

# International Rock Gardener

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## ---International Rock Gardener---

August 2014



It is always a pleasure to have news from the various Alpine and Arctic Botanical Gardens [of Europe](#) and we are fortunate to have friends in these places to report in [The Rock Garden](#) and Forum. One such garden is the Le Jardin d'Altitude du Haut-Chitelet in the Vosges mountains of France. Our correspondent is Philippe Chauvet, a young man who has worked for around 15 years at the gardens at Haut-Chitelet where he spends six months of the year and at the [Botanic Gardens of Nancy](#). You can read his introduction to the garden [here](#) from the time he began his [forum reports](#). In this issue he tells us a bit about the June highlights of the Haut Chitelet. Thanks are due to a friend for translation of some of Philippe's article.

At the [SRGC Discussion Weekend in October](#) one of the speakers will be Arve Elvebakk, Director of the [Tromsø Botanic Gardens](#) in Norway, the most northerly of the world's botanic gardens. Of course we do not restrict our interest and admiration simply to Europe: at that event a presentation will also be made by Nicola Ripley, Director of the highest alpine garden in the world, the [Betty Ford Gardens](#) in Vail, Colorado.

Also in this issue, [Grahame Ware from British Columbia](#), editor, broadcaster and plantsman, writes about the history of a fine *Campanula*.

Cover photo: *Campanula choruhensis* by Zdeněk Zvolánek (ZZ)

## ---Gardens in the Mountains---

### The Alpine Garden at Haut-Chitelet, June 2014 Text and photos, Philippe Chauvet



The season at Haut-Chitelet starts with the opening of the garden in early June. In 2014 after a very mild winter and a spring which, at least in part, was very similar, plant growth was well-advanced with many small miracles beginning to adorn the rock work and other outcrops.

June 2014 was warm on the whole but unusually dry. After some early rain, there was no more for about 20 days in a row. We even had a heatwave with 29°C in the garden, up to 37/38°C in the lowlands, which nearly gave us our highest temperature of the last 15 years. The heat lasted 3 days, with no thunderstorm in the end, and then it went desperately, totally dry.

I regard this as another obvious proof of the onset of climatic change. Something similarly exceptional also happened just last year in July, with almost 3 rainless weeks then. All these extremes are no longer random events that would happen only a few times in a decade; more than ever, they will have to be expected more regularly and even perhaps more frequently, in the years to come.



Contrasting views of the conditions in the garden in April 2013 (left) and April 2014 (right)



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So daily watering was once again the main task in the garden during the biggest part of June. No weeding of the beds, or only here and there, no pricking out or planting at all for the whole month: a pity, as June with its long days is the best time to do such things.



We'll start our quick scan of the horizon by pausing at the area for the European mountains. At this time the alpine section of the rock garden naturally takes pride of place: it traditionally starts off the flowering season in the rest of the garden.

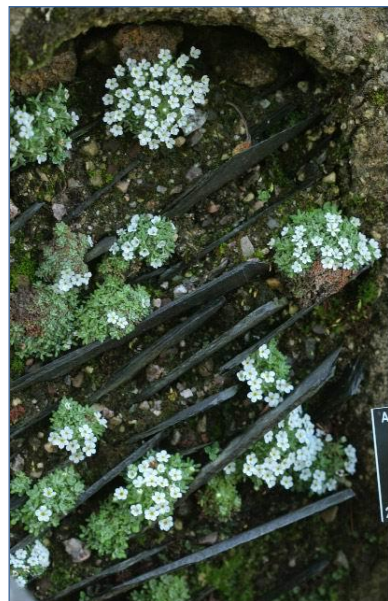
We'll begin with *Ranunculus gouanii* (left) a strictly Pyrenean plant which looks at first sight just like a common buttercup, though clearly more refined, with large, cup-shaped flowers. When planted in number, it certainly produces a very beautiful effect in the rock garden.

Also from the Pyrénées *Carduus carlinoides* (below) Heads of pink flowers like a normal thistle, but with a very interesting silvery foliage

*Lilium pyrenaicum* (below)



*Androsace vandellii* not only grows in the Pyrenees but also in the Alps, and this consequently accounts for its presence in the Alpine section. This magnificent androsace is accommodated here in a vertically-placed trough in an attempt to reproduce its natural growing conditions as best we can. The plant clings to rock faces overhanging the void and with its sites being so difficult of access, it scarcely suffers any competition.



Its naturally fairly accommodating nature in the midst of a group of fairly difficult species equally allows us to grow it in a more conventional manner, that is to say, horizontally, as long as it's provided with impeccable drainage and given the necessary protection from winter damp.



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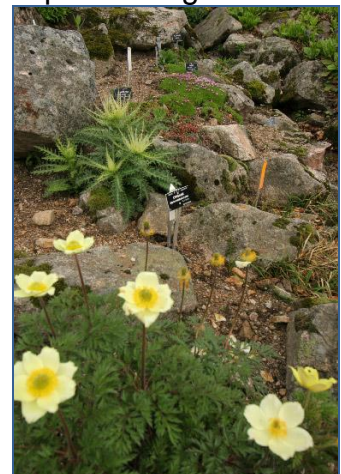


Now for a classic plant of the mountain scene, ***Silene acaulis***, (above) which can be found from the high latitudes of the northern hemisphere to most areas of high ground to the south, though its form certainly varies. It grows as a regular cushion or undulating carpet on the rocks. This allows it to make the most of that rare and precious commodity, the heat stored in the ground, whether in polar climates or at very high altitude in our mountains.



This shows great class for a plant belonging to the thistles! It is fond of damp places.

***Cirsium spinosissimum*** is reminiscent of some of the strange himalayan alpine *Saussurea* species. This plant is a much easier species to grow.





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On the left is *Pulsatilla alpina ssp. austriaca* which is the pulsatilla found in cottage gardens in the Vosges, recently regrouped under the species *austriaca*. It can be found here and there in the mountains of central Europe, which includes the Alps of course, but never very extensively.



*Campanula thyrsoides* (right): A truly magnificent species of campanula which should be found in every rock garden if climatic conditions allow its irreplaceable presence.



Left:  
*Oxytropis campestris*



*Papaver rhaeticum*: A wild collected plant, which needs hand pollination to prevent too much crossing with the *P.alpinum* that grows in other parts of the bed.



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***Paradisia liliastrum***, together with *Lathyrus laevigatus* and *Paeonia officinalis* in the background. It's only a shame that *Paradisia liliastrum* blossom does not last much longer. I couldn't live without this plant.



***Sedum pilosum***: also from the Caucasus, for a crack in the rocks, far away from every other possible plant competition to keep its condensed habit.



Out in the Caucasus, with ***Centaurea cheiranthifolia*** (above): very useful for a somewhat wild place in the beds, associated with taller growing species, as it will generously spread with underground shoots, rapidly covering an increasing surface. The abundant blossom is a first class spectacle. The very sweet colour allows many combinations with other flowers, and I hope I can show in the years to come some breathtaking associations 😊



A step east again – ***Primula halleri***

Haller's primula comes from the eastern part of the Alps and Carpathians. It can be distinguished relatively easily from its near relatives by the quite unusually long tube, the long and delicate part of the flower preceding the petals.

This primula takes us directly to the Himalaya and China, the cradle of more than  $\frac{3}{4}$  of all the species described.



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### ***Primula involucrata*:**

This is a delightful plant of damp places. Its flowers are a delicate combination of white, pearly pink and pale mauve, and all possible shades in between.



I have waited patiently since the sowing in 2009 to see the first blossom on ***Lilium lophophorum***, (above left) which happened this year. Simply a delight, and there can be no greater reward for a gardener to see such miracles happen.

Let's stay in Asia with some other plants pics from there. ***Incarvillea forrestii*** (below left): an interesting plant at flowering time with its huge bright pink flowers, somehow reminding us of the same flashy pink of *Primula rosea* flowering some weeks earlier.



### ***Cremanthodium arnicoides***

Another plant I couldn't wait to admire its first blossom, and it was well worth it. I love *Cremanthodium*. These could be simple alpine sunflowers, but they are of course much more than this, and the fact that much of them grow in the monsoon wet places of the Himalaya has an immense attraction for me. Probably it's also because I love that weather so much (so long as one can shelter from it!)



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I must include two Himalayan poppies: *Meconopsis horridula* (below left) and (right) *Meconopsis baileyi*



The high ground of southwest China or the eastern part of the Himalaya is home to the undoubtedly equally numerous rhododendrons and primulas. Here we have *Rhododendron keleticum*, in full flower in June. It enjoys the generally cool and damp conditions of the Hautes-Vosges.



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Back to primulas: full plant and close-up of *Primula watsonii*



Another stunning primula, shown here in 2 beautiful forms.

***Primula tangutica*:**  
I guess the seeds were all collected at the same place in the wild, but this great variability could also be the sign of two very close species.



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Above left: *Primula reidii* var. *williamsii* together with *Corydalis cashmeriana* in the foreground, both from the western part of Himalaya. Above right: *Primula muscarioides* - here we have a primula from southwest China with a head shaped like a grape hyacinth. It's a small, delicate plant with a pleasant perfume and the single drawback of being short-lived, sometimes lasting in the order of 2 to 3 years.



***Primula longipetiolata*:**  
We'll remain in China but this time in the mountains in the centre of the country within the confines of Sichuan, Gansu and Qinghai in order to make the acquaintance of this superb primula which combines a number of qualities: elegant leaves, magnificent flowers and a sweet perfume.



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A last plant from China: *Polygonatum hookeri*



*Primula ellisiae*

Let's look at one last primula but this time we'll change continents and find ourselves in the southern part of the Rocky Mountains of North America. As the climate there is generally drier and warmer than in the incessant Himalayan mists, this primula is to be found in zones where humidity and coolness are provided by the particular conditions of the terrain such as shady rock faces where there is always a little water, and beside rivulets.

*Lewisia nevadensis*



Also from the Rockies, lewisias tolerate much drier conditions, their thick, fleshy roots acting as true reservoirs. This allows them to face the summer season without batting an eyelid. However should conditions become really difficult, certain species of the type have solved the problem by simply becoming dormant and making the most of the spring conditions only to produce leaves and an abundance of flowers before disappearing totally till the next year.



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***Polemonium pulcherrimum***: We'll catch a last glimpse of North America with this little polemonium which never grows taller than 15/20 cm and has slender leaves and stems.



Now, a look at some southern American plants.

### ***Calceolaria uniflora***:

This is still grown in pot in the propagation area, as the sowing from last year didn't give anything. This is the last living plant, the other one died in fall last year. Careful hand pollination was made again in June on every flower, and it seems 4 of them are producing seedpods, which should be ripe very soon, allowing another sowing. This time hopefully with germination results!



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***Oxalis enneaphylla***, from southern Chile and Argentina. Another plant resistant to spontaneous local insect pollination. Bulb division is however a good means of propagation, as soon as there is enough to play with.

And a last trip to Japan: ***Schizocodon soldanelloides* var. *ilicifolius***



A view from the Japan bed, filled with perennial rather than true alpine plants. ***Iris setosa*** with ***Primula japonica*** and ***Rhododendron japonicum*** in the background.



The difficulties we face are first of all for the plants themselves. It's all about adapting the soil mix and the precise plantation site of the new plants. This is going to become more and more difficult. We now try to make a "not too light" soil for the new beds, which can hold a bit more water during these increasing periods of drought, but that is very risky at the same time, as a wet winter could also mean too much humidity staying too long in the soil. When planting now, I really think about if I should find a place near water or not too far from the shadow thrown by a tree at some distance. These are good choices for some plants, but once again, if the weather stays wet or cloudy for too long, even in summer, these plants would surely better prefer an open place in a drier situation.



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I have to admit that this June was sometimes really tough and stressful to hold the garden in good condition at a time it needs the most care, raising many questions, and giving more doubts than ever. For some species and if the climate goes on changing so rapidly, I feel we are getting near the point where cultivation totally in the open is going to be harder and harder, and later maybe even impossible.

I hardly dare look at the summer weather forecasts. More days at 36/37°C in the lowland could be in on the way. Of course we're not going to get such temperatures up in the garden and anyway most plants have passed their growth peak and highest watering needs, but here it is again, without clouds or thunderstorm, we are going to approach the 30°C again. Relative weather-regularity definitely seems a lost thing in the context of climatic change. Fortunately, July brought the long sought-after weather change, we were back with rainy days and cool temperatures, so that much was done again to try to catch all the lost time in June.

The planting in the new southern hemisphere bed could begin, the last of the oldest North American beds was renewed, and part of the Caucasus and Balkans beds were planted out to improve the soil-mix and give the plants a boost.

The creation of a bed for the central Asian mountains is planned now, and should be achieved this season to welcome plants such as *Trollius ledebourii*, *Hegemone lilacina*, *Eremerus altaicus*, *Cortusa turkestanica*, *Thalictrum petaloideum*, *Pulsatilla campanella*..... P.C.



***Silene vallesia***, is a species widespread throughout the western Alps to Apennines.

[Ed.: Index to IRG up to and including this issue – [click here](#)]



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***Campanula choruhensis*** from ZZ's collection site - a pinker form than that of GW. Photo by ZZ.

### ***Campanula choruhensis* - The Convoluted History of an Alpine Star** © by Grahame Ware

No rock garden is complete without the sumptuous and prolific flowers of *Campanula*.

According to the botanists Fedorov & Kovanda (1978), the highest species diversity in the genus is found in the mountain ranges of the eastern Mediterranean and the Caucasus area. It is a biodiversity hotspot in NE Turkey that some have called the Anatolian Triangle. Since the work of botanist Peter Davis and others in the late 60's and 70's, there have been 16 new species and a handful of subspecies from this zone added to the total. Many of these new discoveries are thankfully proving to be excellent rock garden plants.

One of the best of these 'recent' discoveries is *Campanula choruhensis*. This wonderful species was formally described about 30 years ago by Kit Tan and Sorger (*RBGE Notes* 40:333). The specific epithet references the river Çoruh which flows and widens near the town of Yusufeli in Anatolian Turkey and eventually flows into the Black Sea while briefly crossing into Georgia. [The holotype](#) (type species on file) hails from Tortum and the Kargapazari Dag in Turkey, where it grows in shady cliffs of decomposed schist and in volcanic rock crevices at elevations of around 1520-1830m (5-6000ft). As with many *Campanula*, it fertilizes readily with others in its section so beware of your source (and your subsequent opinions).



Close up of *Campanula choruhensis* grown by Rudi Weiss



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Like many rock gardeners, I first knew of this plant only from the Rocky Mountain Rare Plant seedlist in 1993. It was from this list that I first grew it. The first mention that I recall of this fine plant in horticultural literature was in the AGS Bulletin Vol. 63-4 (December '95) on p.417 in a Michael Baron article, 'With the AGS in North-Eastern Turkey'. Bob Wallis thought he had found *C. choruhensis* at Tortum Golu on this trip. He probably had.



***Campanula troegerae*** grown from Archibald seed by John Forrest.

[Plantsmen Jim and Jenny Archibald](#) were the premier seed collectors in the 80's and they made stunning collections replete with observations and site notes. These were freely available to their customers. In their November 1986 seedlist (a mechanically typed and photocopied manuscript!) entitled [Caravan to Van](#), the Archibalds originally mentioned *C. choruhensis* as a form of *C. betulifolia* without listing it as such. Their accession number was 252.000. Some writers such as Zdeněk Zvolánek aka ZZ ([IRG Aug 2010, p3](#)) have speculated that the Archibalds likely distributed *choruhensis* earlier than this believing it to be a form of *troegerae* - the latter species having been collected by them some 10 years earlier. This may be so. From reading the Archibald catalogues from this 1986 period, it appears that they thought that *troegerae* and *choruhensis* were but subspecies of *betulifolia*. Molecular work may yet prove them right.



***Campanula troegerae*** growing in the garden of Rudi Weiss.

Bobby Ward in his book, [The Plant Hunter's Garden](#) (p.28, Timber Press, 2004), says that the Archibalds thought that *choruhensis* was a form of *betulifolia*. The Archibalds had already collected and grown *C. troegerae* 10 years earlier in 1976 so they knew what this species (*troegerae*) was all about so it seems unlikely that they would have distributed *choruhensis* as a form of *troegerae*.

The Archibald seedlists are available as part of [the Archibald Archive](#) on the Scottish Rock Garden Club website. It is there that we see this entry for *C. choruhensis*: "Turkey, Erzurum, N. of Tortum, 1350m. Igneous rock crevices. Another splendid member of the *C. betulifolia* group( sect.Symphyandriiformes). Thick-textured, slightly downy, greyish, toothed foliage and huge white bells, often pink-tinged externally. Introduced by us in 1986 as a form of *C. betulifolia*." And this was their entry for *C. troegerae* 265.500: "From our 1986 & 1988 introductions, now well established in cultivation. A magnificent



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relative of *C. betulifolia*, with which it intergrades in the adjacent Coruh valley. In this the great white bells of *C. betulifolia* are split down and opened out almost flat to form a breathtaking flower. The thick, greyish, densely pubescent leaves are also most distinct.”

However, it was not until nearly 20 years later in their [December 2005 seedlist](#) that the Archibalds listed *Campanula choruhensis* (253.450) *per se*, with this comment: “Collected near Erzurum north of Tortum at 1350 m. It was introduced by us in 1986 as a form of *C. betulifolia*.”

Tellingly, as we saw above, the Archibalds mention that *C. betulifolia* intergrades with *C. troegerae* in adjacent valleys. How many collections have been made of intergraded species such as *betulifolia* x *choruhensis* in this *Campanula* hot spot in NE Turkey?

Especially at higher elevations where the flowers are smaller and more tightly packed? Ah, the mysteries of plants and gardens.



***Campanula choruhensis*** in my east Vancouver Island garden

But some 20 years on after its introduction into horticulture mainly via seed collection, the story of its origins and its identification still get a little mangled by a few nurserymen. One of them is [Graham Nicholls](#) who says, "*Campanula choruhensis* was introduced into cultivation by Josef Halda in the early 1990s via seed from Rocky Mountain Rare Plants and is one of the best campanula introductions ever." There is no arguing with the last part of that statement but as we can see from the aforementioned scouring of the Archibald seedlists as well as the writings of other primary seed sources, etc., clearly this is not the case in regards to the first part. I have confirmed this with both Kelaidis and ZZ (personal communication).

In addition, I have checked the catalogues of Halda from this period 1994 and 1995 and can see no listing of *Campanula choruhensis*. During this period, Josef and Jarmila were collecting mostly in the Altai, including Abschasian Caucasus, Kyrghistan, Tadjikistan, Uzbekistan, Mongolia and the E. Siberia with some sweeping forays into Greece, Slovakia and Albania. Thus, it seems unlikely that



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Halda would have collected seed in this area when ZZ *et al* had been there to do the same after the initial excursion there in 1992 where cuttings were collected and successfully struck by Milan Halada using the moist confines of a pilsner beer can!

This info and the year it took place is contained in [The Rock Garden for January 2008](#) and was also shared in the [newsletter of the Dublin AGS](#) group, by none other than ZZ:

"In summer 1992, a small party of Czech rock gardeners (Jurasek, Pavelka and Halada) crossed that magic bellflower triangle in NE Turkey (which is historically Armenia). They travelled in an old Romanian Dacia car chauffeured by a Czech dentist who also served as the cook. The poor old car was constantly overheating so they stopped for a rest at the bottom of a steep hill. When they climbed out of the car Milan Halada, observing the closest rock outcrops, saw an interesting white object. It was our campanula in her full oriental charm. No seed was available so they collected some living botanical samples. Milan, intelligently, pushed it into an empty can of Efes Pilsen beer. Next year another party (Czech-Canadian with Jurasek, Holubec and Joyce Carruthers) returned and stopped at the same locality, NE of Tortum. This lovely campanula was in seed and still showed some samples of its delicate white flowers. I was delighted too, to see some plants with red buds and pale rose-coloured flowers. The rock was volcanic; probably basalt, and most of the plants preferred an aspect out of the scorching Turkish sun, keeping themselves cool in crevices, but some brave ones were sunbathing near the base of the rock. On our return my seed was immediately posted to Panayoti Kelaidis in Colorado. Josef Jurasek and Vojtěch Holubec offered it in their catalogues that year."

This would have been the seed that I got (via RMRP, which is sadly closed) when I grew *C. choruhensis* for the first time. We know that ZZ *et al* collected the real thing from a different site than the Archibalds in the summer 1993. We also know that they distributed it vigorously through their network of alpine gardeners. ZZ relates this information regarding the real *C. choruhensis* and their site collection. "Our collection site is directly above road D955 (from Tortum to Kars, somewhere behind the village of Kirecli at an elevation 1900-2000m). This species prefers crevices with a north-east exposure. Sometimes it will grow in full sun too. The plants are variable at this site, some are pink in bud, some have smaller flowers and the flowers are more open or less opened, bell-shaped or more saucer-shaped. They are always smaller and do not have the flat habit or the bigger flowers of *Campanula troegerae*."



Habitat of the 1993 collection by ZZ *et al* of *C. choruhensis*, photo ZZ



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Once this source of *C. choruhensis* was grown in various rock gardens in Europe and N.America, there was no stopping the enthusiasm that alpine gardeners had for this plant. As said earlier, ZZ's seed was listed in the Kelaidis' 1993 Rocky Mountain Rare Plants seed catalogue (as **93-0172**) albeit as *C. coruhensis*. (This spelling is understandable as the Turks spell it with a *cedilla* as follows: **Çoruh**: pronounced chaw-ru). This was the first publicly available seed and would have been the source of Graham Nicholls plants. RMRP also had a rose form 93-171 that ZZ sent along with this AN (Accession #- CZ 0022). The Czechs - Jurasek and Holubec - had also started to list it in their earliest seed catalogues about this time. (See Endnotes)

As a result of growing it from these seed collections in various rock gardens from Victoria to Vernon and the UK to Colorado, *Campanula choruhensis* went from a mere debutante to Queen of the Ball. It quickly won the hearts of rock gardeners around the world. And why not? It is simply gorgeous. Not far in arrears were its newly described Turkish sectional cousins *C. troegerae* and *C. betulifolia* and a little later *C. kirpicznikovii* and *C. seraglio*.



*C. kirpicznikovii*, photo Zdeněk Řeháček and *C. seraglio*, photo Rudi Weiss - photos from SRGC Forum



These last two I have found more difficult to keep and they have gone the way of the passenger pigeon. I will try again though as they are terrific alpine plants too. All of these alpine harebells from the *Betulifolia* Group (as botanists like to call it) are standout feature plants in the alpine landscape. Some of these plants have been available as plants from a few nurseries. (See End notes).

***C. betulifolia*** in the New York State garden of Anne Spiegel.



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***Campanula betulifolia*** in [Zdeněk Řeháček's](#) Czech highland garden

As one can see in this photo, right, of ***C. betulifolia***, it has striking similarities to *C. choruhensis*. However, the smoother, greener leaves are a giveaway as are the burgundy stems. This horticultural history is worthy of deeper analysis because there has been some confusion from the very beginning in regards to the true identity of both *C. choruhensis* and *C. troegerae*.



In 2010, Kris de Raeymaeker in the SRGC Forum wrote:

“We have been in the Çoruh-region this year. We have seen hundreds of *Campanula* of the *troegerae/betulifolia/choruhensis* -group. Now after visiting this area I am more confused than ever because I think they often hybridise in nature. In this region it was very difficult to say which one we have seen. So much diversity and forms that looks like each other... “

In the summer of 2008, Panayoti Kelaidis had published a picture of *C. troegerae* in [The Rock Garden](#) (the SRGC journal) but he referenced it as *C. choruhensis*. Later he advised in his blog, [Prairiebreak Blogspot](#), that it was however, a hybrid with *C. troegerae*. The cross as we shall see is a beaut and more than a few nurserymen offer a cross. (See pic below and Endnotes)

***Campanula betulifolia* x *C. choruhensis***  
in the garden of Zdeněk Řeháček

I believe that because of the original listing and identification by the Archibalds that *C. choruhensis* was tabbed as "a very fine form" of *C. betulifolia*, that some confusion continues to the present although I believe most competent nurserymen and growers know the difference(s). In the picture below note that the burgundy stems of *betulifolia* are not present but overall it has a real *choruhensis* look.



So, the big question is this: who was really responsible for disseminating the real thing? An even bigger question is this: did the Archibalds actually collect *C. choruhensis* or a natural *troegerae* x *choruhensis* hybrid? To this last question, I think it is safe to say that we don't really know. However, I believe that what we can say with certainty is that the ZZ/RMRP seed was the real thing; at least as real as collecting anything in the world's greatest *Campanula* hotspot can be.



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### AWARDS

In 2007, Jim Archibald was awarded a CM (Certificate of Merit) by the AGS for *C. choruhensis*. Three years earlier in 2004, Lee and Julie Martin won a Farrer Medal for their *C. choruhensis*. In 2009 the Martins won Best of Show at the Summer North event held by the AGS for this darling, pictured below, and, even earlier, a CM in 2001 for it.



The 'Best in Show' plant and Lee and Julie Martin pictured in 2009 by Cliff Booker illustrating what a fine show plant this versatile campanula can be.



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Everyone now knows what a fine plant *C. choruhensis* is and its sectional cousins *C. troegerae* and *C. betulifolia* aren't far behind. So what are the differences?

Here is what I know: *C. troegerae* has grayer foliage as a result of more silky hairs (pubescence) and the buds are a soft pink whereas *C. choruhensis* has smoother, green foliage (but not as glabrous [smooth] as *betulifolia*); and the buds are a richer pink. Admittedly, the degrees of hairiness can throw one off. The ends of the flowers also recurve with *C. choruhensis* whereas the inflorescence of *troegerae* has a flat, wide-open form. This admittedly non-botanical 'key' should at least give the average alpine gardener a clue or two.



*Campanula choruhensis* photo by Gene Mirro



Left: *Campanula choruhensis* exploding with buds in late spring, G.Ware. Right: ZZ's form with very pink buds growing on the Beauty Slope.



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### Cultivating *C. choruhensis*

I first grew it in the mid 90's from RMRP seed but my recent plants came from Pavelka seed that was collected in NE Turkey at Tortum 2000m. I am still amazed at the structure of this somewhat woody, saxatile species. During winter, the part of plant above the rock or a planting surface is reduced to a hard woody ball. From this ball, herbaceous stems develop in spring. During the hot summer, this species freely sets seed, and its stems are thin and brittle but still engorged with milky juices. *C. choruhensis* does eventually flop because of the quantity and weight of the buds/flowers. This is why a vertical situation is best. However, it could in no way be confused by alpine gardeners with short-stemmed Turkish saxatile *Campanula* spp. such as *C. hakkiarica* or *C. hacerae*, that also have woody bases just above the crevices they inhabit in the wild. *Campanula choruhensis* is a really stunning plant but it does benefit greatly from good placement. The best position in rock garden is in a vertical wall or boulder crevice overhang. If placed in a horizontal position, the stems, once heavy with bud and flower, will droop and thus the flowers are in contact with the grit or soil. This can ruin the presentation of the flowers. In my garden, I have mine perched on the highest side of a sloping bed and when it buds up and gets ready to flower, I use an ornamental piece of a cedar branch as a collar or neck brace. This is not just a case of aesthetics either although I would argue that this flouncing up adds more beauty to the presentation. By keeping the flowers gathered up, more stability is provided to the stems. The cedar branch blends into my 'All Washed Up' bed (treated driftwood, etc. from local beaches). The photos speak for themselves.



***Campanula choruhensis*** with beautiful cedar 'neck brace' in bud & flower, photo G. Ware

I realize that this mine is a west coast, maritime technique that may not apply to your garden. Having grown this in an arid climate where wind and rain are certainly not big factors influencing form and habit, I can tell you that the chances of getting a nice, round bun (that is a self-supporting mound) are so much greater in the arid south interior of BC or in Colorado for example. Be that as it may, it still works very well here.



## ---International Rock Gardener---

I grow it here on the east coast of Vancouver Island, BC in full sun in a bed of chippy, granitic sand combined with coarse sand and a touch of peat moss. It is very well-drained substrate but it sits atop the natural subsoil level which is compressed shale and [podzolized](#) soil. There is no need for sub-irrigation systems this way.

In addition I use a stone mulch of shale chips which imparts the pH/mineral hit that its DNA loves so much due to it being a limestone chasmophyte. Everytime it rains or is watered, there is a dilution that feeds it.

*C. choruhensis* is so adaptable and clever that, as I said above, it quasi-aestivates in my garden. It has returned, however, in a glorious fashion these last two years with this spring the best yet.

I highly recommend this plant for beauty, ease of culture, stamina and longevity.



***Campanula choruhensis*** in situ Çoruh gorge, NE Turkey, photo Klaas Kamstra

### Endnotes

- 1) [Beaver Creek Greenhouses](#) in Canada has had on offer plants of *C. troegerae*, *C. choruhensis*, *C. seraglio*, and *C. kirpicznikovii*.
- 2) [Graham Nicholls](#) has been crossing *C. betulifolia* with *C. troegerae* and offering the offspring as plants as recently as 2013. He won a PC with his *Campanula choruhensis* in 1997.
- 3) [Siskiyou Rare Plant Nursery](#) in Oregon was offering *C. choruhensis* and *C. troegerae* x *C. betulifolia* in 2010. Neither was on offer this year.
- 4) Plant World Seeds in Devon, UK, [lists \*C. choruhensis\*](#) but has the story wrong as we now know.
- 5) Of course both [Mojmir Pavelka](#) and [Josef Jurasek](#) have been offering seed of at least wild-collected or garden saved seed of *C. choruhensis* over the past number of years. Mojmir Pavelka has [this website](#).
- 6) Herman Berteler hosts a [campanula website](#).



***C. troegerae*** Note the flat, wide-open flowers and orbicular leaves, photo Klaas Kamstra

### Acknowledgements

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G.W.