

International Rock Gardener



---International Rock Gardener---

December 2010



With this issue IRG completes its first year in existence – we hope you have enjoyed our efforts. The IRG Team thanks you for your words of advice and encouragement and [invites you to submit](#) ideas, articles and photographs for future editions.

We in the IRG Team are greatly indebted to a former SRGC President, T. Glassford Sprunt for his preparation of an Index for the 12 issues of

IRG for 2010, which is appended to this edition.

A reminder that you may make any feedback in the [Forum of the SRGC](#). The Forum is, like the main website of the [SRGC](#), available to all to read. To make a post, of text or photos, a simple process of registration is all that is required. The Forum is also a huge resource of information and photographs of thousands of plants and places. It has a search facility to help you find what you are looking for. Currently there are over 170 thousand posts in around 5300 topics!



In this season where many gardeners in the northern hemisphere are experiencing cold and snowy weather it seems appropriate to have this photo of *Paeonia* 'Joseph Rock' and the Karlik Church, taken by ZZ, as the IRG cover picture.

Wherever you are in the world, may you find peace and happiness now and in the year to come.

---Gardens in the Mountains---

Lallemantia canescens by Prague PEPiEDIA



Lallemantia canescens (syn. *Dracocephalum canescens*) grows in Turkey, Armenia and Iran at altitudes of 1500- 3300 m.

We are obliged to Czech seedsman Mojmír Pavelka who photographed this now relatively unknown perennial plant from the Lamiaceae family on Sipikor Daglari.

The Sipikor Mountains are a large massif north of the town of Erzincan in NE Turkey. Mojmír first saw this plant at the pass called Kop Dag Gecidi (2400 m) in 2005 and noted that these plants with grey-blue leaves were only 15 – 25 cm tall. Flowers are blue-violet to purple (3-4 cm high) with striped calyces, carried on erect stems.

Blooming continues over a long time in summer. Plants in rich soil in watered beds can be up to 45 cm tall so a poor mineral soil is better for neater plants, growing more "in character".

The internet informs us that there are also white and pink clones in cultivation and that the plant was popularly [grown as an annual](#) in the 1840s.

---International Rock Gardener---

DIVINE IDA by Zdeněk Zvolánek

I have not had an academic education so I know of only three mountains where the ancient Gods (females and males) surely indulged in happy rock gardening during their leisure time (when they were not immersed in their other supernatural and divine activities). The most famous is the Greek Mount Olympus and the Bithynian Olympus above the Turkish town of Bursa is better known to alpine gardeners as Ulu Dag. I will write about the lesser known holy mountain named Mt. Ida (which was the local Olympus for both the rich and poor people of the kingdom of Troy and sacred, as Phrygian Ida in ancient times, to the goddess Cybele).

If the Gods are not celebrated, adored and served well, they change their coats, local names and move to distant places where they will be welcomed and given their due deference. So, the relics of those abandoned holy places are fortunately not just dead love stories but the plants and alpines, which are still living at the tops of the ancient divine peaks.

The northern foothills of Mt. Ida (now renamed Kaz Daglari) have lovely brooks with romantic ponds and it is the key place where the Trojan prince, Paris, judged the classical charms of three important women. Aphrodite got her Award of Merit (Athena and Demeter were offended), Paris won Helen and the long and bloody Trojan war had its theatre at the sea shore north of Mt. Ida.



Centaurea odyssei in the garden

This place, in woodland, which is surrounded now by a busy Turkish camping region, was the start of a few Czech expeditions to see the endemic plants in the land above the trees. The hike from the north is long (10 km) and high (more than 1 km) and I was lucky that I attempted this track only once. There is *Paeonia mascula* under the trees (pink or nearly white in bloom) and golden *Saxifraga sancta* in steep stony sanctuaries in higher elevations. Pretty *Aubrietas* decorate the cliffs too. Just above the last tree line are lovely limestone rock gardens with dwarf green cushions of pink blooming *Acantholimon trojanum* and yellow flowering *Centaurea odyssei*. Both are easy in cultivation: spiny but desirable. A very exotic pale pink or pale yellow-brown *Matthiola trojana* which Milan Halada gave me comes from this area. My younger companions, Josef Jurášek and

---International Rock Gardener---

Mojmír Pavelka, knew the steep northern marble outcrops above the rock gardens from previous trips and were able to recognise all the different tiny nonflowering alpine plants. They explored the best ledges before me and only fresh wind and paper bags were to be heard. Experienced pioneers and prospectors of Turkey, like the late Jim Archibald or Erich Pasche, know well that the above mentioned paper bags are used only to cover bottles of beer, because to drink in public places is in Turkey strictly prohibited.



Asperula sintenisii in the garden

I went to my knees to give respect to this sacred place and to see the perfect association of miniatures at close quarters. After a long while I was able to recognise three first class plants. *Asperula sintenisii* (introduced in the past by British hero John Watson) formed flat blue- grey-green cushion and promised to show in every garden its impenetrable masses of rose-pink sessile flowers. This species is variable in the colour of its tiny leaves and needs surface or sheet

drainage in a crevice with slightly alkaline mineral soil with no humus.

The Golden King of Ida, the absolute one, is *Linum boissieri*. (left)



This is the surely the best flax for lucky crevice gardening! The buns are extremely compact. They are pulvinate miracles with perfectly formed leaves.

The relatively large golden flowers are sessile and the whole is a truly divine design for a sure medal winner. Last year I planted three seedlings into crevices in a cool place behind our stone cottage and two of them died during the growing season. We can blame two faulty conditions; too shady a place or not “sterile” mineral soil, or both. In every case this noble flax is easier in the garden than the schist loving *Linum aretioides* from ancient Mt. Tmolus (now Bozdağ).

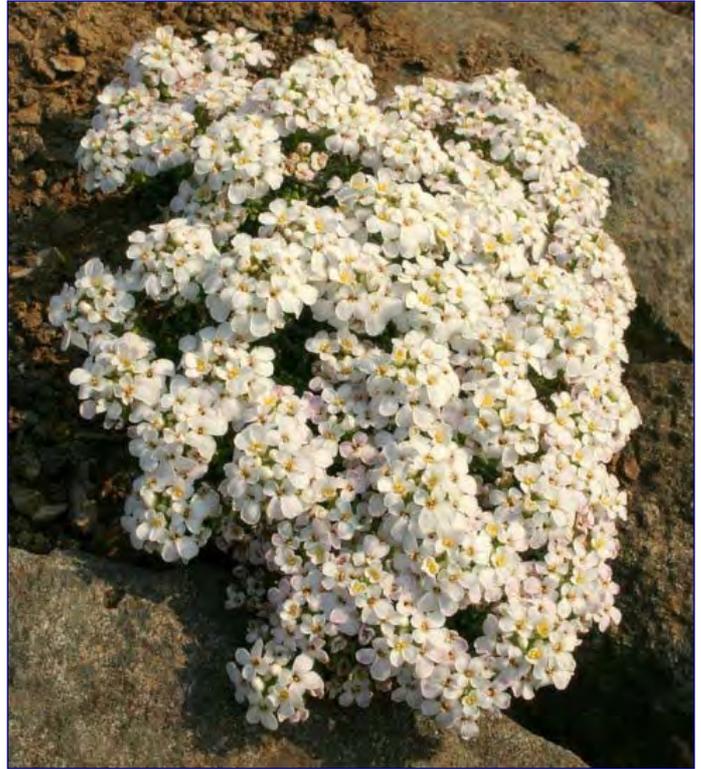
---International Rock Gardener---

Right: *Iberis saxatilis* in ZZ's crevice garden

The third dwarf alpine from this cool and steep slope is *Iberis saxatilis*, surely the best small *Iberis* I have ever seen. Seedlings are variable, some forming denser cushions with more compact inflorescences. Their whites are stunning in full sun and I admire one of my plants sunbathing in a crevice. If this plant continues in its glory, I will describe it as cultivar 'Maggie' to celebrate an inborn influence and vigour.

I did not mention that my pilgrimage on my knees (protected by special pads obtained from gardeners in the Montreal Botanic Garden) was nearly half a kilometre long and a quarter kilometre high, in case I would appear a wimp and not a true enthusiast.

Another fine alpine plant here is a compact *Draba bruniifolia* with dark green leaves and yellow flowers of a good size.



The land above 1500 m is more stony and the prevailing alpine plants are hedgehogs of *Dianthus erinaceus* ssp. *alpinus* (now called *Dianthus webbianus* ssp. *alpinus*). We saw it in August in full bloom: the flowers are not big enough to be too exciting (they vary from rose-pink to violet-pink), but their spiny cushions are beautifully arched and up to half a metre across.



Dianthus webbianus ssp. *alpinus* at 1700m on Kaz Daglari

Of course, Jurášek The Lucky, spotted the only albino among the huge pink population of Mt. Ida. Vlastimil Braun has a white form in cultivation in his Czech-Moravian Highland garden.

---International Rock Gardener---



It is not a clone with perfectly white flowers, but if it is fully established in cultivation, it will be very valuable in every sunny garden.

I suggest the cultivar name *Dianthus webbianus* 'White Trojan Horse' (shown left).

Ida is a home to another smaller species, recently distributed as *D. arpadianus* v. *pumilus* (which, I suppose, John Watson mentioned as *Dianthus anatolicus* var. *alpinus*). The *Dianthus* plants which form really tight buns with small pink flowers, are found only on stony windy ridges together with *Aethionema oppositifolium* (syn *Eunomia*

oppositifolia). One such ridge with a beautiful vista down to the intensively blue sea of the Turkish Riviera, has an altitude of 1700m and has good snow cover every year.

Below: *Aethionema oppositifolium* - [Todd Boland's](#) photo of a plant in Nova Scotia.



Mojmír, who studies 'Flora of Turkey' every winter, had as his target to find two unknown endemic plants: *Armeria trojana* and *Silene bolanthoides*. When we walked towards eastern parts of the highest ridge, we discovered a change in the rock. Limestones and marbles are replaced by a dark metamorphic or igneous stone resembling serpentine. In this area I found *Armeria trojana* in seed together with the dwarf yellow *Centaurea athoa*. The plant community is much enriched by superb flat broom, named quite recently as *Chamaecytisus gueneri*.

Below left: *Armeria trojana*, compact form, in cultivation

Below: *A. trojana*, compact form, in bud



These three alpiners are amenable to cultivation. *Armeria trojana* is a charming miniature and its smaller

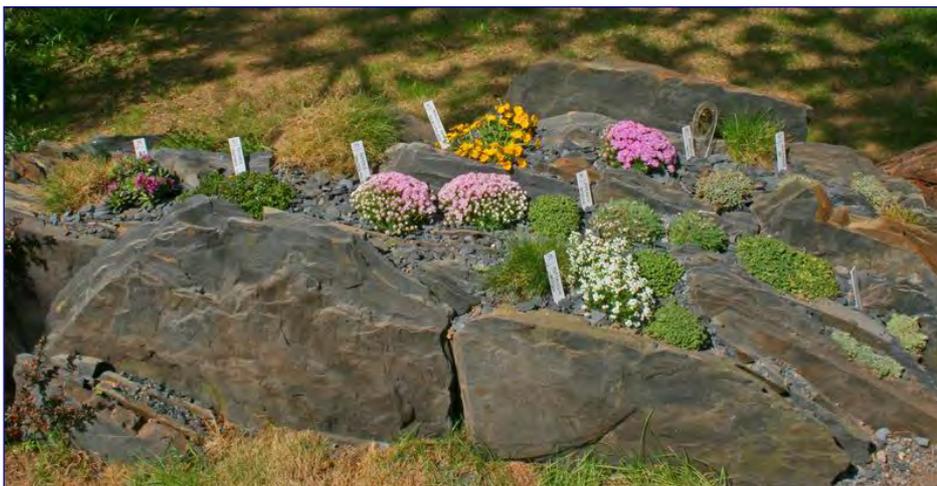
flower heads could be improved by breeding with another small species.

Some successful breeding has been done by Moravian nurseryman [Josef Holzbecher](#) and one result is a darker pink, *Armeria* x 'Brno' which has won an Award of Merit in the Prague Show. This dwarf cushion forming *Armeria* is a new hybrid between *A. juniperifolia* (syn. *A. caespitosa*) 'Bevan' and *Armeria* 'Rosi'. In May this plant is covered with good pink flowers above short dark green leaves. The sister of *A. x 'Brno'* is the paler pink *A. x 'Lelekovice'* which is named after Holzbecher's nursery north of the Moravian capital Brno. It is very distinct with its romantic pale

---International Rock Gardener---

pink flowers densely covering the whole tight cushion. These hybrids are shown in exhibition in a crevice bed at the famous Czech show in Prague.

Below: the two paler pink plants to the left are *A. x 'Lelekovice'*: to the right - *Armeria x 'Brno'*



The crevice bed for the show was built in April 2010 by Ota Vlasák and ZZ.

The stone is a dark slate called [phyllite](#) and the crevices are broader than usual to allow the flowerpots of the exhibited plants to be sunk below the carefully placed broken slate top dressing.



Left: A young plant of *A. x 'Brno'* planted in a crevice with an eastern exposure at the Beauty Slope.

The third of the alpines I listed is a Knapweed, *Centaurea athena*, which, like another dwarf Turkish *Centaurea*, *C. pestalozzae*, has only been in cultivation a short time and we must wait for a few years to know her preferences and dislikes. What does seem sure is that it is seldom covered with blooms.

---International Rock Gardener---



Chamaecytisus gueneri (above) is smaller and more shapely than the better known Turkish broom *Ch. pygmaeus*. One seedling flowered at the age of two years and we can admire its performance in full sun and an alkaline mineral soil at the Beauty Slope.

Left: *Chamaecytisus pygmaeus*

One important task of this mission was to discover if a new road to the buildings for a telecommunication mast had been finished.

---International Rock Gardener---

We saw local holidaymakers in city cars reaching the top ridges after a 30 km long journey on a good firm tarmac road.

Two years later the same party, enriched by the athletic Milan Halada, found that alpine road just before the large town of Edremit. We saw a sign '*Kaz Daglari Milli Parki*' and the entrance to the new National Park for plant conservation was about two miles from the main sea shore road via the village of Zeytinli. We got a permit from friendly mountain guides to camp overnight in a designated place in the forest and we visited the divine Ida again.

We saw first a large area with many horses which were doing a lot of damage to the flora of the stony meadows and we explored surrounding fell-fields formed from eroded metamorphic (probably slightly acidic or neutral) rock. This was a paradise for *Linum boissieri* and the very dwarf and promising (relatively large flowers on short stems) *Hypericum kazdaghensis*.



Mojmír Pavelka found here the first *Silene bolanthoides* (above) with its flat cushion covered with masses of seed pods. One self sown *Silene bolanthoides* was decorating my rock garden in May but I have lost five seedlings planted directly without potting during our hot and dry spring (another reason may be watering seedlings with strong limy water with a chlorine content). This small distinct *Silene* is variable in the beauty of its flowers and surely some cultivars will be selected in future. *Hypericum kazdaghense* flowered when I was in Canada, so I am not able to report either its grace or failure to be superb in flowering time. Pictures from the internet show us a very small *Hypericum* (up to two inches high) with relatively large yellow flowers.

In conclusion I must say that Mt. Ida is one of the richest peaks of [Turkey](#), a country of many rare and endangered species. It is close to civilisation, close to the busy seaside recreation areas and it is now a mountain easily accessible for "seniors" bearing cameras.

All the information at the internet pages of [The National Park](#) is very instructive and impressive and the photographs of endemic plants are mouth watering. You will see there some plants which I did not mention in this article just because I have not personally seen them in flower. Two plants were named by the 19th Century Czech botanist Ladislav Čelákovský: a compact grey leaved and

---International Rock Gardener---

pink blooming *Thymus pulvinatus*, grows in marble stone in the altitude 1300 m and its delicate body is only one inch tall. The second plant described in Prague is the lovely dwarf *Galanthus gracilis* with short elegant grey-green leaves and tubby flowers forming dense tufts. Spring time in Ida presents two crocuses: yellow miniature *Crocus gargaricus* and bluish *C. biflorus* with elegant violet veins. Autumn belongs to the violet flowers of *Crocus pulchellus*. A very spectacular bulb here is the pink *Colchicum boissieri*.

A quite distinct small bulbous plant with dark blue spikes of flowers is *Muscari bourgaei*, pale blue heads belong to a prostrate (10 cm tall in bloom) *Jasione idaea* and flat mats with blue campanulate flowers and artistically curved leaves are *Asyneuma rigida*. Lovers of smallest onions can admire vividly pink *Allium kurtzianum*. Pretty buns covered with small white flowers are named *Minuartia garckeana* and long white flowers are of *Onosma bracteosa* and *Paronychia amani*. A pink *Astragalus idae* is a lovely plant but, like other *Astragalus*, it will not be easy to tame. *Sideritis trojana* and *S. athoa* are probably good for lovers of a natural healthy tisane.

Please, visit [the Kazdag Park's website](#) to see pictures of more flowers and some pictures showing romantic places of this small but botanically rich Trojan Olympus.

---Gardens in the Mountains ---

A SPRING FLORA UNDER AN ANCIENT VOLCANO



Štěpánka and Cedrik Haškovec are more photographers and mountain visitors than gardeners (they have only a small balcony in their Prague flat). During their trip in Turkish Anatolia in May 2010 they visited the huge extinct volcano Erciyes Dag (3.937m) above the town of Kayseri. The volcano (left) which is in Cappadocia, used to be known as Mt. Argaeus and the town as Kaisareia. These names live on in endemic alpine plants such as *Silene argaea*, *Acantholimon caesareum* and *Draba cappadocica*. Their photo

session was around the pass of Tekir Gecidi (2145 m) which is close to the ski centre, Kayak Evi. They write: The countryside was very deserted and plenty of snow was seen near the pass. We were lucky that the local alpine *Pulsatilla* were just starting to bloom in open places near the foot of the volcano.

---International Rock Gardener---



Pulsatilla albana ssp. *armena* (above) is a quite rare and tricky alpine, suitable for cool rock gardens. This Turkish subspecies *armena* has relatively large open flowers in fine dark blue-violet shades. It grows on the limestone massif Ala Dag (80 km in southern direction) in only one windy saddle with a northern exposure.



Left: *Colchicum szowitsii*, darker form

This part of the volcano, close to thawing patches of snow, offered to us a small population of pale pink *Colchicum szowitsii* with an occasional darker form.

This lovely small *Colchicum* is good in our continental gardens for outdoor cultivation.

Right: a paler form of *Colchicum szowitsii* growing in the Beauty Slope.



---International Rock Gardener---



Left: *Merendera attica* (syn. *Colchicum atticum*)

Another lover of melting snow here was *Merendera attica* (syn. *Colchicum atticum*). This bulbous plant is not very well known but offers stronger pink colours. The emerging leaves are a soft copper colour.



Above: *Gagea villosa*

Quite unknown in rock gardens is this small yellow *Gagea villosa*. We discovered a few plants flowering under spiny tufts of *Astragalus*. Many alpine use spiny shrubbery as a protection against overgrazing from the army of goats and sheep.

Left: *Draba bruniifolia*

Draba bruniifolia is a compact rock garden plant with flowers of a well saturated yellow. It decorated short and empty alpine turf.



In one place with bare soil we admired an interesting *Veronica thymoides* with thicker green leaves and quite full flower heads.

Left: *Veronica thymoides*

Photos by Štěpánka and Cedrik Haškovec

---International Rock Gardener---

---Mountains in the Gardens---

Aethionema capitatum Boiss. et Bal. (syn. *Aethionema lignosum*) by Joyce Carruthers



A beautiful dwarf Stone Cress without a label appeared at our southern slope (it was surely planted and forgotten in our extensive garden with a bohemian gardener). After a long effort to find the right name we discovered that it is not the dwarf Turkish form of *A. pulchellum* (which is very distinct from the Iranian *A. grandiflorum*) but a relatively unknown species *Aethionema capitatum*. It was probably collected as seed in the limestone Binboga Mts. (in elevation 1500-2900m) and later wrongly distributed it as *A. pulchellum*. This species, which is endemic to the Cilician Taurus and Anti-Taurus is characterised by the compact flowering and fruiting heads. This is a low-growing perennial with woody rootstocks and ascending simple flowering stems. It is related to *A. schistosum* but nearly all its parts are larger. The colour of leaves is bluish-green; leaves are linear-oblong (10 x 1 mm), sessile and relatively evenly distributed over the stems. Flowers are rose pink with petals 5-7 mm x 3 mm arranged in heads with up to 15 flowers. Stems in flowering time in May are about 8 cm long, so the size of *A. capitatum* in bloom is under 10 cm tall and 20-25 cm across.



Left: *A. capitatum* in the Beauty Slope

The original plant died in our neglected rock garden (too much travelling by the owner) but there is a new healthy generation of this lovely species from the seed collected from a few lucky seedlings, which appeared around the dead mother plant. Pale brown seed is freely produced. These prolifically blooming plants have a very intensive shine that is always trying to fool the camera, burning highlights in our pictures.

---International Rock Gardener---



Left: *Aethionema capitatum* and a 'Map Butterfly', *Araschina levana*

I have planted this dwarf species in crevices in our southern slope and in the open mineral soil without any protection from scorching sun.

Plants set seed freely and were able to survive three hot and dry summer months of this year without watering. No protection was given during our unstable winters. Growing in sand beds can be recommended in gardens that are too wet.

All *Aethionema* are relatively stable: the height is uniform and the colour of leaves and flowers is not too variable. Of course, some mutant with purple red flowers will be desirable... They do not hybridise (they are not promiscuous like dianthus) but they are loyal and support our gardens with their quiet, elegant beauty. I have a 'rose period' in my garden provided by *Aethionemas* just before the blue period of *Moltkia petraea*.

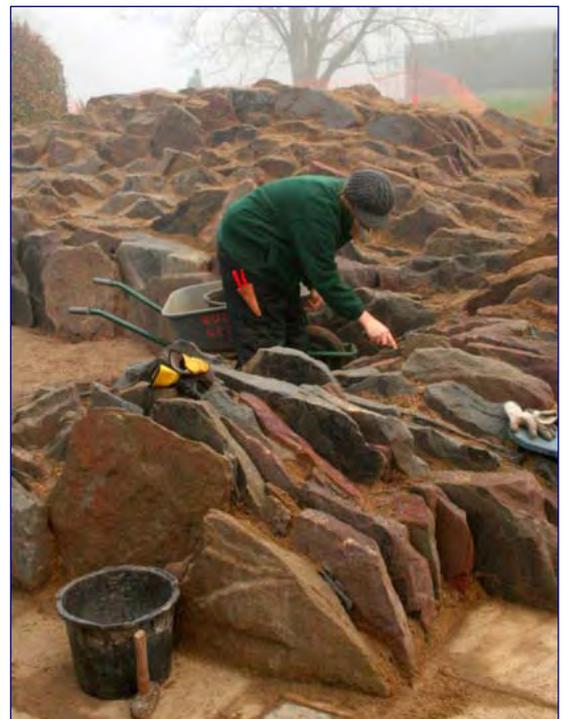
--- The Spirit of Crevice Gardening---

SHEET OR SURFACE DRAINAGE by Zdeněk Zvolánek

"The popular rock gardening techniques of raised beds and deep screes have two main conflicting characteristics: one is the demand for adequate water retention and the other is the need for perfect vertical drainage. Crevice gardens have no such limitations. During periods of heavy rain the water stops soaking into crevices and surplus water runs off, 'like water off a duck's back'. This perfect function is called sheet or surface drainage. The effect of this special 'nearly horizontal' drainage can be strongly improved by constructing the crevice gardens so that the crevices are at steep angles and the plants held firm with stony slivers or flakes set in the clay-rich fill material."

Quote from 'The Crevice Garden and its Plants' ZZ

During cold dull days in November after constructing new ridges of flat sandstones (filled with sand) "above" the holy hill of Wisley Botanic Garden I began to think there is the need to explain the 'terminus technicus' for the



---International Rock Gardener---



sheet or surface drainage in some more visual explanation. The best way of taking rain waters out of the inner content of a construction is to put a roof above it. The classic roof was a set of clay baked tiles placed in a dense rows or layers which were overlapping each other, resembling the pattern of the scales of a carp in a double row.

The two November photographs of my old fashioned roof with perfect sheet drainage is also good basic example showing the four simple rules of construction of a crevice gardens or crevice beds.

- 1) Each layer (one stratum or course) should be approximately the same width throughout its length in the construction.
- 2) All layers should be parallel to each other.
- 3) The tilt or dip of layers should conform to one angle 45-90° from the horizontal.

Above left: Down-looking entrances

Below left: Up-looking entrances



- 4) Functional crevices should be a maximum of 2.5 cm wide.

Yes, all my layers of the red tiles are 15mm thick and absolutely parallel to each other; the tilt of this well-supported construction is 45° and the crevices are only a few millimetres wide.

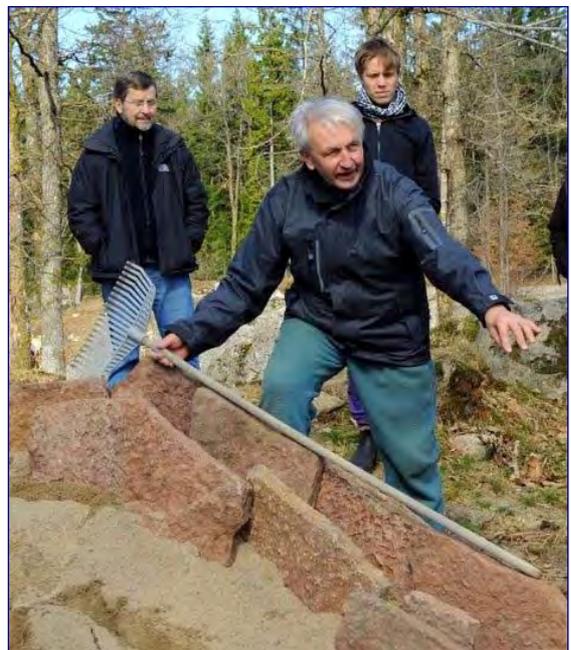
These ultra thin crevices with no filling (filled only with sometimes moist air and condensation of water on inner surfaces of the tiles) are a good home for the smallest species of the Genus *Sempervivum* even if all the crevices are placed head down and water cannot go into them. I insert baby semps, a rosette with a short shoot directly under a tail forming small kindergarten groups: no soil and if I feel sorry, I lick the short shoot to wet it for a better start.

Only a fool can copy this kind of design in his outcrop in the dry

lowland because it is too dry and too strong in diet for common rock garden plants. We must let rain to enter gently into our crevices with lean compost, so please copy the arrangement seen on the 'opposite' picture.

Right: showing sheet drainage line photo by Herluf Johansen

There is no need to copy an old-fashioned roof and put the stone side-walls in the angle of 45 degrees. Below is a Danish picture of a crevice garden built two years ago. It shows that when the tilt of layers (in side-walls) is vertical (90 degrees), all the faces of layers are sloping (returning) down towards ground simulating the natural weathering of a rock outcrop.



---International Rock Gardener---



Solid sheet drainage in Bangsbo, Denmark

---PLANT PORTRAIT---



Susann Nilsson, who has a fascination for Pulsatillas, shares with us this article, originally published in the Journal of the [Swedish Garden Society \(STA\)](#) and with the kind permission of that organisation. Photos are by Susann Nilsson and Christina Fryle, the Editor of the STA Journal - Trädgårds Amatören.



Pulsatilla integrifolia by Susann Nilsson

[Issue 2 \(February\)](#) of IRG featured, as *Miyakea integrifolia*, a plant that is still not well enough known but which deserves all the attention it can get. This is *Pulsatilla*

integrifolia, the wholeleafed Pulsatilla, formerly *Miyakea integrifolia*. The first description of the species is from 1936 by Miyabe & Tatewake who found it in an expedition in 1935. (Trans. Sapporo Nat Hist. S14:2 (1936))

The species' habitat is very limited to an area of alpine tundra at approximately 1300 metres altitude in the mountains of Nabilski in the island of Sakhalin's east coast.

Sakhalin (or Saghalien or, in Japanese, Karafuto) belonged to Japan until World War II, but it is now Russian territory. The island is situated in the northern Pacific, only 7.5 km north of the

---International Rock Gardener---

Japanese island of Hokkaido, which is a well known source for many interesting plants for our gardens.



Left: *Pulsatilla integrifolia* in the [Gothenburg Botanic Garden](#).

The nature of Sakhalin does differ a lot from the nature of Hokkaido, however, and Sakhalin has far fewer species represented in cultivation than the neighbouring island. Nevertheless, there are quite a lot of endemic species, amongst which *Pulsatilla integrifolia* is to my mind the most famous and spectacular.

The landscape of Sakhalin Island consists mostly of mountain ranges hiding a central lowland. The climate is relatively cool and moist with frequent fog. The short summer is similarly temperate and rainy. Winters there are relatively mild but with snowcover, followed by a prolonged and cold spring.

The island's nature and climate gives us clear indications of how to cultivate *Pulsatilla integrifolia* in our gardens; we will return to the subject at the end of the article.

The species is endangered in its natural habitat and is listed by Russia as a species requiring special

efforts for its protection. During an expedition in 2003, seeds were gathered by Alexander Taran, Bo Nilsson and Svetlana Tschabanenko. These seeds were conveyed, by an international seed exchange, to other institutions, including Gothenburg Botanical Garden in the southwest of Sweden, enabling them to cultivate the species and pass seeds on to devoted gardeners.

Pulsatilla integrifolia belongs to the family Ranunculaceae, which has around 2200 species.

Its Russian name is Miyakeya tselnolistnaya, Миякея цельнолистная, which signifies entire-leaved Miyakea. In almost all texts it is still referred to as *Miyakea integrifolia*, as the single species of its genus, but it has just had its allegiance officially changed to the genus Pulsatilla.

One can sometimes incorrectly find it described as *Pulsatilla sachalinensis*, but that is actually a different species. Most of the experts seem to agree that the plant is now correctly classified, as it in every detail, except the shape of the leaves, looks and behaves like a pulsatilla.



Pulsatilla integrifolia photo Susann Nilsson



P. integrifolia x *P. vernalis* photo Peter Korn

---International Rock Gardener---

Pulsatilla integrifolia is in its appearance more or less identical to *Pulsatilla vernalis*, except for the afore-mentioned shape of the leaves. [Peter Korn](#), the well known Swedish gardener, has had it spontaneously cross with *Pulsatilla vernalis* in his garden (photo above right).

The dark evergreen leaves of *P. integrifolia* are shiny and leathery. Underneath they are densely covered with silvery-white short hairs. Leaf edges are smooth and untoothed. The underneath hair does, though, provide a beautiful, thin white border clearly visible from above. The leaves are similar to those of *Ranunculus parnassifolius*, but lack the hair on top and are not as egg-shaped, but more slender.



As we may all know, all the other *Pulsatillas* have more or less finely lobed leaves. In autumn one is able to see the signs of whether or not the plant will bloom the following spring. If one looks closely in the centre of the evergreen leaf rosette one might hopefully spot a swollen and hairy little “package”, just above the ground, indicating a flower bud that is awaiting spring. If, on the other hand, one only finds a hairy, but not swollen bud, this contains only the new leaves to come, and no blooming will take place. The number of likely flower buds in autumn does not necessarily correspond to the amount of flowers that will delight us next spring, as there can still be more buds to come that are not yet visible.

The *Pulsatilla integrifolia* together with *Pulsatilla vernalis*, is ready to bloom as soon as the snow has melted. That makes them the earliest *Pulsatillas* in the season. Neither buds nor flowers are normally damaged by frost or some snow.

The species usually blooms for the first time two years after sowing, but unfortunately these early buds and others, have a tendency to abort.

It can happen that the plant tries to burst into bloom even in its the first season, but generally it will only produce “a small fluff”, and no seed is set.

Conversely, once the plant is established, it is not unusual for it to give a second blooming in midsummer, regardless of the first blooming being successful or not in setting seeds.

The petals are nicely furry on their outside, and the flowers are about 5 cm long and wellshaped. They are placed singly, on 8-10 cm long, hairy stalks. The flower colour may vary from the lightest ice-blue, almost white, to the (for a *Pulsatilla*) more common, purplish blue. The calyx of the flower is, as in most *Pulsatilla*, covered with long silky hairs.

The yellow stamens form a lower dense ring around the pistils. The seeds, which in Sweden are mature in July, are spool-shaped with a hairy tail, to be easily spread by the wind.

They should be sown immediately and germination normally takes place in 2-4 weeks.



---International Rock Gardener---

If germination has not occurred within that period, it is not likely to happen at all. Nevertheless, seeds stored in a hermetically sealed container kept in the refrigerator over winter might germinate with some success.

Right: The roots are finely divided as in *Pulsatilla vernalis*. Photo Susann Nilsson

The plant is not difficult to keep alive but might be short-lived. It does require conditions that mimic its natural habitat as much as possible; that is, a lean, cool and humid place, facing north, or in more southern locations than Sweden perhaps also an eastern facing slope, in a raised sandbed or rockgarden.

(Geir Moen has the plant in similar conditions in his Norwegian garden, as shown in IRG2)

The plant will become a bit woody after a number of years, and one can then strike cuttings to rejuvenate it. It is of great importance to keep *Pulsatilla integrifolia* in lean conditions. Placed in a more nutrient rich soil it will at first grow rapidly, but then collapse and die during winter period. It is very unhappy potted up and will tend not to be long-lived as such, preferring a free root run.



---REPORT FROM THE BEAUTY SLOPE---

by Zdeněk Zvolánek

While I do not believe that the well-seasoned Viking jester called Santa Claus brings well-wrapped products of China to our spoiled children, I do believe that this broadly migrating individual is somehow responsible for bringing protecting snow to our children of the mountains in the time of December.



---International Rock Gardener---

This year the Beauty Slope obtained that glistening crystalline gift in very good volume, just to cover tender leaves of cyclamens (probably because I have recently become a fresh member of the [Cyclamen Society](#)) and young *Daphne genkwa*. I immediately sent a thanksgiving e-mail to santaland@srgc.uk and start to admire this ultra light-dry series of snow-white cushions and polsters. Below left: *Pinus parviflora* 'Glauca'



The late Josef Velenovský (the enlightened Czech botanist) would write that the pine forest nymphs had charmed Beauty Slope for their winter services. But these romantic heaps and arches have the basic blessed purpose to hide the details of a lonely rock garden, which had no weeding service for 15 months. My New Year resolution is to weed around every plant before taking its portrait (photographers called it 'little gardening') and, with a bit of good luck, to reconstruct some areas with the help of the choirs of angels.



Above: Head gardener's shirt- 'so many weeds, so little time'

I inherited from my late head gardener, Joyce, her uniform with the poignant philosophy "so many weeds so little time" and I will do my best. I send from the white Beauty Slope my warmest thanks to the all friends of rock gardening, who wrote their sympathy to me at the SRGC Forum and I hope that these reports will continue in this e-journal during the next busy season.



I wish you the cheap, cheerful and best protection for your alpines, provided by Santaland and other Seasonal Greetings!

ZZ

INTERNATIONAL ROCK GARDENER INDEX

SYMBOLS

- 01/** = Issue Number
/12 = Adobe Reader Page number
/C12 = Colour picture
; = Divider between Issues
, = Divider between Pages
— = Substitute for name above

- Acantholimon caesareum* : **12/10**
— *trojanum* : **12/3**
— *ulicinum* : **02/15**
— *venustum* : **02/15; 08/13, C13**
Achillea millefolium : **02/3**
Adonis vernalis : **03/18, C18, 05/3; 09/C14**
Aethionema caespitosum : **04/22, C22**
— *capitatum* : **08/14; 12/13, C13**
— *grandiflorum* : **12/13**
— *oppositifolium* = *Eunomia oppositifolia*
— *oppositifolium* : **12/6, C6**
— *pulchellum* : **12/13**
— *schistosum* : **04/13, 14; 08/8, C8; 12/13**
— *subulatum* : **05/18, C18**
Albuca sp. JCA 15856 : **09/C16**
Alkanna aucheriana : **09/13**
Allium kurtzianum : **12/10**
Alluvial fans : **10/8**
Alpines 2011 Emblem : **06/C3, 3**
Alpines Clubs Emblems : **06/C2**
Alstroemeria magnifica subsp. *maxima* : **09/C16**
Anchonium elichrysofolium : **05/18**
Anchusa caespitosa : **01/13**
Androsace barbulata var. *glabella* : **05/7**
— *carnea* ssp. *brigantiaca* : **04/13, 14**
— *dasyphylla* : **04/C1, 2, C2**
— *delavayi* : **04/18**
— *fedtschenkoi* : **04/14**
— *hirtella* : **05/7**
— *lanuginosa* : **04/13**
— *montana* : **04/23, 10/C10, 10**
— *sarmentosa* 'Salmon's variety' : **04/13**
— *vandellii* : **05/7**
— *villosa* : **05/3, 7**
— — var. *glabra* : **04/23**
— x 'Millstream' : **04/13**
— *yargongensis* : **04/18**
— *zayulensis* : **04/18**
Anemone parviflora : **04/6**
— — var. *grandiflora* : **04/6, C6**
Antennaria monocephala : **04/5, C5**
Anthyllis vulneraria ssp. *vulneraria* var. *coccinea*
: **04/13**
Aquilegia alpina : **07/7**
— *caerulea* : **11/C12**
— *jonesii* : **11/6, C19, 21**
— —, forming seed pods : **11/C6**
— *saximontana* : **07/7, C8**
Aquilegia scopulorum : **11/3**
— *scopulorum* f. *perplexans* : **08/14; 11/C1, C2, 3**
— — var. *scopulorum* : **10/C13**
Armeria caespitosa 'Bevan' : **12/6**
— *juniperifolia* 'Bevan' = *A. caespitosa* 'Bevan'
— *juniperifolia* 'Bevan' : **12/6**
— *maritima* 'Dusseldorfer Stolz' : **04/13, C13**
— 'Rosi' : **12/6**
— *trojana* : **12/6, C6**
— x 'Brno' : **12/6, C7**
— x 'Lelekovice' : **12/6, C7**
Arnica lessingii ssp. *lessingii* : **04/3, C3**
Arenaria tmolea : **08/7**
Artemisia norvegica : **04/3**
— *rigida* : **10/9**
— *tridentata* : **10/C8, 8**
Asperula boissieri : **04/13**
— *gussonii* : **04/13**
— *sintensisii* : **12/4, C4**
— — ssp. *puberula* : **07/9, C9**
Asplenium septentrionale : **04/20**
Aster coloradoensis : **11/20**
— *scopulorum* : **10/22**
Astragalus idae : **12/10**
Asyneuma rigida : **12/10**
Aubrieta glabrescens : **04/23**
Austria - Embroidered special edition 'stamp' :
06/C6
Austrian one cent Euro coin : **06/C6**
Austrian two-cent Euro coin : **06/C4**
Barn in an alpine meadow : **06/C#, C2**
Beauty Slope & Joyce Carruthers : **10/C2**
Betula glandulosa : **04/4**
— *nana* : **04/4**
Books:

INTERNATIONAL ROCK GARDENER INDEX

- Buried Treasures : **09/C18**
Crocuses : **09/19, C19**
High and Dry by Robert Nold : **10/C2**
New Trees, Recent Introductions to
Cultivation : **07/12, C12**
Portraits of Alpine Plants : **07/5**
Snowdrops : **07/12, C12**
The alpine House : **07/5**
The Caucasus and its Flowers : **07/4, C4**
Travels in China : **07/C17**
Wildflowers of the Pacific Northwest : **09/C17**
- Botanic Gardens :
Bangsbo Botanic Garden, Denmark : **08/C9**
Montreal : **04/11, C11, 12**
- Callianthemum farreri : **08/11, C11**
Caltha scaposa : **02/5, C5; 03/2**
Campanula betulifolia : **08/3, 4, C4, 5, 6, C6**
— bornmuelleri : **08/4, C4**
— carpatica : **08/18, C18**
— celsii : **04/C15**
— choruhensis : **08/3, C3, 5, 14, C14; 09/13**
— 'Covadonga' : **04/9**
— finitima : **08/5, C5**
— hawkinsiana : **09/13**
— hybrid : **08/5, C5**
— kipricznikovii : **08/5**
— lasiocarpa : **04/C4, 5**
— 'Paul Furse' : **09/C4**
— pusilla : **08/18**
— raineri : **04/10, C10; 08/16**
— — f. alba : **08/C16**
— 'Rick Lupp' : **04/10, C10**
— seraglio : **08/5**
— sp. : **08/C18**
— teucroides : **08/6, C6, 7**
— 'Timsbury Chimes' : **04/9, C9**
— troegerae : **05/12; 08/C3, 5; 09/13**
- Canyons :
Bryce : **10/13**
Red : **10/C13**
- Carduncellus pinnatus : **09/11, C11**
Celmisia spectabilis : **07/C17**
Centaurea athoa : **12/6, C7**
— odyssei : **12/3, C3**
— pestalozzae : **12/7**
— pindicola : **04/13**
— triumfetii : **03/11**
- Chamaecytisus gueneri : **12/6, 8, C8**
— pygmaeus : **12/8, C8**
Chinese rice mill : **08/C16**
Chionocharis hookeri : **01/3-4, C3, C4; 05/4**
Chrysanthemum alpinum : **04/6**
Calylophus lavandulifolius = Oenothera
lavandulifolia
Calylophus lavandulifolius : **10/13, 16, C16, C20**
Castilleja chromosa : **10/22**
Claytonia megarhiza : **10/12; 11/C17**
Clematis integrifolia : **05/3**
— marmoraria : **05/8, C8**
— tenuiloba : **11/7, C7, 9, C9**
— x durandii : **08/18, C18**
- Clubs & Societies:
Calgary Rock & Alpine Garden Society :
08/22
Flemish Rock Garden Club : **08/21, C21**
French Alpine Society, SAJA & Emblem :
07/7
New Zealand Alpine Garden Society : **07/17**
Emblem : **07/C17**
North American Rock Garden Society Badge
: **07/C8**
Scottish Rock Garden Club : **06/12**
- Colchicum atticum : **12/12, C12**
— boissieri : **12/10**
— szowitsii : **12/11, C11**
Collomia debilis : **10/12**
— — var. larsenii : **11/6**
Convolvulus arvensis : **04/11**
— boissieri ssp. boissieri : **03/C4**
— — subsp. compactus : **03/3, C3, C4, 5**
— — — var. suendermannii : **03/C4, 6, C6**
— compactus : **03/5, C5**
— — Tap root : **03/C5**
— nitidus : **03/4**
— phrygius : **03/6, C6**
Cornus canadensis : **06/19, C19**
— kousa : **08/C20**
— mas : **03/17**
Corydalis hamata : **03/C1, 2, C2, 3**
— pauciflora : **04/6, C6**
Crevice bed with Eriogonums : **11/C22**
Crevice Gardening : **02/C6, C7; 08/C12; 11/C19, C20; 12/14-15, C14**
Crocus alatavicus : **01/12**
— dalmatica : **07/C5**
— gilanicus : **09/C16**
— hittiticus 'Jim' : **09/C23**

INTERNATIONAL ROCK GARDENER INDEX

- korolkowii : **01/12**
- korolkowii hybrid : **01/12**
- biflorus : **12/10**
- gargaricus : **12/10**
- mathewi : **09/C3**
- michelsonii : **01/12, C12**
- niveus JCA5312 : **09/C16**
- pulchellus : **09/19; 12/10**
- scardicus : **09/12, C13**
- scharojanii : **09/19, C19**
- speciosus : **09/19, C19, 20, 22**
- — 'Blue Web' : **09/21, C21**
- — 'Cloudy Sky' : **09/21, C21**
- — 'Goris' : **09/21, C21**
- — 'Late Love' : **09/21**
- — 'Lithuanian Autumn' : **09/21, C22**
- — 'Oxonian' : **09/C20**
- — 'Pambak' : **09/21, C21**
- — ssp. archibaldii : **09/23, C23**
- — ssp. ilgazensis : **09/22, C22**
- — ssp. speciosus : **09/19, C20**
- — ssp. xantholaimos : **09/22, C22**
- tommasinianus : **02/C17; 04/16**
- vernus : **04/7**
- — 'Albus' : **04/C8**
- Cyclamen coum : **01/14**
- — f. atkinsii : **01/C14**
- elegans : **09/C14**
- pseudibericum : **04/21, C21**
- Cymbidium sp. : **06/C17**
- Cytisus ardoinii : **03/17**
- x beanii : **03/17**

- Daphne arbuscula : **04/13; 05/10, C10, 11**
- — f. platyclada : **05/7**
- 'Arnold Cihlarz' : **05/17**
- blagayana 'Brenda Anderson' : **04/20, C20**
- circassica : **08/C13**
- cneorum : **05/3**
- — var. cneorum 'Czech Karst' : **05/C17**
- — var. pygmaea : **04/21**
- — — 'Czech Song' : **05/C16**
- genkwa : **12/20**
- jasminea : **08/15, C15**
- juliae : **05/C1, 2, 3, C3; 08/17**
- — Variegated leaf : **05/C2**
- mezereum : **01/14**
- retusa : **08/15**
- rodriguezii : **01/13; 05/18, C18**

- sericea : **04/21, C21**
- — 'Collina' : **08/C12**
- tangutica : **08/18**
- — clone B : **04/21**
- x napolitana 'Bramdean' : **05/7**
- x rollsdorfii 'Wilhelm Schacht' : **05/C17; 08/15**
- x susannae 'Lawrence Crocker' : **08/C12**
- Degenia velebitica : **04/13, 14, 22**
- Delphinium chrysotrichum: **01/C1, 2, C2**
- — var. tsarongense: **01/2**
- likiangense : **05/11, C11**
- nuttallianum : **10/22; 11/7**
- Dianthus anatolicus var. alpinus : **12/6**
- arpadianus v. pumilus : **12/6**
- brevicaulis : **01/9, C9**
- carthusianorum : **03/17**
- erinaceus ssp. alpinus = Dianthus webbii ssp. alpinus
- erinaceus ssp. alpinus : **12/5, C5**
- haematocalyx ssp. pindicola : **04/13**
- microlepis ssp. degenii : **08/7, C7**
- — var. microlepis : **08/7, C7**
- webbii ssp. alpinus : **12/5, C5**
- webbii 'White Trojan Horse' : **12/6, C6**
- x allwoodii alpinus : **03/17**
- Dictamnus albus : **01/14**
- Digitalis thapsi : **09/13, C17**
- Dionysia archibaldii : **09/13, C13**
- — 'Tora' : **09/13, C13**
- 'Chris Grey Wilson' : **07/13, C13**
- curviflora : **09/12, C12**
- diapensiifolia : **09/12**
- haussknechtii : **04/C17; 09/12**
- janthina : **09/12**
- michauxii : **09/12**
- Diplarche multiflora : **05/4, C4, 5, C5**
- pauciflora : **05/4, 5**
- Dodecatheon meadia : **06/C7**
- pulchellum : **11/3**
- — habitat : **06/C7, C8**
- sp. : **06/7, 8**
- Douglasia montana : **05/9, C9; 10/C10, 10; 11/21**
- — var. biflora : **05/9**
- nivalis : **11/21**
- Draba acaulis : **01/9, C10**
- Draba bruniifolia : **12/5, 12, C12**
- cappadocica : **05/7; 09/13; 12/10**

INTERNATIONAL ROCK GARDENER INDEX

- densifolia apiculata : **11/C9**
- incerta : **04/13, 14**
- oligosperma : **05/9**
- ossetica : **07/C5**
- rosularis : **04/13; 05/7**
- sp. : **11/6**
- ventosa : **04/13**
- Drainage line, sheet : **12/C15**
- Dryas drummondii : **08/22, C22**
- integrifolia : **04/4**
- octopetala : **06/11, C11, C12**
- — seedheads : **06/C12**

- Edelweiss brooch 1848 : **06/C4**
- Edraianthus graminifolius : **08/14, C14**
- Empetrum nigrum : **04/5**
- Enceliopsis nudicaulis : **10/15**
- Epilobium canum ssp. latifolium : **10/C5, 5**
- obcordatum : **11/4, 5, C5**
- septentrionale : **10/C5, C18**
- Equisetum pratense : **04/6**
- Eremurus furseorum : **09/4**
- Erica carnea : **04/21**
- Erigeron aureus : **11/C19, 20**
- chrysopsidis : **11/20, C21**
- — var. brevifolius : **11/4, C4**
- compactus : **10/19**
- compositus : **04/13**
- linearis : **10/19; 11/20**
- modestus : **04/14**
- vagus : **11/5, 6, C12**
- Eriogonum arcuatum = E. jamesii
- Eriogonum acaule : **10/11, C11**
- arcuatum : **11/C7, 8**
- aretioides : **10/13**
- aff. brevicaule : **10/C18**
- brevicaule var. bannockense : **10/17, C17**
- caespitosum : **10/C18, 22; 11/20**
- douglasii : **10/C18**
- gracilipes : **11/5, C6**
- holmgrenii : **11/3**
- jamesii : **11/C7, 20**
- kennedyi : **11/20**
- kingii : **11/4**
- marifolium : **11/4, C4**
- ovalifolium : **10/14, C15; 11/21**
- — var. nivale : **11/6, C6**
- prociduum : **10/22, C22**
- rosense : **10/21, 22**
- scopulorum : **11/5, C5**
- shockleyi : **10/3, 14, C15, 15, 16; 11/20**
- soredium : **10/16, C16**
- sphaerocephalum : **10/C18; 11/20**
- — var. halimioides : **10/19**
- thymoides : **03/17; 10/C18**
- umbellatum var porteri : **11/20**
- Eritrichium aretioides = E. nanum var. aretioides
- aretioides : **11/7, 9, C11, 21**
- howardii : **01/5; 05/6; 10/C9, 9, C10**
- — 'Blue Sky' : **01/C5**
- nanum : **01/C7**
- — var. aretioides : **11/C11**
- sp. : **01/C7, C8**
- Erythronium montanum : **07/14, C14**
- Eunomia oppositifolia = Aethionema
oppositifolium
- Eunomia oppositifolia : **05/18; 12/6, C6**

- Farrer Medal : **06/C6**
- Fauna:
 - Anna's Hummingbird, Male (Calypte anna) :
08/19, C19
 - Araschina levana (Map Butterfly) : **12/C14**
 - Duck Helpers : **04/C23**
 - Moravian Bird : **01/16**
 - Pronghorn 'antelopes' : **10/C11, 11**
 - Ptarmigan : **11/C15**
 - Resting Bat : **02/C7**
- Festuca altaica : **04/3**
- Fibigia triquetra : **04/22, C22**
- Fritillaria alburyana : **09/C4**
- aurea : **08/10, C10**
- — f. cilicio-aurica : **08/C10**
- — 'Golden Flag' : **08/10**
- aff. bithynica : **07/13, C13**
- chlorantha : **07/15, C15**
- eduardii : **04/15, 16, C16, 17**
- — bud : **04/C17**
- imperialis : **04/15, 16**
- — forms : **04/C17**
- — yellow : **04/C17**
- raddeana : **04/15**

- Gagea villosa : **12/12, C12**
- Galanthus gracilis : **12/10**
- nivalis : **02/C17**
- plicatus 'Diggory' : **02/C17**
- transcaucasicus : **09/C14**

INTERNATIONAL ROCK GARDENER INDEX

— woronowii : **01/16**

Gardens:

Bangsbo Botanic Garden, Denmark :

08/C9; 12/15, 16

Creating and Planting Alpine Gardens :

10/C3

Gardens in the Mountains : **10/6**

Holubec garden : **07/C4**

Natural Rock Garden in Wyoming : **10/C8**

Pelham House Garden : **07/C15**

Rock Garden - Young : **07/C1, 2**

Gazania Hybrids - watercolour : **09/C4**

Genista horrida : **02/16; 03/17**

— — under snow : **02/C16**

— lydia var. lydia : **04/13**

— sericea : **03/17**

— subcapitata : **03/17**

Gentiana acaulis : **06/6, C6**

— boissieri : **01/11, C11**

— — habitat : **01/C9**

— clusii : **04/23**

— decorata : **05/4**

— emergens : **05/4, C4, 5**

— glauca : **04/3**

— paradoxa : **08/19**

— septemfida : **01/11; 04/13**

— szechenyi : **02/12, C13**

— — f. alba : **02/C12**

— verna : **02/2, C3**

— wardii : **05/4**

Geranium dalmaticum : **08/16, C17**

— subcaulescens 'Splendens' : **08/15, C15**

Geum triflorum : **04/13**

Geology:

Glacial Rocks with pine trees : **04/C7**

Gilia caespitosa : **10/13**

x Halimocistus sahuicii : **08/16**

Haplopappus acaulis : **10/9, 22**

— pygmaeus : **11/9, C9**

Haplopappus acaulis = Stenotus acaulis

Helianthemum 'Fire Dragon' : **04/13**

— 'Orange Surprise' : **08/19**

Helichrysum aff. milfordiae : **02/C16**

Helleborus chinensis : **03/10, C10**

— foetidus : **05/15**

— niger : **01/15, C15; 02/C16**

— viridis var. thibetanus : **03/10 C10**

Hepatica nobilis : **01/14, C14; 04/8, C8**

— — 'Alba' : **04/C7**

— triloba : **04/C8**

Hymenoxys acaulis : **11/6**

— grandiflora : **11/C16**

Hypericum kazdaghense : **12/9**

Iberis saxatilis : **12/5, C5**

Incarvillea compacta : **02/12**

Iris acutiloba : **01/12**

— aphylla : **05/3**

— fosteriana : **01/12**

— galatica : **03/14, C16**

— heldreichii : **03/14**

— hymenospatha : **03/15, C15**

— — ssp. leptoneura : **03/15, C15**

— kopetdagensis : **01/12**

— paradoxa : **05/C13, 14, C14**

— — f. mirabilis : **09/13**

— persica : **03/14, C16**

— planifolia : **03/C16**

— — var. alba : **03/C16**

— rosenbachiana f. nicolai : **02/15**

— — — 'Cormozak' : **02/C1, C15**

— ruthenica f. nana : **02/12**

— stenophylla : **03/C14**

 subsp. stenophylla : **03/14**

 subsp. allisonii : **03/14, 15, C15, C16**

— taurica yellow form : **04/20, C20**

— urmiensis : **09/13**

Jancaea heldreichii : **06/13, C13, 14, C14**

Jardin de Crevasses : **04/C15**

Jasione idaea : **12/10**

Juniperus horizontalis : **10/9**

Kelseya uniflora : **05/6; 10/12; 11/C13**

Lallemantia canescens : **12/2, C2**

Larix decidua 'Krejčí' : **05/11, 12, C12**

Ledum decumbens : **04/5**

Leontopodium alpinum : **06/C4**

— — from Styria : **06/C5**

— — ssp. nivale : **06/C5**

— 'Mignon' : **06/C4**

— pusillum : **02/12**

Lepidium nanum : **10/20**

Lesquerella alpina : **11/C15**

— tumulosa : **10/13**

INTERNATIONAL ROCK GARDENER INDEX

- Leucanthemum integrifolium* : **04/6, C6**
Leucogynes grandiceps : **06/C5**
— *leontopodium* : **06/C5**
Lewisia cotyledon : **08/14**
Lewisia rediviva : **10/19, C19**
— — *var. minor* : **10/21, 22**
Linnaea borealis : **06/17, C17, 18, C18, C19**
Linum aretioides : **05/18; 08/7; 12/4**
— *boissieri* : **12/4, C4, 9**
— *cariense* : **05/18, C18**
Lithodora diffusa 'Heavenly Blue' : **08/16, C17**
— *zahnii* : **01/13**
— — 'Ness Blue' : **04/20**
Lupinus arcticus : **04/3**
— *aridus* : **10/22**
- Macroglossum stellatarum* : **03/C11**
Matthiola montana : **05/12, C12**
— *tricuspidata* : **09/10, C10, 11**
— *trojana* : **12/3**
Meconopsis delavayi : **09/9, C9**
Merendera attica = *Colchicum atticum*
Merendera attica : **12/12, C12**
Michauxia tchaiatcheffii : **09/13**
Minuartia garckeana : **12/10**
— *obtusiloba* : **11/C11, 12, C14**
Miyakea integrifolia = *Pulsatilla integrifolia*
Miyakea integrifolia : **02/8, C8, 9, C9; 12/16, C16**
Moltkia petraea : **08/C17; 12/14**
Morisia monantha : **09/11**
Mountains & Hills :
 Ala Dag –habitat : **03/C5; 12/10**
 Ali Botusch Mts. Bulgaria : **03/C11**
 Bai Ma Shan, Yunnan : **02/C5**
 Batang Mts. : **02/C12**
 Beauty Slope : **02/C15; 04/C19; 05/16, C16; 12/19, C19**
 Beauty Slope under Snow : **01/C13; 02/C14**
 Zdeněk Zvolánek's Garden : **05/C19**
 Bighorn Mts. : **11/7**
 Binboga Mts : **12/13**
 Bolkar Dag: **01/C10, C11**
 Burbank Hills : **10/13, C14**
 Duncum Mountain : **11/8, C8**
 El Tepe : **08/C7**
 Erciyes Dag : **12/10**
 Kings Hill Peak : **11/6**
 Medicine Mountain : **11/C10**
 Mt. Argaeus : **12/10**
 Mount Cook : **06/C5**
 Mt. Ida (Kaz Daglari) : **12/3**
 Mt. Lassen : **11/6**
 Mt. Matterhorn : **11/4**
 Mount Moriah : **11/3**
 Mt. St. George : **04/C3**
 Mt Washington : **11/3**
 Mount Wheeler, Nevada : **11/C2**
 Ruby Mountains : **11/4**
 Sheep Mountain : **11/6**
 Sipikor Mountains : **12/2**
 Snake Range, Sunset above the : **11/C3**
 Snowy Range Pass : **11/10**
 Ulu Dag : **12/3**
 Wah Wah Mts., Utah : **10/C7**
 White Mountains : **11/5**
- Muscari bourgaei* : **12/10**
— *mcbeathianum* : **09/13, C15**
Myosotis alpestris : **01/6, C6**
- Narcissus assoanus* : **05/15, C15**
— *bulbocodium var. nivalis* : **09/11**
— *cantabricus petunioides* : **09/C12**
— *romieuxii 'Julia Jane'* : **09/11, C12**
— — *ex JCA805* : **09/C1, C11**
— — *JCA 805* : **09/11**
- Oenothera caespitosa* : **10/3, C12, 21, 22; 11/3**
— *howardii* : **10/21, C21**
Onosma bracteosa : **12/10**
Oxalis adenophylla : **07/C10**
— *depressa* : **04/13**
- Paeonia 'Joseph Rock'* and the Karlik Church :
 12/C1, C2
— *mascula* : **12/3**
— *officinalis* : **09/C15**
Parnassia palustris : **04/6**
Paronychia amani : **12/10**
Pediocactus simpsonii : **10/3, 9**
Penstemon caespitosus : **10/13**
— — *var. desertipicti* : **10/19, C20**
— *caespitosus* : **11/C18, 20**
— — *var. caespitosus* : **11/7**
— *cardwellii* : **04/14**
— *dolius* : **10/17**
— *duchesnensis* : **10/17, C17**
— *hallii* : **04/14; 11/C15**
— *humilis* : **10/22**

INTERNATIONAL ROCK GARDENER INDEX

- laricifolius var. exilifolius : **10/C12**
- nanus : **10/3, C14, 14, 15**
- newberryi var. newberryi : **11/6**
- pinifolius 'Mersea Yellow' : **04/14**
- rupicola : **04/14; 08/15**
- — var. alba : **08/15, C15**
- scariosus : **11/7, C7**
- speciosus ssp. kennedyi : **11/6**
- thompsoniae : **10/19, C20; 11/3**

People:

- Achilles, Hans : **03/C16**
- Anderson, Brenda : **04/20**
- Aphrodite : **12/3**
- Archibald, Jim : **09/2, 3, C19**
- Archibald, Jim and Jenny : **08/1, C1; 09/6, C6**
- Boland, Todd : **06/17, C17**
- Bondareva, Olga : **05/C2**
- Booker, Cliff : **06/2, C2**
- Carruthers, Joyce : **10/2; 11/C2**
 - — in Big Horn Mts : **11/C8**
 - — Dedication : **10/C23**
 - Joyce at Karlik, 2007 : **10/C23**
 - on the Kings Hill tundra : **11/C6**
- Čelákovský, Ladislav : **12/9**
- Chambers, Anne : **06/9, C9**
- Clement, Diane : **06/9, C9**
- Cox, Euan : **09/C4**
- Dominguez, Rafael Diez : **03/C12**
- Farrer, Reginald : **09/3, C3**
- Forrest, George : **09/3**
- Fulford, Cohan : **06/8, C8**
- Furse, Rear Admiral John Paul Wellington : **09/4**
- Gemmill, Robin : **04/C7**
- Good, John E.G. : **07/3, C3**
- Grey-Wilson, Christopher : **07/8, C8**
- Grimshaw, John : **07/12, C12**
- Gustafson, Phyllis : **09/17, C17**
- Haškovec, Štěpánka and Cedrik : **12/10, C10**
- Haslegrove, David : **07/15, 16, C16**
- Himalayan beauty : **02/C5**
- Hinkley, Dan : **09/C5**
- Holubec, Dr. Vojtěch : **07/4**
- Holzbecher Josef : **12/6**
- Hoppel, Michal : **11/17, C17**
- Jans, Harry : **01/C3; 06/12, C12, 13**
- Johansen, Herluf : **12/C14**

- Jurášek, Josef : **02/C12**
- Kammerlander, Michael : **03/C16; 07/13**
- Kelaidis, Panayoti : **05/12, C12; 09/17, C18**
- Lafong, Cyril : **05/19, C19**
- Lancaster, Roy : **07/16, C16**
- Lemmens, Jozef : **03/C9**
- Lever, Tim : **03/C2**
- Linnaeus, Carl : **06/18**
- Mathew, Brian & Margaret : **07/14, C14**
- McBeath, Ron : **09/C15**
- McGregor, Malcolm : **11/C16**
- Millward, David : **03/C15**
- Murfitt, Rex : **10/3, C3**
- Newton, Alan : **09/C12**
- Nicholls, Graham : **04/9, C9**
- Nilsson, Susann : **12/16, C16**
- Pavelka, Mojmír : **12/2, 4**
- Richards, John : **07/10, C10, 11**
- Roemer, Hans : **04/C2**
- Rolfe, Robert : **07/5, C5**
- Ruksāns, Jānis : **09/18, C18**
- Saunders, Rachel and Rod : **09/C5**
- Sekerka, Pavel : **03/C10**
- Sharp, Davie : **05/C8**
- Skulski, Lori : **08/22**
- Walek, Kristl : **06/19, C19**
- Wallis, Bob and Rannveig : **07/12, C12; 09/C16**
- Walsh, Martin : **07/3, C3**
- Watson, John : **07/9, C9**
- Watson, John and Anita : **09/C5**
- Weiss, Rudi : **03/C5**
- Wiley, Keith : **07/16, C16**
- Wynn-Jones, Sue and Bleddyn : **09/C5**
- Young, Ian : **07/2, C2**
- Zschummel, Rosi and Dieter : **03/C7**
- Zvolánek, Zdeněk : **11/C14**
- Petrophytum caespitosum : **10/14; 11/3**
- Phacelia sericea : **11/C14**
- Phlox albomarginata : **05/9**
 - austromontana ssp. densa : **10/21**
 - bryoides : **10/C11; 11/20, 21, C21**
 - caespitosa : **11/C9, C10**
 - aff.caespitosa : **10/C10, 10**
 - — ssp. caespitosa : **11/7**
 - — ssp. pulvinata : **04/21, C21; 11/3, 6**
 - condensata : **04/13; 11/20**
 - — detail : **11/C21**
 - diffusa : **10/12**

INTERNATIONAL ROCK GARDENER INDEX

- grayi : **10/21**
- griseola tumulosa : **10/19**
- 'Gypsy Blood' : **04/C22**
- hirsuta : **10/C18**
- hoodii : **10/9, 12, 21**
- kelseyi : **11/21**
- lanata : **10/12**
- missoulensis : **10/C12, 12; 11/C18, C20**
- muscoides : **10/C11, 11, 12**
- opalensis : **10/11**
- pulvinata : **04/13; 11/9, C10, 20**
- pungens : **10/11**
- sp. : **11/C9**
- stansburyi : **10/21**
- x 'Frantonine' : **05/11, C11**
- Physoplexis comosa : **06/C9**
- — watercolour : **06/C9**
- Pinus aristata : **04/C12, 13**
- parviflora 'Glauca' : **12/20, C20**
- sylvestris : **03/17**
- Physaria acutifolia : **05/9**
- chambersii : **10/20, 21, C21**
- didymocarpa : **11/20**
- eburniflora : **11/20**
- Pinus aristata : **10/C13**
- longaeva : **11/3, 5**
- Places:
 - Great Basin : **11/C2**
 - Independent Pass : **11/C16**
 - Kaisareia : **12/10**
 - Karlik Church : **12/C1, C2**
 - Kodachrome Basin : **10/13**
 - Lake Van : **08/C4**
 - Lhasa : **06/C15**
 - Medicine Wheel : **11/10**
 - Poznan : **11/C17**
 - Red Fleet Camp Ground, Utah : **10/C6**
 - Sakhalin (Karafuto) : **12/16**
 - Sheldon Refuge, The : **10/22**
 - Tekir Gecidi : **12/10**
- Polemonium pulcherrimum : **11/C16**
- viscosum : **11/C11**
- Polygala subspinosa : **10/19, C19**
- Potentilla arenaria : **03/17**
- nitida : **08/14**
- Primula albenensis : **05/7**
- allionii hybrids : **11/22**
- — x 'Jackie Richards' : **05/7**
- bhutanica : **03/13, C13**
- 'Carina' : **05/11**
- chumbiensis : **07/11, C11**
- daonensis f. alba : **02/2, C3**
- dryadifolia : **05/4**
- elatior ssp pseudoelatior : **07/C10**
- 'Kusum Krishna' : **05/7**
- marginata : **04/13, 20; 08/16**
- nevadensis : **11/3**
- rebecca: **07/11, C11**
- sonchifolia : **03/13, C13**
- veris : **05/3**
- vulgaris : **07/6**
- — Zigana form : **07/C7**
- — ssp. balearica : **07/6**
- — ssp. heterochroma : **07/6**
- — ssp. sibthorpii : **07/6, C6**
- — — Iznic form : **07/C7**
- x forsteri - natural hybrid : **02/2, C2**
- x 'Marven' : **05/11, C11**
- zambalensis : **03/C2**
- Prunus prostrata : **05/18**
- Pulsatilla albana ssp. armena : **12/10, C10, 11, C11**
- grandis : **03/17, C17**
- — f. albiflora : **03/17, C18**
- integrifolia : **12/16, C16, 17, C17, 18, C18, 19**
- — x P. vernalis : **12/17, C17, 18**
- patens : **05/3**
- pratensis ssp. bohémica : **03/17**
- — nigricans : **01/14**
- sachalinensis : **12/17**
- vernalis : **02/2, C4; 04/13, 14; 05/10, C10; 12/18, 19, C19**
- vulgaris : **08/C1, 21, C21**
- Purshia tridentata : **10/8, 19**
- Pyrethrum leontopodium : **05/7**
- Pyrola grandiflora : **04/4, C4**
- rotundifolia : **04/4**
- Quercus petraea : **03/17**
- Ramonda nathaliae JCA686 : **09/C14**
- Ranunculus parnassifolius : **04/C15; 12/18**
- Rheum nobile : **06/15, 16, C16**
- Rhododendron calostrotum : **08/9**
- calostrotum 'Gigha' : **08/C9**
- 'Chipmunk' : **04/13**
- lapponicum : **04/3, 5, C5**
- 'Wee Bee' : **04/13**

INTERNATIONAL ROCK GARDENER INDEX

- 'Wren' : **04/13**
- Rhodothamnus chamaecistus : **07/3**
- Rock, amphibolite : **11/20**
- Rydbergia grandiflora : **11/C16**
- grandiflora = Hymenoxys grandiflora

- Sagebrush : **10/6**
- Salix arctica var. petraea : **04/13**
- jejuna : **04/13**
- retusa : **04/13**
- stolonifera : **04/5**
- x boydii : **04/13**
- Saxifraga burseriana : **03/18**
- dinnikii : **02/C11; 07/4**
- ferdinandi-coburgii 'Dracula' : **03/18**
- 'Francis Cade' : **08/C6**
- 'Joyce Carruthers' : **10/C23**
- ludlowii : **04/18**
- lyallii : **04/6**
- marginata : **02/C11, 04/20**
- — var. coriophylla : **02/10, C10**
- oppositifolia : **10/12**
- — 'A.C.U.Berry' : **04/C14**
- poluniniana : **03/18**
- sancta : **12/3**
- wendelboi : **09/13, C13**
- x caroli-langii : **02/10, C10, 11**
- x 'Lenka' : **03/18, C18**
- Scilla (or Fessia) furseorum : **09/4**
- morrisii : **09/C14**
- Sempervivum arachnoideum : **08/16**
- furseorum : **09/4**
- sp. : **12/15, C15**
- Senecio pauciflorus : **04/6**
- Shoshonea pulvinata : **05/6**
- Sideritis athoa : **12/10**
- trojana : **12/10**
- Silene acaulis : **04/13; 10/12; 11/9**
- — ssp.subcaulescens : **11/C11**
- argaea : **12/10**
- bolanthoides : **05/18, C18; 12/6, 9, C9**
- petersonii var. minor : **10/13**
- Soldanella alpina : **02/2, C4**
- carpatica : **06/C10**
- sp. - Dolomites : **06/C10**
- sp. - Watercolour : **06/C10**
- Solms-laubachia baiogoinensis : **03/7, 8; 04/18, C18**
- linearifolia : **03/C9**
- prolifera : **03/7, C7, 8, C8; 04/18**
- pulcherrima : **03/9**
- retropilosa : **03/9**
- species ? nova : **04/18, C19**
- xerophyta : **03/C9**
- zhongdianensis : **03/C9**
- Sphaeralcea caespitosa var. caespitosa : **10/1, 2, C2, 3, 15**
- — var. williamsiae : **10/2**
- Stachys lavandulifolia var. lavandulifolia : **04/13**
- Stamps :
 - Viola delphinantha : **03/C12**
 - Viola kosaninii : **03/C12**
- Sternbergia fischeriana : **02/14, C14**
- Sternbergia lutea : **02/14**
- Stipa capillata : **05/3**
- joannis : **03/18**

- Telesonix jamesii : **11/3**
- Tetraneuris acaulis : **11/20**
- lapidicola : **11/20**
- Thlaspi bellidifolium : **04/23, C23**
- Thymus praecox ssp. arcticus 'Minus' : **04/13**
- pulvinatus : **12/10**
- sp. : **02/3**
- Tonestus pygmaeus : **11/9, C9**
- Townsendia condensata : **11/C18, 20**
- excapa : **05/6**
- hookeri : **05/6; 11/21, C22**
- incana : **05/6**
- leptotes : **11/20**
- montana : **05/6; 10/C17; 11/20**
- nuttallii : **05/6**
- parryi : **11/20**
- rothrockii : **05/6, 7; 11/20**
- (?)spathulata : **05/6, C6, 7**
- Trillium ovatum 'Roy Elliott' : **09/C3**
- Tufa Wall & Harry Jans : **06/15, C15**
- Tulipa armena var. armena : **04/21**

- Verbascum x 'Letitia' : **08/C13**
- Veronica caespitosa : **04/23; 05/18**
- kotschyana : **04/23**
- liwanensis : **05/12**
- oltensis : **09/13**
- thymoides : **12/12, C12**
- Viola cazorlensis : **03/11, C12**
- columnaris : **09/6, C6, 7, C7, 8, C8**
- dasyphylla : **09/7, C7**

INTERNATIONAL ROCK GARDENER INDEX

- delphinantha : **03/11, C11, C12**
- fluehmannii : **09/8, C8**
- kosaninii : **03/11**
- trinervata : **10/C9**

Yucca nana : **04/13**

Zauschneria arizonica = Epilobium canum ssp.

latifolium

- arizonica : **10/C5, 5**
- californica : **08/19; 10/4**
- — 'Alba' : **10/C4, 5**
- — 'Etteri' : **10/C6**
- — 'Solidarity Pink' : **10/C5**
- latifolia f. alba : **10/5**
- septentrionalis : **08/18 C19; 10/C4, 5, C18**