

# International Rock Gardener

ISSN 2053-7557



Number 50

**The Scottish Rock Garden Club** February 2014



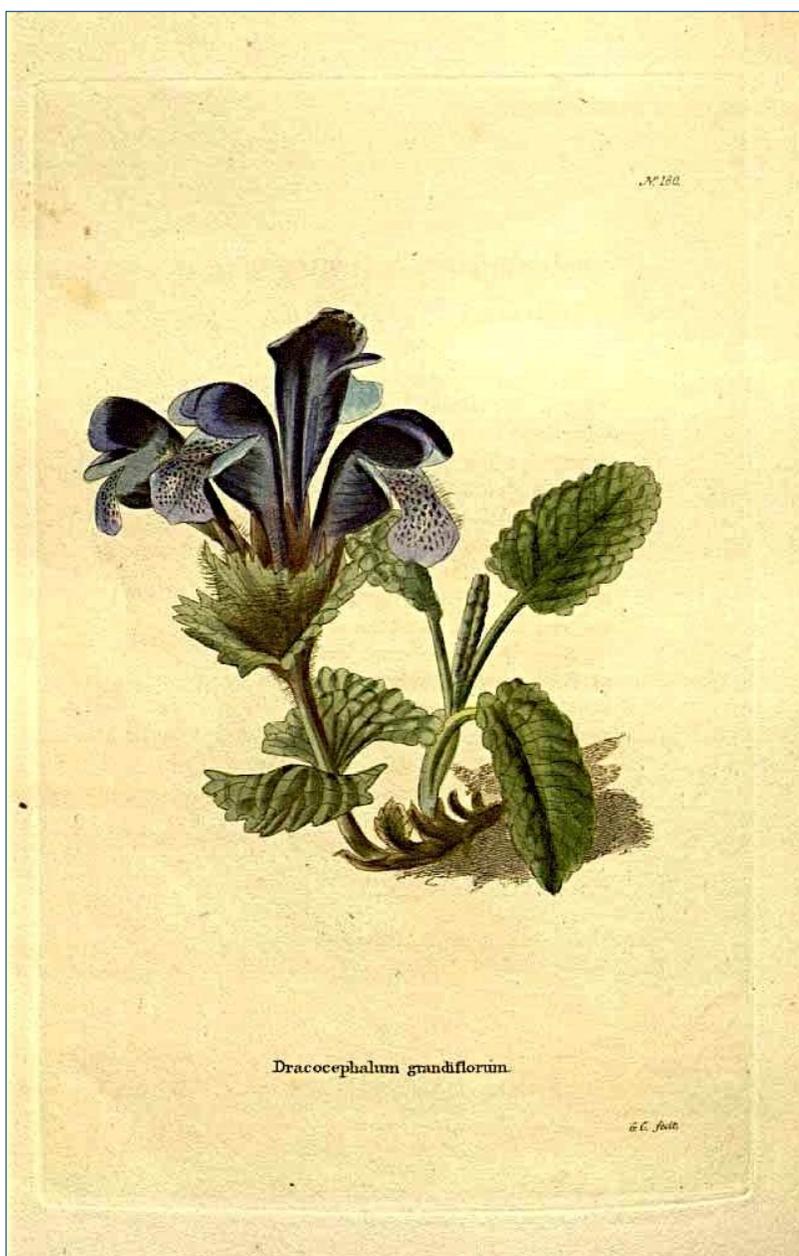
Thanks to all who got in touch to say you enjoyed the single article issue IRG of January. Your comments and suggestions and also your submissions for inclusion are always welcome [via email](#). This month we return to a mixture of pieces with a strongly North American flavour from some of our Canadian contributors – though not necessarily about North American plants.

Cover picture: *Phlox diffusa*, darker purple form from the [Vancouver Island Ranges](#), photo by Hans Roemer (page 18).

## ---Plant Portrait---

### ***Dracocephalum* Rears Its Lovely Head by Grahame Ware**

"They are all hardy and will grow in any common garden soil; they are, therefore, well adapted for decorating flower borders and rock work." - George Don, "[A General System of Gardening and Botany](#)" Vol. 4 1838



This was an early thumbs-up for a good dual purpose perennial/alpine that could be used in almost any garden in the UK. Its Central Asian centre of biodiversity notwithstanding, *Dracocephalum* has also proved that it misses nary a beat on the maritime coast of western N. America either.

Simply put, it is an under-rated genus in the Mint family (Labiatae /Lamiaceae). However, some people think that 'Dracos' are nothing more than *Ajuga* on steroids and won't touch them with a ten foot trowel. Leaving those poor horror-stricken creatures aside for the moment, how is it that the rest of us could be so smitten?

The colour of the flowers and their profusion is a good starting point in that affection. Then, we can add to that its tendency to be quite long-flowering or, at the very least, remountant (re-blooming). Need more convincing? Well, in addition, it generally does well in poor soil and tough spots making it a good outer garden colony candidate.

Everything exciting has a downside I suppose but when *Dracocephalum* is understood, it can be reframed as a non-problem. Yes, really it can! In gardening - as in life - it is that eternal problem - too much? ... or, not enough?

Above: Illustration of *Dracocephalum grandiflorum* in Loddiges' Cabinet 1827.

# ---International Rock Gardener---

## History in Cultivation

For rock gardeners, it seems that 'Dracos' despite their fascination to early 19th C. horticulturists have been late to our current dance. But as improbable as it may seem, *Dracocephalum* species had been in cultivation even earlier. A survey of horticultural literature positions them firmly within the consciousness of gardeners of the early 18th C. with a fine illustration of the annual *D. thymiflorum* gracing the pages of that seminal Dutch publication, the [Moninckx Atlas](#)\*. This was an astonishing codex that was commissioned by Jan Commelin and François Kiggelaer ostensibly to highlight the amazing number of plants under cultivation in the Amsterdam Botanical Garden. It became the basis (from an icones viewpoint) of the later and much lauded publication, Hortus Amsterdamensis. The Moninckx Atlas was created by Jan Moninckx and his daughter Maria. Between 1686 and 1709, 453 watercolour paintings (on parchment) were made of specimens from the renowned Amsterdam Medicus Hortus. Jan Commelin (or Commelijjn) issued one botanical volume before he died and the second was completed by his nephew, Caspar, in 1701. It clearly demonstrates the advanced state of plant knowledge at the time in late 17th C. Holland. Caspar Commelin - who had been a student of Paul Hermann (Director of Leiden garden) - directed or paid for these illustrations which were drawn in vivo. [\*[This](#) is a link to the Labiatae in the Moninckx Atlas.]



*Dracocephalum thymiflorum* drawn by Maria Moninckx from [Moninckx, J., Moninckx Atlas, vol. 6: t. 45 \(1682-1709\)](#)

Of course the two people that really moved Dutch botany forward during the late 17th C. were Paul Hermann and Caspar Commelin and to a lesser degree Fredrick Ruysch. The latter would later have his name attached to one of the more important perennial 'Dracos', [Dracocephalum ruyschianum](#).

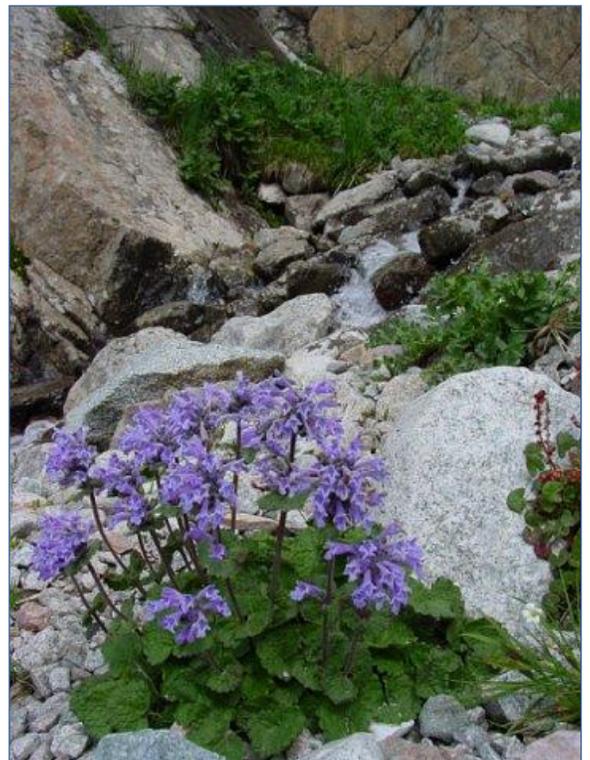
Meanwhile in early 19th C. England, lovely illustrations of *D. grandiflorum* could be seen in Curtis's Botanical magazine and the Loddiges Cabinet catalogue (pictured on the previous page). Early botanical chroniclers of the centre of biodiversity of *Dracocephalum* included but a few of the species but they were, in most cases, species of a perennial nature. For example, A.A. Grossheim in his

monumental Flora Kavkaza (Flora of the Caucasus, 1940) included but six species and two of them were species with a wide swath of occupation from SW Europe through to C. Asia.

Right: *D. imberbe* in the TienShan, photo Olga Bondareva [*D. imberbe*: Description from [Flora of China](#) ]

Now with more and more dryland rock gardens being created that have a [xeriscape](#) premise, 'Dracos' certainly have many new opportunities to become part of the current horticultural scene. But nomenclature and the lack of a good and widely accepted monograph hampers things from a horticultural point of view.

However, from a more current alpine horticultural point of view, *Dracocephalum* got a shot in the arm in the early 90's when Josef Halda began botanising this area with his artist/wife, Jarmila.



# ---International Rock Gardener---

## Some Recent *Dracocephalum* Collections of Alpine Horticultural Interest

In Josef Halda's 1994 seed catalogue he listed - *D. altaense* JJH941075 (a synonym - accepted name *D. imberbe*); *D. diversifolium* JJH948170; *D. imberbe* JJH941076; *D. integrifolium* JJH94893; *D. aff. paulsenii* JJH948005 Halda comments that in his opinion this was the "smallest species." As an aside, I saw Peter Bailey of Armstrong, BC grow this plant from Halda's seed on his south-facing, [Hullcar Valley](#) shale bluff and it was stunning looking almost like an *Eriogonum* but with ghostly, blue flowers; and, *D. scrobiculatum* JJH94896, this latter collected at 4400m.

The following year in 1995 Halda listed some new species: *D. bungeanum* (a synonym - accepted name *D. origanoides* subsp. *bungeanum*) from the Altai 2200m; *D. fragile* 2400m Altai; and, *D. imberbe* 2950m Altai. Some of these may be found in botanical gardens and private gardens and we hope that seed exchanges and university Index Seminum will collect seed and distribute them.



*Dracocephalum origanoides* var. *bungeanum* in W. Mongolia, photo by Panayoti Kelaidis,

["bungeanum": named for [Alexander von Bunge](#) 1803-1890]



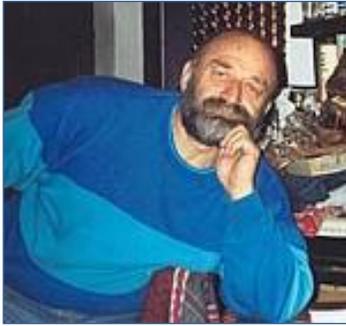
*D. fragile* in the garden of Lori Skulski.

In the present time, we note that Vojtěch Holubec's recent seed collecting trip found *D. stamineum*, *D. nodulosum* and a nice white flowering species of [D. heterophyllum](#) in Tibet. Photos can be seen [here](#) in his website.



## ---International Rock Gardener---

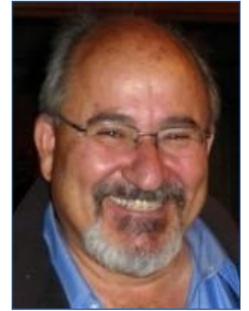
Concurrent with these botanical expeditions of Halda was a surge in alpine gardening much of it centered in the United States at the [Denver Botanical Garden](#) and its then curator, Panayoti Kelaidis.



Left, Josef Halda

Right, [Panayoti Kelaidis](#)

“Every facet of a garden is a vessel for communicating with people, with nature, with the universe. I want everyone to acknowledge plants and gardening, and to accord them the significance they give popular music or sports today.”  
Panayoti Kelaidis



As a supporter of Halda and his expeditions, the DBG put a floor of respectability and support for the Czech botanist. Halda was one of those unfortunate victims of academic collateral damage in the Prague invasion in 1968. The only “[unbearable lightness of being](#)” that Halda felt was that of an academic career cut short through disruption. As a result of being shunted aside, he pursued other avenues. The plant explorer/seed collector role was a good fit for this mesomorphic, Falstaffian figure. Rock gardeners had entered a golden age the likes of which they'd never known due to the heroic exploring work Halda and his wife did over the next decade.

[Kelaidis at the DBG](#) was able to strike a good relationship with Halda and thus he began to appear on the lecture circuit in North America under the auspices and energy of the North American Rock Garden Society.

Kelaidis and the DBG established some beautiful *Dracocephalum* plantings. Kelaidis at around the same time went on an expedition for [Plant Select](#) (an independent wholesale nursery consortium) and really took to this genus and took many fine in situ pictures.

Recently Kelaidis told me the following,

"I have grown "*origanoides*" from one of the Czechs for many years – it is quite different from what I saw as *bungeanum* in the Altai - although both were charming. I have lost both, but I think I hope to be getting both back again. They were both easier and longer lived than the true *D. grandiflorum*, which

probably needs cooler conditions - such as higher in our mountains - to really thrive.”



Left and below: *Dracocephalum botryoides* Lori Skulski, Alberta, Canada.

“The longest lived ‘Dracos’ here in Denver have usually been the subshrubby group (*austriacum*, *altaiense*,

*ruyschianum*, etc.) which are real toughies and last for years. I've grown lots of these over the years at the Gardens, although in my home garden not so much. ***Dracocephalum botryoides*** is the all-time winner for us in the garden - almost a weed in the mountains hereabouts.”



## ---International Rock Gardener---

Kelaidis continued: "I find *D. paulseni* to be quite hard to grow well. I once grew the stunning ***Dracocephalum palmatum*** at the Gardens for several years but like its magnificent cousin, *D. aucheri*, a real challenge. I am sure we could do better now in our new crevice gardens or in troughs."



Kelaidis, as you can see, has had a lot of hands-on experience with *Dracocephalum*.

Getting the right amount of heat, dryness and moisture along with seasonal rhythms is the ultimate battle for every alpine gardener. To be sure there are some weedy dogs in the genus such as *D. multicaule* that a few Czech seed collectors have had on offer. I'm sure there are others but let's not forget that this is a Lamiaceae character.

Left: *Dracocephalum palmatum* "from seed a few years ago... ridiculously oversized, considering the leaves are 5mm across in the widest dimension !" Lori Skulski

When Halda visited the Alpine Garden Club of BC for a lecture in 1994, one of the plants that Halda showed (on good, old-fashioned slides) was *Dracocephalum* aff. *grandiflorum*. It was such an

amazing violet colour and the flower clusters were so evocative. Was it just the S. Altai light? And the plant was very compact! I asked myself, 'But, would it stay that way in lowland, maritime gardens'? It has since proved to be a difficult rock garden plant and not just in a maritime west coast rock garden. Recently three plants placed in different positions in my garden (including one in a pot in an unheated greenhouse) perished. All of them! However, *D. forrestii* has proven amenable. The best one in my garden though for overall performance and merit is a plant that I received as ***D. grandiflorum*** but I have since keyed out as ***D. nutans***. It has been superb. It put on a show last year that was pure stamina and beauty. In my southwest, sunny and sloped bed on an extraordinarily hot summer, it simply had no



problems excelling in low-nutrient, gritty soil without any mechanical watering systems in place.

*D. nutans* straddles the line between alpine and perennial in size and habit. Cutting back the strong stems of *D. nutans* in mid-Summer usually results in another round of flowering.

Left: *Dracocephalum nutans* above treeline W. Mongolia; this can grow much taller at lower altitudes and in cultivation. Photo, Panayoti Kelaidis.

## ---International Rock Gardener---



*Dracocephalum grandiflorum* in the wild, photo Panayoti Kelaidis



The Altai mountain ranges represent great altitudinal variation – map, Wikipedia Commons.

### ***Dracocephalum* facts**

The genus includes about 76 species that grow in the temperate zones of America, Asia and Europe. Within the former Soviet Union there are 38 species. The greatest number of species is concentrated in Central Asia with 24 and in Siberia with 19.

Plants in this genus can be annual or perennial herbs, sometimes shrubs or bushes.

Not surprisingly, there has not been an up-to-date monograph done on this genus. As a result of many changing criteria by previous workers in this field, there is a lot of misidentification of species at the taxonomic level. As a result, there are many mistakes at the horticultural level as well.

[Recent molecular work](#) (Trusty, Olmstead, Bogler, Santos-Guerra, Francisco-Ortega; Systematic Botany (2004), 29(3): pp. 702–715) has shown that *Dracocephalum*, *Lallemantia* and *Hyssopus* form a

## ---International Rock Gardener---

clade. That is a start taxonomically speaking. Budnatshev (1997) and Pojarkova (1954) have offered up morphological criteria to distinguish species but this has proven unworkable due to the plasticity and ecotypical variation of *Dracocephalum* infraspecifically. It begs the question: if the top workers in the field are 'at sea' what's a poor gardener to do? There are some beachheads of certainty that we can find though.



Left: When is a *Dracocephalum* not a *Dracocephalum*? When it is *Lallamantia canescens*! photo Lori Skulski

### Conclusion

The Plant List currently lists 76 "accepted" [species of \*Dracocephalum\*](#), including synonyms and illegitimate names. The RHS Dictionary of Gardening gives an uninspired and unreliable account with the odd comment that, in cultivation, *D. grandiflorum* and *D. imberbe* are usually *D. rupestre*.

As with many other species that are montane and cosmopolitan as to habitat, it would appear that confusion within *Dracocephalum* is largely a result of ecotypical variation. Based on the collection altitudes of *D. grandiflorum*, *D. nutans* and *D. organoides*, different names have been ascribed to the same species.

Any rigorous taxonomist is concerned with the morphological plasticity of a species or family and the amount of investigation at the herbarium level is daunting. To further complicate matters, when they are brought into cultivation, the plants have usually

grown bigger and floppier. This has been known for over 200 years.

*D. nutans* at Denver Botanic Garden circa 1988 – some of the original ones grown by P.K. in the crevice garden Halda built in D.B.G. a couple of years earlier (slides scanned by Ann Frazier) photo P.K.

*D. nutans* is described by [Kelaidis](#) as very variable in size, colour and even ranging from monocarpic to perennial in the wild.

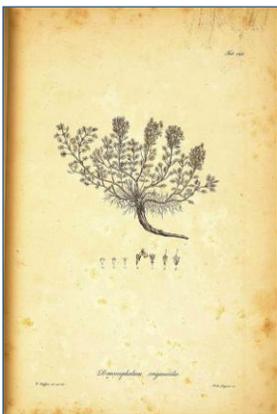


## ---International Rock Gardener---



*Dracocephalum nutans* at Waunakee, Wisconsin - see how tall these are growing above the *Dicentra* plants. Photo Panayoti Kelaidis.

As stated above, there has been no definitive monograph done on this genus but work is under way on the family. The botanist Budantsev, a former Director of the Komarov Botanical Institute, uses the stamens as qualifying/disqualifying characters in his revision of the genus. Others like to use the bracts such as the Flora of China botanists. However it seems we are still quite a way from understanding this genus properly although pollen morphology does hold a bit of a torch. Time will tell.



### Some Ecological and Cultural Notes

Left: This is the type of [\*Dracocephalum discolor\* Bunge \[as \*Dracocephalum origanoides\* Ledeb.\]](#) : [Ledebour, C.F. von, Icones plantarum novarum, vol. 2: t. 128 \(1830\)](#)

The recent Greentours trip to Kyrgyzia found a couple of 'Dracos' including a very beautiful individual of *D. paulsenii*.  
<http://www.greentours.co.uk/Gallery/Asia/Kyrgyzia-2013/3/> and scroll down to the sixth row for *D. nutans* and *D. paulsenii*

The terrific [Russian website on Dracocephalum](#) has this to say on *D. nutans*. :  
"Synonyms - *Dracocephalum nutans* L. = *Dracocephalum alpinum* Turcz. = *Dracocephalum microphyllum* Turcz. = *Dracocephalum nutans* L. subsp. *subarcticum* Kuvajev  
Eastern (Volga region) and Central Europe (probably adventive), Central Asia, Mongolia and the Russian Far East and Siberia. On upland, riparian and forest meadows, steppes, coniferous and birch forests, rocky-gravelly open slopes, on sandy deposits, gravels, comes into the highlands, where it occurs in the alpine meadows and subalpine meadows. Often seen in lowland thickets of dwarf birch and mountain tundra as a weed - a primary succession winner - in wastelands, in fields, roadsides, industrial waste dumps and railway embankments."

## ---International Rock Gardener---



*Dracocephalum nutans* Kyrgyzstan, Chichkan Pass. ©[Vladimir Epiktetov](#)

It would seem that from a geological/mineral point of view, that 'Dracos' especially *D. nutans* have an affinity for magnesium silicates. Note the bluish rocks in the background of this picture, above. Those are magnesium silicates. This is especially true in my sandstone garden in B.C. where the underlying substrate is rich in the harder magnesium silicates.



Left: Note the distinctive unsegmented bract of *D. nutans*, an identifying morphological feature. The opened calyx will ultimately reveal segmented, acute features. Picture taken last spring in [my garden](#).

Right: *Dracocephalum paulsenii* in P.Kelaidis' garden, Denver.

A wonderful alpine if you can find just the right conditions- alkaline substrate, dry atmosphere, well-drained 'soil' and cold winters.

G.W.



# ---International Rock Gardener---

## ---Mountains in the Garden---

**Report on Paul Spriggs' Crevice Garden Demonstration to VIRAGS in October 2013  
by June Strandberg, Canada, photos June Strandberg and Barb Lemoine**



We learned of this workshop in September at the [VIRAGS](#) monthly meeting and

members' plant sale. It was not an open event, so we asked if any of us could attend – two were invited to come. So on October 20th Barb and I headed for Victoria. It was held in Paul's own garden and most of us know that he does not have a lot of room left for people!

Right: One of Paul's crevice gardens

Paul started with his big box piled up with soil and lined up on this were bowls containing the soil ingredients: Sand, volcanic rock, tufa grit and pathway chippings, perlite (optional) all count as 'rock'. Leaf mould, worm castings, coir, peat and potting soil – he used Growell – all count for 'dirt'. Whatever your mix, use 50% rock and 50% dirt.



First rock and ingredients



First big leading stone

After removing the bowls Paul placed a large rock slanting across the middle – about the biggest he could handle alone.

On one side he added slate rocks – being careful to always hide the joins and making the crevices about one inch wide. On the other side he added sandstone – these rocks are the 'Bones' of the garden. Paul does not recommend using two kinds of rock in a small crevice garden but did so here for the purposes of demonstration.

# ---International Rock Gardener---



Left: Short sandstone goes behind the ridge



Right: Sandstones behind the ridge

Then the fun stuff for the on-lookers – pounding down the soil in the crevices, lots of help and more soil is needed!

Then the pounding in of small rocks – with spaces left for plants or sometimes planting first & then carefully adding the rock slivers.



Left: Closing crevices and planting

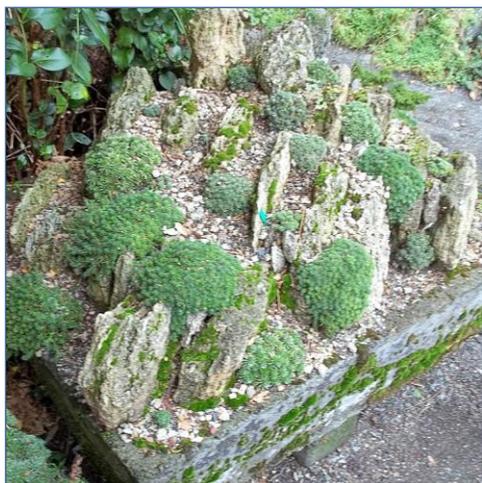
For the plantings, he first put in one or two of the things he had for sale and then produced a pail of cuttings.

An advantage of crevice gardens, beside good drainage and deep, cool root-runs, is their ability to provide a variety of microclimates for alpines requiring different conditions or soil. For example a north facing cliff for a cool shade loving plant or a south facing spot for a plant needing heat.

A little lime can be added into a crevice for a lime lover.

Below: Finished as far as time permitted.

Below: Paul's trough, with tufa, for *Saxifragas*.



# ---International Rock Gardener---

REMARKS from ZZ

The Canadian sporty professional gardener Paul Spriggs illustrates how sometimes a young guru of rock gardening (crevice gardening) will appear in some long established club otherwise full of distinguished seniors. A Swedish example of this miracle is the strong young Viking, [Peter Korn](#). Paul was my best disciple and we did together a few demonstrations at American Study Weekends. He has sharp eye for proper returns of the outcrop back to terrain, for erecting bold ridges and natural erosion of the rock towards a scree or thin layers. All the features are well seen in the illustrations of this article.



He is a happy 'constructeur' with no knowledge how to make amateurish or offensive façades. Victoria in British Columbia has huge granite outcrops with no cracks, crevices or holes, so the building of alternative crevice beds with plenty of luxury or microclimate for its dwellers is badly needed. It is fortunate that there is the existence of fine crystalline rock near the town, called schist.

Left: Demonstration bed with bluish schist in the corner.

Schist is a metamorphic rock consisting of mineral grains that are more or less aligned in layers. Because of this structure, schist tends to cleave into flakes or slabs. The quarry near the town of Victoria (about ten kilometres from the Pacific ocean) provides Paul with blue schist. There is a need to scramble across the scree heaps in the corners of this active quarry to select suitable flat rocks (a similar stone and similar situation can be seen in quarries of Northern Ireland). Stones loaded on a trailer do not cost much per tonne.

Many local schists have 'bad fat bellies' so they provide problems in keeping stone layers parallel to each other; Paul is patient with selection of the best flat slabs.

The continental mountains of British Columbia have small amounts of soft travertine (tufa in English) in the places where there were hot springs in the past. This tufa often splits into parallel slabs or pieces peeled from the tufa outcrop. Paul used them in his miniature crevice gardens.

Right: Miniature tufa outcrop with an uncharacteristic small artistic mistake from Paul: the top dressing is done not from tufa flakes but with another rock of a different colour.

Z.Z.



## ---International Rock Gardener---



**Paul Spriggs is a passionate mountaineer and plantsman.** He has owned his own garden landscaping company for nearly 25 years and is a keen exponent of the [crevice garden](#), having learnt his craft from nature and the Czech innovators of the style, such as ZZ (Zdeněk Zvolánek) and Vojtěch Holubec. Paul is also keen to promote the use of [native plants](#) in garden settings. He is a keen propagator of plants as well as a designer and popular speaker. Paul designed, and built the crevice beds at the [Eswyn Alpine & Rock Garden at Nanoose Place](#).

Above: Paul Spriggs with the [Golden Hinde](#) in the background. Paul has recently climbed this rather inaccessible mountain in British Columbia with our next author, Hans Roemer, who first wrote for the [IRG in 2010](#).



Hans Roemer was born and raised in southern Germany. He was apprenticed in horticulture and studied landscape architecture & landscape ecology.

He earned a [PhD on the forest ecosystems](#) of the Saanich Peninsula, including the Garry Oak ecosystem from the University of Victoria in 1972. He worked in conservation with the provincial [Ecological Reserves System](#) and Provincial Park System. Since retiring in 2002, he has been working as a botanical consultant, mainly in rare plant inventories and monitoring. One of his interests is native grasses. [Roemer's Fescue \(\*Festuca roemerii\*\)](#) an important species of the Garry Oak vegetation, has been named after him. A member of the Vancouver Island Rock and Alpine Garden Society for over 30 years, he has led many club outings to the mountains of Vancouver Island & northern Washington State. Most of his gardening is with bulbs and other drought-tolerant plants. He is also a contributor to a recent book, "Alpine plants of the Northwest - Wyoming to Alaska" ([Pojar & MacKinnon 2013](#)).

## ---Plant Portrait---

### ***Phlox diffusa* in the wild by Dr. Hans Roemer**



I titled this "...in the wild" because I know much less about this plant's cultivation and garden performance than about its natural occurrence. Despite Will Ingwersen's words "...well known in cultivation" there is not much one can find on this *Phlox* in the gardening literature. In the [Index to The Rock Garden](#), the SRGC journal, there are a mere eleven references to *Phlox diffusa*: only one of these is to the plant in a garden setting while the others comment on the attractions of the plant in habitat. Twenty-five entries in the AGS Index refer mostly to observations of the plant in the wild, some to pictures, and only three make some

## ---International Rock Gardener---

scanty comments about cultivation. Among them, North American cushion phlox in general are called “intractable and difficult”. More recently, ZZ in this magazine relates how quickly he lost *Phlox diffusa* from his garden and calls the species a “difficult microphlox” ([IRG#19, July 2011](#)). In his 1970 monograph of the Genus *Phlox* H.L. Foster \* points to the broad distribution of the species in western North America at many different altitudes and to the existence of four subspecies. He also points out that “some forms are relatively easy to grow under garden conditions, others almost intractable”. \* Foster, H. Lincoln. 1970. The Genus *Phlox*. Quarterly Bulletin of the Alpine Garden Society. Vol 38, p.88.



- 1) *Phlox diffusa*, Olympic Mountains, USA. This shade of lilac is the most common colour found in this species in the west.

Current taxonomy still recognizes four subspecies, *P. diffusa* subsp. *longistylis*, subsp. *scleranthifolia*, subsp. *diffusa* and subsp. *subcarinata*. Collectively they range from the coastal mountains in southern British Columbia, Washington and Oregon east to the Rocky Mountains and beyond, a distance of 1800km, and from well within Canada nearly to the Mexican border, almost 2200km. This encompasses

## ---International Rock Gardener---

enormous climatic differences from high yearly precipitations combined with summer minima on the coast to moderate precipitations combined with summer maxima in the east and from high yearly precipitations in the northwest to semi-arid climates in the southeast. The high-elevation effect takes only part of these differences away. In the north and west *Phlox diffusa* can colonize dry rock outcrops below the tree line down to 1000m and in the south and east it can rise to alpine elevations of more than 3600m. That this diversity in conditions would have given rise to corresponding genetic diversity is easily imagined. It is therefore only through careful tracking of provenances that garden-reliable strains of this lovely species could possibly be found.



- 2) Also from the Olympic Mountains, the narrow-petaled flowers of this specimen seem to have nothing in common with those in images 1 and 3. However, the variation in flower colour and shape is enormous in this *Phlox*.

How to raise this species from seed is well described by Trindle and Flessner (2003)\*: Seed collection is tedious as a single seed is formed per flower and seed set is sparse or non-existent in some years. Germination was most successful at 50% after lengthy cold stratification, followed by 45 days of moist/warm conditions. Ventilation and conservative watering were essential as damping-off was a problem. *Phlox diffusa* formed a single, very deep taproot, a complication well known to rock gardeners from other hard-to-grow species. Subsequent garden performance is not available from this study as the plants were used in their natural sites at 2100m elevation at Crater Lake, Oregon, as part of a restoration project. \* Trindle, Joan DC; Flessner, Theresa R. 2003. Propagation Protocol for production of container *Phlox diffusa* Benth.Plants. in [Native Plant Network](#).

## ---International Rock Gardener---



- 3) One of the loveliest forms of *Phlox diffusa* has these broad, overlapping petals in shades of pink (Olympic Mountains).

Among my local rock gardening acquaintances here in Victoria, British Columbia, I found almost as few leads as in the literature to how this phlox performs in the garden. Is this because failures to succeed are readily banished from memory? Most local alpine gardeners relate vague memories of having had it for only a short time and none report profuse flowering such as is common in its natural habitats. There was one remarkable exception, however: A friend and alpine plant enthusiast raised *Phlox diffusa* from cuttings obtained from one of our alpine peaks on Vancouver Island. The resulting specimens, planted in a north-facing crevice, are now about five years old and 20 cm across. They have flowered repeatedly, though not as luxuriantly as their parents in the wild. Encouragingly, they have stayed compact. This is in contrast to my own experience with a specimen I had many years ago. After surviving and sparsely flowering for a number of years it became rather 'leggy', especially after getting entangled with its neighbours.

In most of its natural habitats *Phlox diffusa* is a very abundant plant. The main habitat is on stabilized scree and open stone fields, but also other rocky terrain. Associated vegetation is usually sparse to absent, but sometimes the *Phlox* cushions are set in a somewhat open community of grasses, sedges and herbaceous alpine species. As mentioned, the species occurs both below and above the tree line, wherever open habitats are available. In the northwest the low-altitude occurrences are often on mossy cliffs (Fig. 4) where it roots in rock crevices. These marginal habitats rarely produce the spectacular flowering specimens that are found at higher elevations. Even in their prime habitats not all specimens

## ---International Rock Gardener---

are equally floriferous. Non-flowering plants are often scattered between others that show their best. There is also a great variability in flower shape and colouration. Specimens with narrow, 'propeller-like' petals are scattered among others with very wide, often overlapping petals and differently coloured flowers are sometimes found in adjacent specimens. Generally the colours range from white to lilac, with clear pink not infrequent. Pink or lilac blooms with white centres are also found. This great variation in number of flowers, flower colour and flower shape would indicate that raising this species from cuttings rather than seed is the more reliable method to obtain high-quality plants.



4) Above: Contrary to rumours about *Phlox diffusa*, the species does well on pure limestone, as shown in this picture from central Vancouver Island. Pink forms are also common on limestone.

5) Left: Petal colours rarely get more intense in the purple direction than in this specimen from Vancouver Island. The green foliage next to the *Phlox* is from *Saxifraga bronchialis*.

[Ed.: You can read an interview with Hans Roemer by Friends of Ecological Reserves [here](#). ]

## ---International Rock Gardener---

*Phlox diffusa* can be found on all bedrocks, including limestones (Fig. 6). This is based on observations in the northwest and thus on *Phlox diffusa* subsp. *longistylis* (as are most of my generalizations). However, this may possibly vary in plants from the opposite end of this species' huge distribution.

As mentioned above, carefully recording localities, subspecies, altitudes and other environmental variables for wild-collected *Phlox diffusa* will be key to eventually finding garden-amenable forms of this species.

H.R.



- 6) In the northwest, as here on southern Vancouver Island, *Phlox diffusa* also occurs far below the tree line in cracks of mossy cliffs. The dominant ground cover on this site is *Selaginella wallacei*. *Cryptogramma acrostichoides*, *Allium crenulatum* and *Micranthes ferruginea* are associated species. Such habitats are subject to considerable summer drought conditions.

Final February thoughts:

"In February, the gardener carries on with the jobs of January, especially in cultivating the weather. For you ought to know that February is a dangerous time, which threatens the gardener with black frosts, sun, damp, drought, and winds; this shortest month, this addle-egg among the months, this aborted, leap and altogether unreliable month, excels them all with its wily tricks, therefore beware of it. During the day it wheedles out the buds out of the bushes, and at night it blisters them with one hand and it cajoles you, and with the other it makes you feel a fool. God only knows why in leap years one day is added, just to that wayward, catarrhal, sly, and stunted month; in leap years one day should be added to the beautiful month of May, so that there would be thirty-two, and all would be well. What have we gardeners done to deserve that?"

~ an extract from ['The Gardener's Year'](#) - by [Karel Čapek](#), 1890 - 1938.