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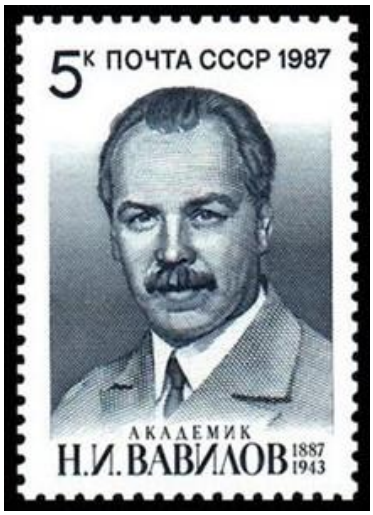
Welcome to a new year of the IRG – what delights and disappointments might 2016 bring to our plants, we wonder? No doubt there will be plenty of "unusual" weather for us to rejoice in or bemoan - depending on our situation. We can at least ***hope*** for good germination of our seeds, steady establishment of our new plants, a strong back for the work in the garden and some fine days to enjoy both plants and gardens with friends. Surely this cannot be too much to ask?

Cover picture: ***Crocus duncanii***

***Crocus duncanii* (*Iridaceae*) – a new crocus species in series *Carpetani* from Portugal** described by Jānis Rukšāns Dr. biol.

It seems that the genus *Crocus* is one of the most researched genera in recent decades and really during this time the number of recognised species has increased dramatically. Since Brian Mathew published his famous monograph, the number of published species (including those whose status was changed) has more than doubled.

Left:
Crocus duncanii



Right:
Postage stamp commemorating centenary of the birth of Nikolai Vavilov.

["In 1926 he published 'Studies on the Origin of Cultivated Plants' which described his theories on the origins of crops. Vavilov concluded that each crop has a characteristic primary center of diversity which is also its center of origin." Quote from OSU page]

In the first part of the last century the brilliant Russian botanist Nikolai Vavilov formulated his theory about the centres of origin and diversity of plant species. By this system the area where the greatest numbers of species occur must be regarded as the centre of origin and the longer the distance from these centres is, the smaller the number of occurring species will be and larger areas are occupied by each individual species. So, conforming to this law, the centre of diversity for crocuses can be regarded as the Balkans and Western Turkey. In that area more than half of

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all recognised species can be found. The number of species significantly decreases in every direction from this centre and the largest territory is occupied only by the most easterly-growing species, *Crocus alatavicus*. At the same time there are several secondary centres of diversity. This was stated for the first time by G. Maw in his monograph. According to the knowledge of his time, he designated four such secondary centres, each with a great number of endemics. This is something that still has not lost its significance even today.

Accepting the Aegean region as the centre of origin, the distribution of crocus species agrees quite well with the rules of Vavilov's regularity. Several species earlier believed to be growing in large territories turned out after DNA checking to be complexes of outwardly similar but genetically distinct species. Such complexes were found to be the species earlier regarded as *C. reticulatus, C. ancyrensis, C. speciosus, C. chrysanthus*, etc. Considerable splitting has taken place particularly within the *C. biflorus* sensu lato complex. It is no surprise that just the centres of distribution, where the majority of new species are found, receive the most attention from researchers, leaving the peripheries out of their sight.

The most primitive species grow in the very west of the crocus range – these are *Crocus carpetanus* and *C. nevadensis* from Spain, Portugal and NW Africa (Algeria and Morocco). They are very close to and resemble more by their leaf morphology *Romulea* sp. - therefore the question about the place where the first crocuses have arisen is still debatable. It is however very possible that only in the western periphery of the *Crocus* areal did the ancient crocuses escape the pressure from the more advanced species, which ensured their survival and conservation. The region where they grow is densely populated, so theoretically it must have been very well explored and no new important discoveries should have been awaiting there.

Crocus carpetanus

In spring 2015 I was invited to join a small group of daffodil enthusiasts in their travel to Portugal and Spain. I had never before visited Portugal and of course, I was very interested in seeing *Crocus carpetanus* in its native habitat. It is not a very easy species in cultivation, so an insight as to its natural surroundings would have been very valuable for a better understanding of its needs. Although I had only a few free days between two other mountain trips, I accepted the invitation and spent 4 days with the team. I am very thankful to my colleagues in that very international group (there were gardeners from 5 countries – the United Kingdom, the USA, Chile, the Netherlands and Latvia) who, because of my necessity to return at an earlier date, changed their schedule and brought me to the airport in the middle of their trip.

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Narcissus triandrus* subsp. *lusitanicus

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Narcissus triandrus* subsp. *pallidulus

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On our first full day in the field, after visiting a very nice population of various *Narcissus triandrus* forms growing on rocks near Portalegre, we continued on to Pico de São Mamede to look for the somewhat dubious *N. portensis*. [According to the Kew Plant List *Narcissus* x *portensis* Pugsley is a synonym of *Narcissus* x *bakeri* K.Richt.. It has been described in some places as “common” but has often proved to be elusive.]

Narcissus portensis

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Noticing by the roadside in a sparse pine forest some crocus flowers, I requested a stop. While checking the leaves I thought that it was *Crocus carpetanus* but was amazed by the shape and colour pattern of the flowers. However, the greatest surprise came when I tried to dig out some of the corms for herbarium. Traditionally it is regarded that *C. carpetanus* corms will lie at shallow depth in the soil – usually around 5-7cm deep, but the corms of this crocus were much deeper – almost impossible to dig out with the tool at my disposal – and in this aspect it resembled the Turkish *C. antalyensis* and *C. mouradii*; and this crocus also had similarly very long tunic necks. A later finding of the typical *C. carpetanus* at the Serra da Estrela confirmed my suspicions of a discovery of a new crocus species. Actually I had already had pictures of this new species for a few years. They were sent to me by Brian Duncan who organised the trip of 2015. It was quite impossible to make any accurate identification by these pictures; by the flower dimensions and colour I was more inclined to think of *C. nevadensis* which has different leaves, not visible in the pictures.

***Crocus carpetanus* corms**

***Crocus duncanii* corms**, showing the long tunic necks.

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Map which shows the distribution of *C. carpetanus* and *C. duncanii*

***Crocus carpetanus* habitat**

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The new crocus certainly is a close relative of *Crocus carpetanus* having the same semi-cylindrical leaves without lateral channels (replaced by several grooves on the abaxial side) and canaliculated on the surface, but easily separable by the very long neck of the corm tunic, longer and narrower flower segments, flower colour pattern, longer stigma and ecology. In the wild it also grows at lower altitudes. Although no DNA results have been published so far it certainly belongs to the same series *Carpetani* Mathew together with its relatives *C. carpetanus* and *C. nevadensis*. All data for description of features were obtained from 17 randomly gathered flowers collected in both populations (together).

***Crocus carpetanus* in cultivation**

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Crocus duncanii Rukšāns species nova

Type: Portugal, on top of the Serra de São Mamede, 15PTS-026, 24-02-2015. Holo: GAT.

Habitat and distribution – light pinewoods and clearings in pinewoods, based on limestone. Known from two localities in Portugal on the Serra de São Mamede and near Portalegre where it grows at altitudes of 250-600m, though it may be more widely distributed.

Flowering time – February-March.

Corm – around 10-15mm in diameter, globose or slightly elongated.

Tunics – thinly fibrous, finely reticulated.

Tunic neck – very long - 7-10(-12)cm (n=7), reaching the soil surface, formed by fine, strong fibres.

Basal rings – absent.

Cataphylls – 2-3, white to light greenish.

Prophyll – absent.

Leaves – 2-3, deep green, ciliated on the margins, pale on the canaliculated surface, semi-cylindrical, without lateral channels but furrowed on the underside with many channels alternating with low ridges, reaching the flower tips or more often longer.

Bract and bracteole – subequal, white to greenish.

Perianth tube – white, striped purple at the apex or uniformly light purple, darker at the top.

Throat – greyish white to light yellow, sometimes with a white diffused edge.

Filaments – 5-7mm long, white to creamy.

Anthers – 8-12mm long, lanceolate-linear, bright yellow, notched or subacute at the tips.

Connective – yellow, indistinct.

Style – white, divided at the top into three up to 5mm long branches, widely expanded and frilled at the tips, ending at the tips of the anthers (in *C. carpetanus* usually below).

Flower segments – oblanceolate with subacute tips, 2.7 to 3.2 times longer than wide (in *C. carpetanus* the segment length/width ratio is around 2.5), inside lighter or darker violet (slightly lighter on the inner segments) with a few insignificant darker veins.

Outer segments – outside paler or darker lilac, at the base with a wider or narrower, fanlike, starry blotch extending into a distinct dark midvein, wider at the base and threadlike at the top, reaching the tips of segments or at least half of their length.

Inner segments – outside slightly darker, with a darker basal blotch and a shorter midvein.

Capsule and **seeds** – not observed.

2n = ?

Etymology – named after the famous daffodil breeder Brian Duncan who invited me to partake in this trip and a few years earlier sent me the first pictures of this crocus.

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Crocus duncanii, photo Brian Duncan.

***Crocus duncanii* habitat**

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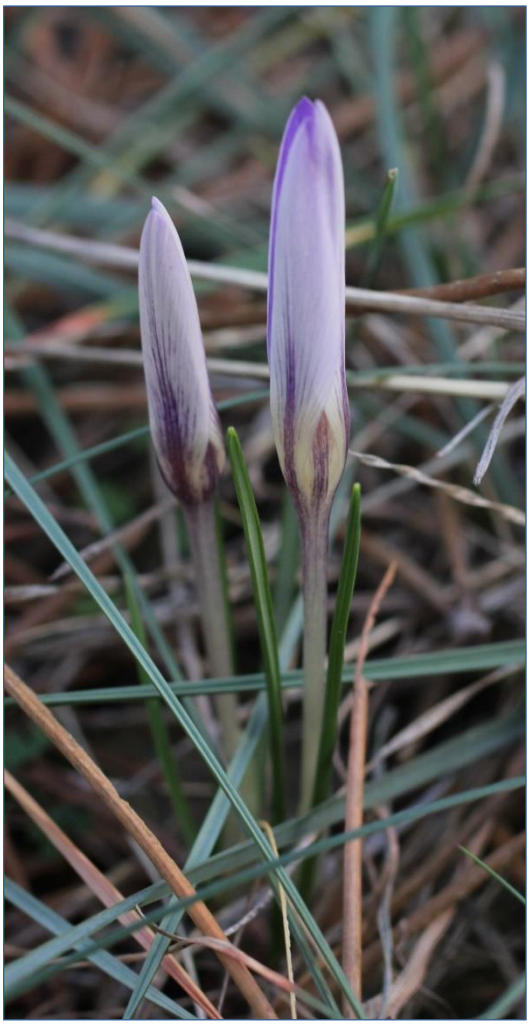

Crocus duncanii

Crocus duncanii is easy to identify and distinguish from its close relative which has the same shape of the leaf crosscut by the very long tunic neck, the shape of the flower segments and their colour pattern. It certainly does not belong to the species about which a correspondent wrote on the Scottish Rock Garden Club forum pages: “I wonder if when we purchase plants in the future they will come with a certificate of authenticity with DNA analysis attached. It will be the only way it will be possible to identify them as given the marginal differences (it) will not be possible by seeing them in flower!”

Also the habitats differ when drawing a comparison with *Crocus carpetanus* : *C. duncanii* is a plant of pine forests whereas *C. carpetanus* is more associated with deciduous forests and shrubs where oaks

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dominate. The *locus classicus* of *C. duncanii* is situated around 100km to the south from the observed locality of *C. carpetanus* in the Serra da Estrela, outside the southern distribution limits given by Mathew (1982) for *C. carpetanus* (Coimbra and the Serra da Estrela).

Above: ***Crocus carpetanus*** at Sierra d'Estrella and below: at El Segovia, photos by Rafa Diez-Dominguez.

This discovery only confirms that thorough research is needed throughout the entire crocus areal. Many very interesting pictures of a crocus regarded as *C. carpetanus* that seem worthy of further research were sent to me by Rafa Díez Domínguez.

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At present I have no experience in the cultivation of *Crocus duncanii*. The few collected corms are now passing their first winter in my collection. Judging by the growing conditions in its homeland, it could be more tender than *Crocus carpetanus* and would require planting at a greater depth. It seems that *C. duncanii* does not require alkaline soils, so I planted it in my standard mix. For *C. carpetanus* I always add some amount of peat moss to ensure lower pH, otherwise it will seriously suffer and subsequently disappear within a few years. However, the habitat of pine woods where *C. duncanii* grows, is as a rule characterised as more acid, so only practice will show what is the best for this crocus.

Acknowledgments: I am especially thankful to Brian Duncan who invited me to take part in this short but very successful and wonderful trip and of course to all our international team (Sally Kington - UK, Suzi Worsham, Kathryn Welsh, Kathy Andersen - all USA, Juan Andres Varas Braun - Chile, Jan Pennings - Holland) for good company and their kindness for a change of schedule allowing me to join them. I hope that no one is forgotten...
And as always, thanks to Mārtiņš Erminas for his patience in correcting my ugly English. I'm especially thankful to my family and my wife Guna for their help and patience during my trips and preparation of my publications.

***Crocus duncanii* habitat**

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J.R.

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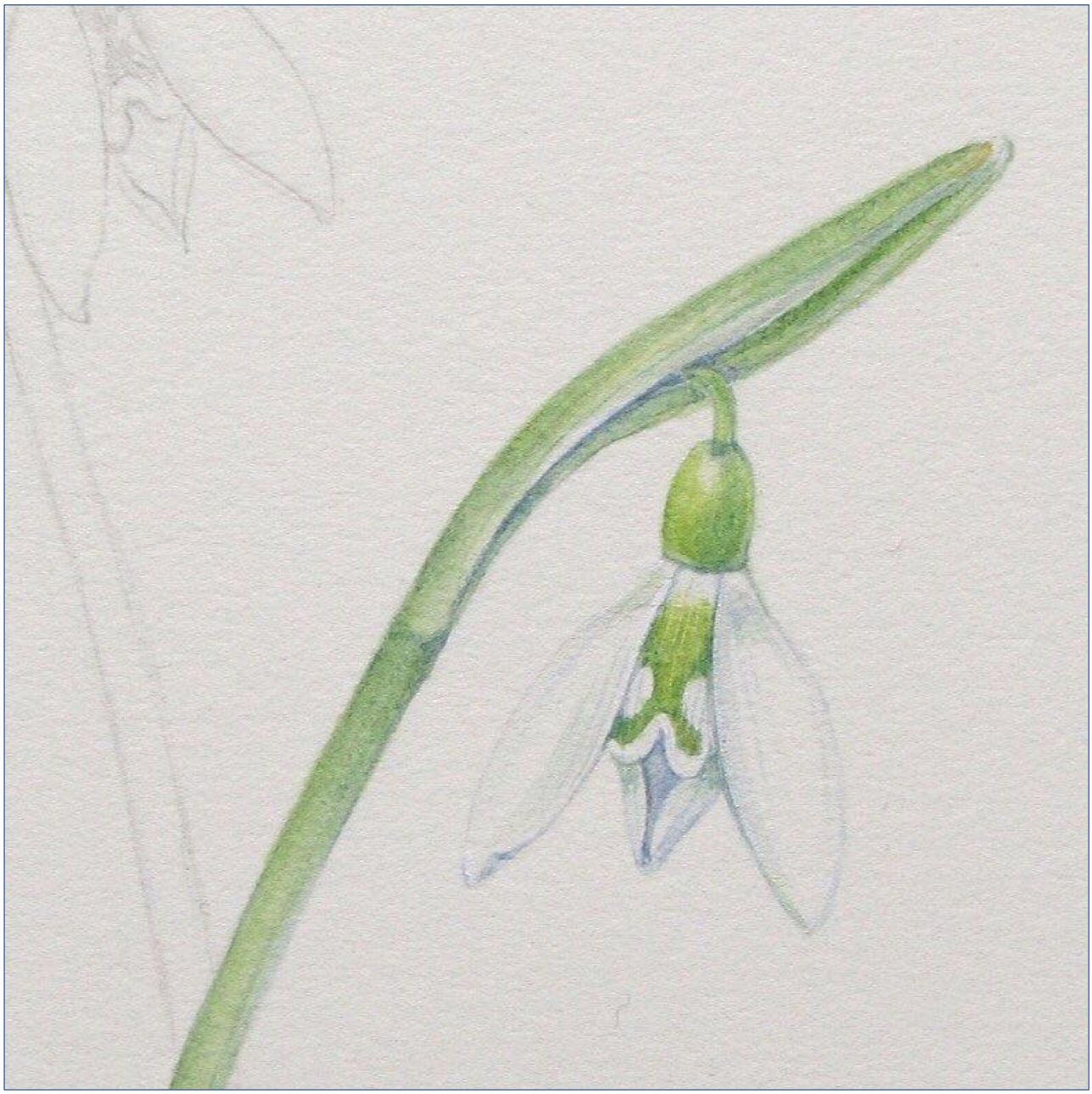

A preliminary study of ***Galanthus*** **'Longraigue'** by Shevaun Doherty, to whom thanks for the use of this image, which will be part of the exhibition of paintings of Irish garden plants next autumn and will also be used as an illustration in a book to accompany the exhibition.

'Longraigue' – a new Irish snowdrop described by Alan Briggs, photographs by Paddy Tobin.

At the end of 2001 my wife and I were invited to spend the New Year with friends at their home in Co. Wexford, Ireland. Our room was decorated with a vase of flowers containing a sprig of witch hazel and some snowdrops. At that time I was just becoming interested in snowdrops and I was impressed to see them already in flower at the end of December. I found a scattering of these early snowdrops growing in a bed by the front of the house. I admired them and my friend, Carol Gibbon, immediately dug up a few bulbs for me. Back in England they did well, although flowering a little later in the first week or two of January. After a few years I had enough to repatriate some to Irish snowdrop enthusiast Paddy Tobin. They prospered for Paddy whilst mine suffered a set-back, so he now has far more than I do. We both think this attractive snowdrop is worthy of a name and I have chosen **'Longraigue'**, which is the name of the house where they originated.

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***Galanthus plicatus* 'Longraigue'**

'Longraigue' is an early-flowering example of *Galanthus plicatus*. The inner petals have a mark which I feel, fancifully, resembles an oil lamp. This comprises a green u-shaped mark at the apex joined to an oval shape in the basal half of the petal which has a lighter part at the centre. The receptacle ('ovary') is olive green and slightly elongated; the pedicel is short. The plicate leaves are glaucous green and around 12cm long at the time of flowering, when the scapes are about 16cm.

This snowdrop is already gaining admirers in Ireland and would be a welcome addition to any collection.

A.B.

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Alpines for Beginners – some suggestions for "starter" plants - Text Margaret Young, photos by J. Ian Young, unless otherwise stated.

We are fortunate in the UK to still have some excellent specialist nurseries who supply a wide range of rock garden and alpine plants which will, with minimum effort, perform well in many different gardens and climates. Other countries may be less well catered for in this respect but their nurseries are even more valued. There are also a number of respected growers whose nurseries provide mail-order internationally.
In the UK we are able to see the wares of many nurseries at the shows run by the SRGC or AGS and to collect plants at the shows ordered from them even if they do not offer mail order or we are unable to visit their premises. The recent list of a number of such nurseries, produced by David Nicholson for the SRGC journal "The Rock Garden" draws from his personal experience, recommendations made by members in the forum and from the SRGC Links pages. You may access that list HERE.
Life as a specialist nursery owner is not easy and without the support of our members we will see more of these little businesses failing – to our own detriment.
In the online SRGC links pages there are also details of seed suppliers, for those who really do prefer to "do it themselves".

Alpines can be grown in troughs and raised beds of all sizes.

As Ian Christie, nurseryman and former SRGC President has written in his advice online in the SRGC website for "beginners' alpines": "The versatility of plant types classified as alpines allows cultivation in the woodland, raised bed, trough, scree and of course 'The Rockery'. Gardeners of all persuasions can find room for a few attractive alpines." This is true - for the most part it just takes a little soil preparation, by the inclusion of plenty grit to ensure good drainage in advance of planting, to satisfy most such plants. A number of Ian Christie's "beginner's alpines" are included in the following pages.

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Many alpine plants are, by their nature, diminutive in stature and so most people can find space to grow a selection of these plants to achieve a display throughout much of the year.

Plants grown from bulbs, corms and tubers – usually just loosely referred to as “bulbs” - come in all shapes and sizes, and so the choice for these is a wide one. These lend themselves to use all over a garden – even in a lawn.

Above: Thomas Huber’s bulb lawn in March and below: in October.

Species *Crocus*: Flowering through the Autumn into the Spring they give colour to the garden when it is much needed. There are also many fine named cultivars available in the trade.

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***Crocus speciosus* 'Artabir'** – an autumn-flowering crocus; photo Thomas Huber.

Now to list some more suggestions for easy plants which might generally be expected to grow well and boost the confidence of those who are starting an alpine collection. The majority of these could also be pot grown, if, for instance there was a desire to grow for show purposes but they will do well in troughs or raised beds to add their charm to the garden.

Cyclamen hederifolium: Pink or white flowers appear in August and September with the ivy shaped attractively patterned leaves popping up during and after flowering.

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Cyclamen coum give a much needed splash of colour in the winter (December through to March) flowers can vary in shade from magenta to white which show above the heart shaped glossy leaves. As can be seen in the photo from Franz Hadacek (above), *Cyclamen* and *Iris* are among those plants which lend themselves to “meadow” planting, to enliven a lawn.

Iris reticulata **‘J.S.Dijt’** from the Vienna garden of Franz Hadacek.

Dwarf *Iris*, especially of the Reticulata type, push up through the soil from January to March with eye-catching veined flowers in blue, purple and yellow they increase slowly to make colourful little clumps.

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Above: ***Corydalis solida***, purple form and the white ***Corydalis malkensis***, below right: ***C. solida* red form**.

Corydalis solida types have conical flower spikes from Feb. onward. Blooms slowly unfurl as the weather gets warmer offering a range of colours from white, blue, yellow, pink to a vibrant red.

Dwarf *Narcissus*: What cheerier colour than bright yellow to welcome you to the Spring?

Dainty species narcissus come in many colours…… and can also make good show plants when grown in pots.

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Fritillaria pallidiflora

Fritillaria: Small and dainty or large and showy there must be a place in any garden situation for this family.

Above left: ***Fritillaria pyrenaica***, above right: ***Fritillaria meleagris.***

Right: ***Fritillaria hermonis* subsp. *amana*** in the garden of Franz Hadacek.

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Small cushion plants are ideally suited for troughs. *Saxifragas* resemble studded pincushions and are early Spring flowering and give the following choice of colours; pink, yellow, white and a few rich cherry or peach shades.

Saxifraga cultivars in a trough, photo Kevin Begley in Co. Limerick

Above: ***Draba dedeana***, photo Kris de Raeymaeker

Left: ***Draba aizoides***, photo Franz Hadacek

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Draba are ideal for a sunny situation, either neat mounds or tufted cushions producing small yellow or occasionally white flowers during the Spring. Cushion plants can make excellent show plants, in or out of flower.

***Chionohebe pulvinaris*:** a ground hugging neat moss-like plant from New Zealand, producing tiny stem-less white flowers. Pictured in habitat in New Zealand by Doug Logan.

Right: ***Gentiana verna***: Makes a neat rosetted mound with the electric blue star shaped flowers giving a beautiful display in April and May.

Left: ***Gentiana acaulis*:** forms a spreading mat of glossy green leaves with large deep blue trumpets in late Spring.

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Gentians come in summer and autumn flowering species too, mostly in shades of blue and white. Autumn Gentians give colour from September into December.

Above: ***Gentiana sino-ornata*** *hybrid* – autumn flowering

Left: ***Gentiana septemfida*** – summer flowering

Gentian photos on this and the preceding page are from Franz Hadacek in Vienna.

Ian Christie has suggested *Primula minima*, which makes a tiny mound of glossy deep green leaves with bright purple/pink flowers nestling on the foliage as a beginners' plant. It is, however, not one of the most easily obtained primulas.

Alpine primulas including the old fashioned sweetly scented Auriculas in all colour variations are favourites.

Primula minima: photo is from Philippe Chauvet of the plant in the Haut-Chitelet Garden.

Primula allionii and its hybrids make very attractive plants. These colourful little gems require a little extra care and do better with protection from wet.

Primula allionii* x *villosa: photo from Franz Hadacek.

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Primula marginata is a tougher prospect for garden or trough: photo Franz Hadacek.

For the larger trough or raised bed or at the front of a mixed border:

Andromeda: this evergreen dwarf shrub has six to nine inch stems with narrow blue grey leaves and small pink flowers is another member of the Ericaceae, the family of the Rhododendron, which is a good garden plant for those with even a slightly acid soil.

Above left: ***Andromeda polifolia* 'Macrophylla'** photo Christine Boulby and right: ***Andromeda polifolia*** in habitat in the Sarek area of northern Sweden by Ashley Allshire .

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***Cassiope* 'Muirhead'**: photo Kris de Raeymaeker

Cassiope: An ericaceous evergreen with whipcord stems which produces delicate white bells in May

Rhododendron keleticum: photo by Philippe Chauvet.

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Dwarf shrubs: Many of these are evergreen and small enough for the larger raised bed, such as dwarf Rhododendrons in all shapes sizes and flower colour. *Sorbus reducta* is a dwarf rowan with spreading habit and bright pink berries followed by bright autumnal leaf colour. *Daphne retusa* is a dwarf evergreen with scented flowers in Spring and bright orange berries in Autumn.

Sorbus reducta in its autumn glory: photo by Lesley Cox in New Zealand.

Daphne retusa in flower*, with the purple* ***Rhododendron 'Sacko'*** in the foreground and the yellow ***R.* 'Wren'** behind: photo by Graham Catlow.

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Polygala: Spreading mats with purple and yellow, yellow and white, or blue flowers –

Above: ***Polygala chamaebuxus*** from Anne Spiegel, left and Wim Boens, right.

Above and left: ***Polygala calcarea* 'Lillet'** in the garden of nurseryman Rob Potterton in Lincolnshire.

Dwarf *aquilegias, such as* ***Aquilegia bertolonii*** are charming plants for a sunny situation, photo: Luc Gilgemyn.

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Lewisia have fleshy green rosettes and lots eye catching flowers in May and mid-July.

Left: ***Lewisia cotyledon*** hybrids with, below, ***Linaria alpina*** -another good genus for the garden: photos Franz Hadacek

Thanks to the SRGC members and forumists for the use of their photos.

Phloxes provide colourful carpets to cascade over edges of walls or borders in pink, white and red.

Phlox kelseyi , possibly **var. *missoulensis***: photographed by Philippe Chauvet in the Haut-Chitelet garden in the Vosges.

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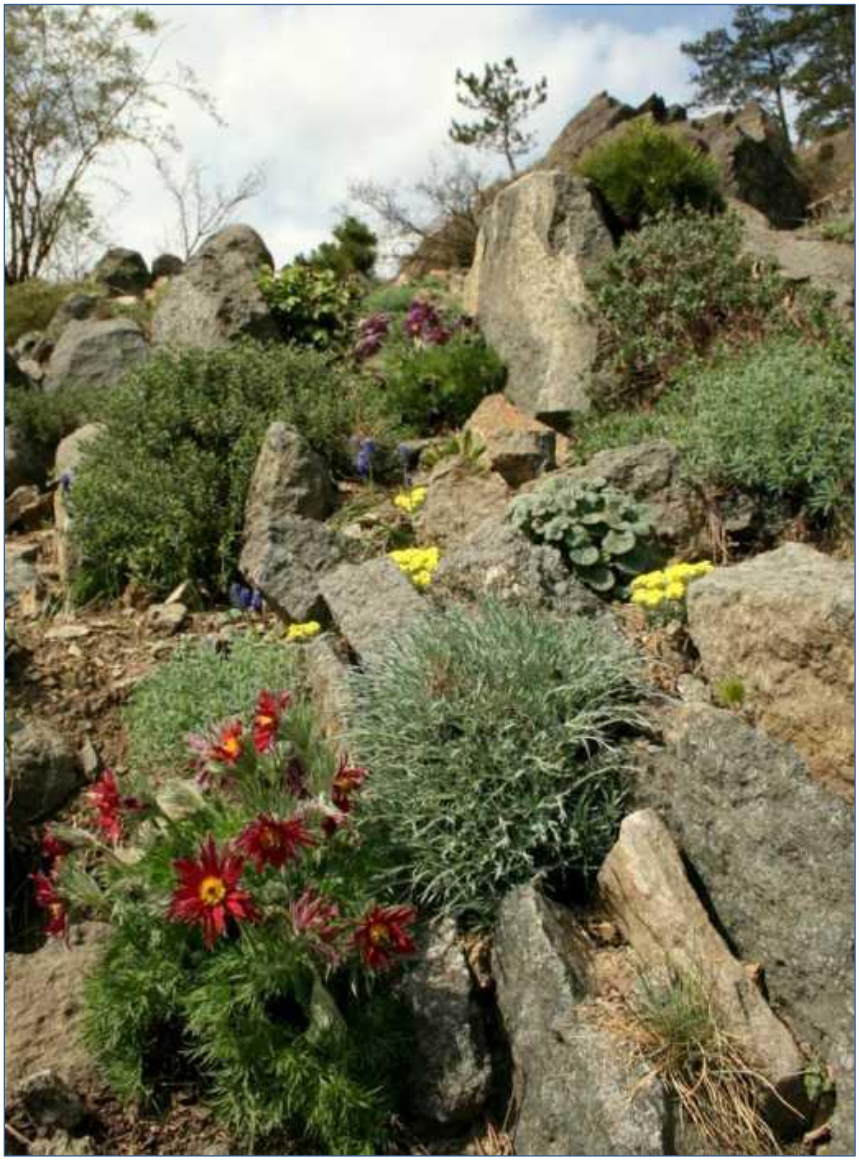
Above:
***Phlox douglasii* 'Crackerjack**: photo Franz Hadacek
Left:
***Phlox subulata* 'G.F.Wilson'**: photo Darren Sleep

Pulsatilla have pendant or even forward–facing bells – which come in many colours – all followed by attractive fluffy silver seed heads.

Right: ***Pulsatilla* 'Papageno'** on The Beauty Slope – the garden of ZZ.

Below: ***Pulsatilla* 'Eva Constance'** in the garden of Tim Ingram.



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Summer-flowering dwarf *Penstemon,* in pink, orange or yellow, are worth finding a space for. Below: ***Penstemon davidsonii* var. *menziesii 'Microphyllus'*** with a background of ***Helianthemum***: photo Shelagh Smethurst.

Silver leaved *Celmisia*: all bear white daisies whether they are small tufted mounds or the larger architectural plants with their long strap-like foliage.

Larger ***Celmisia*** with more silvery foliage, from Roma Fiddes and, with greener leaves, growing with ***Dactylorhiza*** orchids from J.Ian Young.

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Smaller *Celmisia species* from Doug Logan in New Zealand: above, ***Celmisia gracilenta*** and below, a close-up of ***Celmisia incana*** **foliage.**

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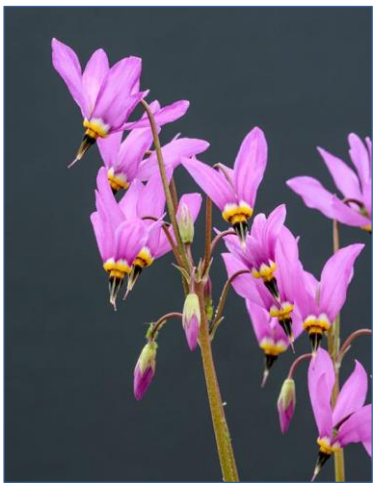
Ideas for the Woodland and Shrubbery

Trillium; A beautiful plant for a deep humus soil with all parts in threes as the name suggests. Pristine white, mahogany red and even lemon scented yellow with all shades in between.

Trillium grandiflorum can form large colonies - as here in the garden of Ian McEnery.

Trillium rivale in company with ***Anemone ranunculoides*** and ***Erythronium dens-canis***

Erythronium (Dog Toothed Violets and Trout Lilies) have elegant recurved flowers in pink, white and yellow hues. They look great under deciduous shrubs and Rhododendrons.
Dodecatheon (or Shooting Stars) have flowers like little cyclamen on a tall stalk.



Right: ***Dodecatheon meadia***; photo Chris Johnson.

With a profusion of varieties of plants and dwarf bulbs for every conceivable situation you will soon become hooked on alpines. Whilst a range of plants are available in most garden and horticultural outlets, you may be wise to seek out some of the specialist nurseries and societies where you are assured of good friendly advice. M.Y.

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