian Shan, for in this diverse area everything between hot steppes and cool alpine meadows may be found.

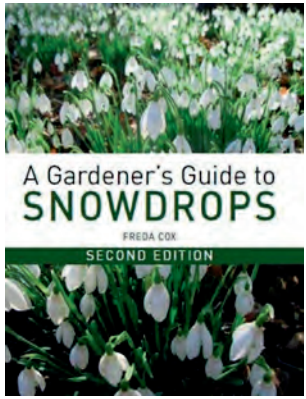
The very wide range of photographers deserves praise; contributions come from Kazakhstan, Kyrgystan and Russia, many European countries and the USA. In addition to the photographs, the book contains some drawings from Vojtěch's daughter Klára, who also worked on the graphic design of the book. Vojtěch's book is dedicated to his wife and our rock garden friend and galanthophile Lenka, who died suddenly before the book was printed.

This original work deserves to be widely read. There has not yet been any such book about the Tian Shan. Vojtěch and David have launched the book as their own publication, which is surely proof of their true faith in their work. The first presentation and launch for a large audience came about through a lecture tour of Vojtěch in the USA with the North American Rock Garden Society, where the book was justifiably well-received.

Martin Hajman

Gardener's Guide to Snowdrops
Freda Cox

Crowood Press
ISBN: 9781785004490 (2019)
304 pages & 2088 colour illustrations



Over the last few years several new Snowdrop books have been published. I have at least six of these, including the first edition of this book by Freda Cox, which is very informative and contains many fine colour drawings. I am very happy to review this new second edition in its electronic form.

There are so many wonderful new parts in this book, with very comprehensive details for the species, and a wealth of excellent coloured flower drawings that show shape and texture. For me, the details about different leaf shape and form are very important and this is what I always notice first when looking for Snowdrops.

In part 1 (Morphology, Taxonomy, Round the World, Pest & Diseases, Gardens and Growers) Freda pays tribute to very many Snowdrop enthusiasts (I do not like the term "Galanthophiles") and she lists many special gardens where Snowdrops grow in profusion alongside suitable companion plants such as wonderful cyclamen and dwarf narcissus. Pictures are enhanced with large swathes of naturalised Snowdrops in woodland settings and are simply superb. An account of Snowdrops around the world is welcome and very interesting.

In part 2, the huge "Snowdrop Directory" depicts by hand several hundred individually detailed flowers, each accompanied by a concise description. These pages are a delight to read and comprise the most comprehensive list to date, showing very convincingly just how very special Snowdrops are. We are all now acquainted with "Snowdrop Madness", which has opened many doors around the world and has led enthusiasts to search for ever more to satisfy their cravings. This has led to escalating prices, new select breeding, to the addition of yellow tips, virescent, inverse, *poculiformis*, early & late forms, and even to those with orange & pink inners. No doubt criticism will be voiced by some but for me this book has something for all – it is an essential read.

Freda has constructed this book with great knowledge, deep understanding and obvious love for the humble Snowdrop. This is not just a reference book but is a fine work of art; it is outstanding in every way for everyone around the world with a passion for Snowdrops and is a tribute to the author. At this time of year, I have the first edition open on my desk at all times and now look forward to the printed version of this new edition.

Ian Christie

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