

"THE CREVICE"

In memory of Eswyn

Newsletter of
The Alpine & Rock Garden Special Interest Group
of the
Qualicum Beach Garden Club

Issue # 6

April 2012

From the Editor: *Happy Days in the Garden !!*



Fritillaria uva-vulpis



Primula auricula

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APPEAL FROM GROUP CHAIR, JUNE STRANDBERG

A volunteer is needed from the group to be in charge of carpooling for outings. The co-ordinator doesn't have to arrange trips, just sort out the people who want to go in cars. If you can take on this desk job, please contact June at normjune@shaw.ca

SPECIAL PRIZE DRAW

A member of the the Alpine SIG, Bernie Guyader of Courtenay, has donated to the group an Edith Wilk print , # 27 of /400.

A vase of Erythronium oregonum is shown against a dark background.

It has an oak frame that is 17 1/2 in.X 14 1/2 in.

The artist, Edith Wilk has been a resident of the Victoria area for most of her life.

Draw Tickets: 1 entry \$2.00 3 entries \$5.00

Monies earned will be used to support Alpine SIG activities - speakers, workshops, etc.



LARGE WHITE PAILS FOR SALE, IN SUPPORT OF ESWYN ALPINE GARDEN AT NANOOSE

Available at June's on April 23rd, the day of the trough-making bee. There are two different types of pails. Some have grab handles on each side of the pail and some have the conventional strap like pail handles. \$4 for each pail; the money raised will be donated to Eswyn's garden. (We already have \$52!) Jo Graham is supplying these pails.

JO GRAHAM'S COCONUT MACAROONS

Jo brought these yummy cookies to the last meeting. She is kind to share the recipe.

Beat 3 egg whites and $\frac{1}{4}$ tsp salt into soft peaks. Gradually add 1 $\frac{1}{4}$ cup sugar, beating until very stiff. Fold in by hand $\frac{1}{2}$ tsp vanilla, $\frac{1}{2}$ tsp almond flavoring and 2 $\frac{1}{2}$ cups of coconut. Line a cookie sheet with brown paper; place tablespoon-sized dough on the sheet. Bake at 325 for 20 min. Cool before removing from the pan. Jo writes: "It is such an easy and delicious recipe; it is also popular in my family as it is a yummy gluten-free dessert for those darn celiacs."

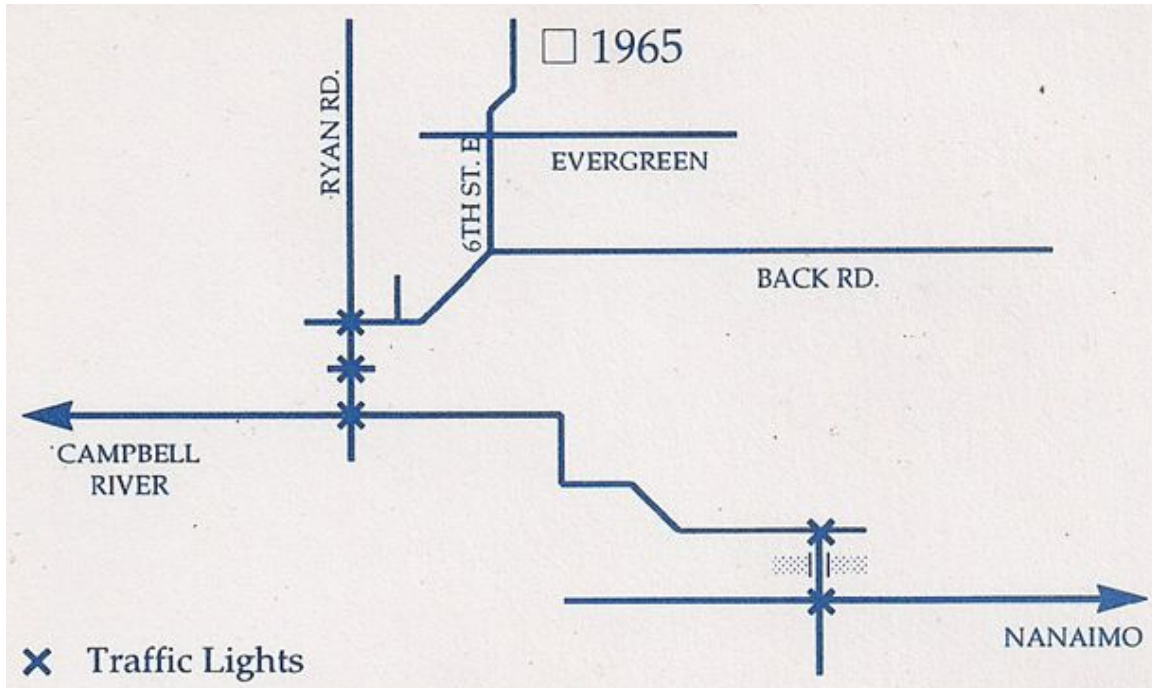
UPCOMING ALPINE SIG EVENTS

April 23rd **NOTE CHANGE OF DATE TBC - Monday - APRIL**
REGULAR MEETING: BUILDING HYPERTUFA TROUGHS AND DISHES,
at June Strandberg's, 1980 Island Hwy, between Village Way and Bennett Rd. in QB,
morning and afternoon sessions. If you wish to use one for the Crevice Garden in a Trough
Workshop in September, here are the dimensions suggested by Gordon Mackay: 6" deep -
the deeper the better for the rock and personal preference for the rest but suggested 16"
X 12" rectangular. **YOU WILL HAVE RECEIVED AN EMAIL FROM JUNE WITH**
DETAILS OF THIS WORKSHOP ALREADY.

April 28TH - Saturday - ALPINE SIG SPRING PLANT SALE at Louise
Cotterill's, 886 Primrose St., QB. More info to come in a separate email.



APRIL 30TH - Monday - VISIT TO BERNIE GUYADER'S GARDEN, IN COURTENAY, ARRIVE THERE 2pm. Via carpool. 1965 – 6th St. East. Map follows



May 28th - Monday - MAY REGULAR MEETING: at Eswyn Alpine Garden at Nanoose Place, Nanoose, TBC with more info to follow.

June 25th - Monday - JUNE REGULAR MEETING - VISIT TO OWL & STUMP RARE PLANTS NURSERY. TBC

July 30TH - Monday - JULY REGULAR MEETING - WILDFLOWER WALK AT PARADISE MEADOWS, TBC

SEPTEMBER - WORKSHOP ON BUILDING A CREVICE GARDEN IN A TROUGH with Gordon Mackay. More details to follow.

OTHER EVENTS OF NOTE

April 21st - Saturday - The Mt. Arrowsmith Rhododendron Society Show and Sale, at the Parksville Curling Club. Truss Show and competition, specialty nurseries with rhododendrons and their companions for sale

April 24th - Tuesday - VIRAGS, Victoria - Ken Marr, Curator of Botany at Royal B.C. Museum on "Botanizing in the Altai Mountains and Far Eastern Russia"

April 29th - Sunday - UNION BAY SPRING PLANT & CRAFT SALE - Community Hall on Island Hwy, North end of Union Bay, 10-3

May 5th - Saturday - The MARS Spring Fling - Sale of plants of MARS members & other vendors, at the QB Community Hall, Memorial Avenue & Legion Way

May 8th - Tuesday - QBGC REGULAR MONTHLY EVENING MEETING - DIANA WALKER ON CLEMATISES

May 9th - Wednesday - AGCBC, Floral Hall, VanDusen Gardens, Vancouver - STEPHANIE FERGUSON on "Sun, Stone & Water" - describing construction of her new crevice garden in Calgary and how it was planted.

May 12 & 13th - Saturday & Sunday - The MARS Garden tour - Mothers' Day Weekend, 14 beautiful gardens in Qualicum Beach in a self-guided tour - \$15. Tickets on sale April 22

May 12th - Saturday - QBGC Plant Sale, "All About the Garden", at Sandy Glazier's, E. Garden Road, between Qualicum Road and Hollywood.

May 22nd - Tuesday - VIRAGS, Victoria - GRAHAME WARE on "Roscoe, Robust Renegade of the Ginger Family"

JUNE 5TH - Tuesday - QBGC REGULAR MONTHLY EVENING MEETING - EXPERT GARDENER PANEL

June 13th - Wednesday - AGCBC, Floral Hall, VanDusen Gardens, Vancouver - MARK TURNER on "Rare and Endemic Plants of the Northwest"

June 26th - Tuesday - VIRAGS, Victoria - PAUL SPRIGGS on "A Great Scot: David Douglas, The Man, the Legend and His Plants"

July 10th - Tuesday - QBGC REGULAR MONTHLY EVENING MEETING - GRAHAME WARE ON "Carl Jung, Shade-Loving Plants and Garden Variety Self-Realization"

American Rhododendron Society
Western Fall Regional Conference, Nanaimo, B.C.

RHODOS IN PARADISE - DESTINATION VANCOUVER ISLAND
September 21 - 23, 2012

For full details:

Check out our brand new website at <http://arsnanaimo2012.ca/>

Registration is open now!

We encourage you to register early!

The Master Gardeners Association of BC is holding its fall conference in Nanaimo this year in October. There will be lots of good information for the home gardener - everyone is welcome! The advance publicity and registration for the MGABC Conference to be hosted by VIMGA in Nanaimo on October 20th and 21st is now up at the mgabc.org website. HOME page, at NEWS. You can take advantage of the Early Bird pricing. So have a look, and let all your gardening friends know, as this event is open to the public.

Best of the West
A Celebration of Best Gardening Practices

Presented By
Master Gardeners of BC

Debbie Turnbull
Seattle

Linda Johnson
Salt Spring Island

Plus
Panel Discussion
"Growing for
Your Community"

Lady Hardiman
Portland

Harry Jongerden
Vancouver

SATURDAY, OCTOBER 20, 2012
Beban Park Social Centre, Nanaimo, BC

Enjoy Early Bird Pricing
Day and Evening
program available

ticket info
mgabc.org/events

"Celebrating 30 years of Master Gardeners in BC"

HEADS UP !!! (Thank you to ZZ)
May 2013 - Czech International Rock Garden Conference -
see www.czrgs.cz

FOLLOW UP ON SIG EVENTS

Report on Vancouver Trip to hear Malcolm McGregor, author of Saxifrages A Definitive Guide to the 2000 Species Hybrids & Cultivars **by Karen Unruh**

On March 12th a group from the Alpine Special Interest Group of the Qualicum Beach Garden Club planned to visit David Sellers' garden and then attend the Alpine Garden Club of B.C. meeting at Van Dusen Gardens in Vancouver. The wind and ferry cancellations did not co-operate and the trip was cancelled. However, I had planned to see my mother in Port Coquitlam the next day so I returned to the ferry terminal and waited for the first ferry to cross the straits at 3:40 p.m. I was in Vancouver in time for the meeting so I decided to go, and am very glad that I did.

David Sellers was the chair of the meeting and as I was chatting to him and his wife Wendy, he jotted my name down in his book from my Garden Club name tag. And then he even introduced me to the meeting, along with the Nova Scotia visitors beside me, so I received an enthusiastic welcome. David shared progress with the members of a community rock garden he is supporting being built in Surrey--selecting rocks from the municipal yard and marking them for the rock garden, deciding on plants and supplies needed. The City of Surrey is picking up the costs. Except for this last point, it all sounded very familiar to our experience with Eswyn's Alpine & Rock Garden at Nanoose Place.

A parlour show of specific categories was exhibited by the members, and Malcolm was asked to judge. When discussing a certain cushion saxifrage, which I am sure he knew was entered by David, he expressed the need for the clay pot to be cleaned with a pumice stone to eliminate the white marks...there was laughter and acceptance of the given advice

Malcolm McGregor is a great speaker and a performer on stage. His talk followed the contents of his book, and, as I had lots of ferry wait time I had just re-read his book, so I could follow his stories and comments which complemented the illustrations in the book used onscreen. The room was darkened for the presentation and there was no possibility of note taking, so I could just settle in to total enjoyment of the style of the speaker and the visuals. For a very detailed, quite academic topic, Malcolm presents both in his book and at the meeting in an inviting and personable way. He is quite a story teller and shared much of his travels and explorations with Saxifrages world wide as well as suitability for use in gardens, including his own. The movement of ice in the early ice ages determined where Saxifrages are found in nature today. The talk went until 9:45 p.m. so our plans to get our Qualicum group to the ferry, leaving the meeting at 9:30 would have been disappointing for

us. Fortunately, I could stay for the full meeting.

After the talk, I followed up with Malcolm my curiosity of one of the saxifrages in Eswyn's Alpine & Rock Garden--a tiny cushion saxifrage given to the garden by Eswyn's gardener. I had a picture of it on my camera and I shared it with Malcolm. The label on the plant is Betcho Pass Siberia. So Malcolm stated that Betcho Pass is not in Siberia but in the Caucasus area of Russia. It is a *Saxifraga marginata* and the red buds of flowers in the photograph will open to one of the white flowers on page 81 of his book. So I will have to watch and study this plant this spring.



Saxifraga marginata ex Betcho Pass, Caucasus

David Sellars Talk to
The QBGC Alpine & Rock Garden SIG
"Alpine Jewels of the Olympic and Wenatchee Mountains,
Washington State"

**A Plant List based on the photos shown &
some notes taken by Valerie Melanson**

Geographical and Geological Notes: The Olympic mountains are isolated as are those on Vancouver Island. The Wenatchee mountains are on the fringe of the Columbia (River) Basin. The Cordilleran ice sheet during the last glaciation stopped just north of the Olympics & Wenatchees, so pre-glaciation flora is preserved in these two areas, areas known botanically as refugia. In contrast Vancouver Island and Puget Sound were covered so the flora was wiped out.

Therefore the Olympic and Wenatchee Ranges have flora found elsewhere in the Washington & B.C. Mountains that arrived post-glaciation, flora that is rare elsewhere and flora endemic to these ranges alone.

The Wenatchees have interesting geology - serpentine. Some plants, e.g. mimulus and penstemon can tolerate this rock and therefore have a competitive advantage.

The Olympics

One endemic is *Campanula piperi* - photo of plant on a plug of volcanic rock

The west side of the range is wetter, the east side drier (rain shadow effect). On the east side is found *Rhododendron macrophyllum*, e.g. along the Elwha River.

East Side of Range:

Mt. Townsend Trail, leading up from Puget Sound

Buckthorn Wilderness

Common here:

- Douglasia laevigata*, related to *Androsace* and known in the UK as *Androsace laevigata*
- Lupinus lepidus* var *lobbii* - forms a mat, about 2" H
- Lewisia columbiana*
- Penstemon procerus* - 3-4" H
- Phacelia sericea*
- Phlox diffusa*
- Potentilla villosa*

North Side of Range:

Paved Road to Hurricane Ridge Visitors Centre from Port Angeles

- Eriogonum ovalifolium* var *nivale*
- Lilium columbianum*
- Saxifraga bronchialis*
- Saxifraga cespitosa*
- Aquilegia formosa*

Part Way up Paved Road from Port Angeles to Hurricane Ridge is a Switchback Trail up to Mt. Angeles

- Campanula piperi* - an endemic
- Viola flettii* - an endemic
- Petrophyton hendersonii* - a bottlebrush flower. Available from Wrightmans but not quite the same as that found wild

Gravel Road onwards from Ridge to Obstruction Point

- Campanula piperi*, white form - on the cliff on the right side of the road
 - Erythronium montanum* - great drifts spring up a week or two after the snow goes
- Elk Mountain Hike from Obstruction Point** - colourful steep meadows on scree
- Viola flettii* - a crevice dweller and endemic
 - Collomia debilis* - has long tap root in very deep scree anchoring it to rock beneath. In essence the plant floats on scree. Whitish petals with purple veining and blue anthers.
 - Allium crenulatum*

- Erigeron compositus* - flowers are only about 1" H above plant
- Castilleja miniata*
- Phlox hendersonii* - white
- Smelowskia calycina* var *Americana* - white
- Lupinus lepidus* var *lobbii* - dwarf alpine, silvery leaves, purple/white flowers
- Eriogonum ovalifolium* var *nivale*
- Potentilla fruticosa* - shrubby form on top of Elk Mountain
- Phacelia sericea*

Wenatchee Mountains

East side of Cascades and Snowqualmie Pass, North of Ellensburg. A great centre to explore from is Leavenworth.

Chumstick Mountain:

Off to North East of the Wenatchee Range is Chumstick Mountain

Dryish climate, leading over to the Columbia Basin, witness the Ponderosa Pines. Here's what David saw in late June. NB: you need a 4 wheel drive for this road:

--*Douglasia nivalis* - more of a cushion plant, wine coloured. It can go outdoors in a sand bed, very well-drained with lots of sun

--*Lewisia tweedyi* (now *Lewisiopsis tweedyi*) - all over Chumstick Mountain

Later in July:

--*Calochortus lyallii*

--*Lilium columbianum*

Tronsen Ridge, in the centre of the Wenatchees - dry, 4 wheel drive road to the top

--*Ipomopsis aggregata* - also seen in the Okanogan

--*Penstemon pruinosus*

--*Lewisia rediviva* - needs real good drainage, sandy, dry in summer, lots of sun, has a flower like a water lily. After flowering the plant disappears, becomes a dormant root in the ground. In Sept/Oct little green shoots start to appear and thick green leaves grow all winter long. Then the leaves disappear and the white to dark pink flowers appear in May. The root is edible and is known as "Bitter root" and rather like a big carrot. David grows them in sand and gives them rock dust and a tiny bit of slow release fertilizer.

--*Clematis columbiana*

--*Zigadenus paniculatus*

--*Phacelia linearis*

--*Allium crenulatum* - white form

--*Physaria alpestris*

--*Lewisia tweedyi* (*Lewisiopsis tweedyi*) - wonderful apricot edged colour forms

Iron Peak, Wenatchee Mountains - serpentine geology

In June there is snow on the top ridge.

--*Erythronium grandiflorum* - yellow

--*Anemone drummondii* - starts blue, then goes white as the stem grows taller

--*Douglasia nivalis*

--*Castilleja elmeri* - endemic to Wenatchee Mtns.

--*Lomatium cuspidatum*

--Claytonia megarhiza v. nivalis - endemic to Wenatchees, Purple blue flowers unlike regular Claytonia megarhiza which is white. Succulent, wonderful leaves

Recommended to purchase a map to the Wenatchees that the US National Park Service sells on the web. The website is also great as it shows snow conditions, road conditions. For the best flowers, add a week or two to the road opening date.

Note from David Sellars: to seed Lewisia rediviva, take Highway 3, in Southern BC, on way from Princeton to Okanagan, there is a gravel road leading to Mt. Koba. They start flowering first week of June. There are white and pink forms. They continue to flower on top at the viewpoint, reached via a trail in July.

Note from Grahame Ware: Arthur R. Kruckeberg, a Professor Emeritus of the University of Washington is an expert on serpentine soils of California, Colorado, and other places in western USA. See www.artkruckeberg.com

Editor' Note:

Taxonomists and Geneticists have the advantage now of using DNA analysis to delve into the nitty gritty of plant families and genres. As a result many plant associations and names are being revised. It takes time to make revisions to time honoured names, both in our gardens and in the horticultural trade. Grahame Ware draws our attention to some changes that impact some of the Kabschia Saxifrages David Sellars brought over on March 28th.

NAME CHANGES IN SAXIFRAGA

Some nomenclature notes and asterisks on David Sellars Kabschias

Currently correct names (from Malcom McGregor's 'Saxifrages' book)

Saxifraga x irvingii 'Jenkinsiae'

Saxifraga x megaseaeiflora (S. aretioides x S. burseriana x S. lilacina x S. media)

and in turn from Holenka's Miracle group (S. x anglica x S. x boydii)

'Radka' is simply a colour form.

Saxifraga 'Marianna' is an early S. x borisii cross

Saxifraga 'Vladana' (another Holenka's Miracle group x)

Saxifraga 'Winton' (an S. x paulinae cross) Gorgeous yellow bred by one of the master hybridists

Saxifraga 'Allendale Charm' a so-called 'Swing Group' cv. (S. poluniniana x S. wendelboi)

Very free flowering.

All are tufa or trough candidates for continued growth and success.

Grahame Ware, March 19th, 2012

Rhodos and Gentians

by Bernie Guyader

Now do we say Rhodos and Gentians or Gentians and Rhodos, I suppose that if you are a rhodophile the first order would be yours. No matter the order, they make a great combination. (Companion plants anyone) Our garden is in large part a rock garden with many alpine plants. Whenever I read or attend talks on companion plants, I am amazed that there is never any mention of Gentians. I suppose, I maybe prejudiced due to the fact that Gentians are my favorite plants. I feel that the best companion plants have the same horticultural requirements as rhodos and bloom at different times, or complement the rhodos when they are in bloom. I think, possibly, the reason more people do not grow gentians is because they have been told they are difficult. I have found that if you give them the proper conditions most of them will grow and blossom happily for many years.

I suppose if we mention alpinines, we should first consider the Rhodos that are native to the Alps of Europe, which are *ferrugineum* found on siliceous subsoil and *hirsutum*, found on calcareous subsoil. We also have *Rhodothamnus chamaecistis*, which was previously known as *Rhododendron chamaecistus*. These are all perfectly happy on a well-drained rockery, in full sun with a mulch of 5 to 8cm(2-3in) of shale or rock chips. I should mention at this time I also grow *R. radicans* on the rockery, but on the north side in a more shaded area. With the alpine rhodos you can grow *Gentiana* in the *acaulis* group such as *alpina*, *kochiana*, *dinarica* and *clussii*, *Clussii* in my garden is more lavender than the usual deep blue of the others. It may not be to everyone's liking. These evergreen gentians with their large showy trumpets, most of which are approximately 8cm(3 in) long in a deep rich blue, bloom at the same time as the rhodos. The plant height is about 7cm(2.5in) with the flower rising up to 15cm(6in.) above the foliage. They simply require a well-drained, gritty soil in full sun. I top-dress them with a handful of screened compost in early winter. The compost is worked in by the winter rains or even better by the melting snow. I think most people lose these plants or have them do poorly because they treat them too kindly. Giving them too much moisture and fertilizer. Blooming during the summer, given the same conditions are *Gentiana septemfida*, *lagodechiana* and many other gentians from the Alps and the Caucasus. They are deciduous and grow to a height of 25-30cm(10-12 in.). I also have a summer gentian that I grew from seed I received from a seed exchange. It is supposed to be "paradoxa". It is a great plant with some of *paradoxa*'s features, probably a hybrid, definitely not *paradoxa*. I think it is the best summer flowering gentian I have grown.

The following plants in our garden grow in a raised bed about twenty feet by ten feet, on the north side of our house. The Gentians, which grow here where it is a little more shaded and stays moister, are the August blooming *G. asclepiadea*, or willow gentian. It comes in many shades of blue and there is a white form, which is a little taller. They have upright arching stems to about 50cm(20 inches). They happily hybridize and sow themselves through the garden. The Asian gentians such as *G. sino ornata*, *ternifolia*, and their many hybrids, bloom in September and October they are mat forming with dark green foliage with large trumpets from the darkest blue to white. These are the easiest to propagate as they root where the stems touch the moist soil. *G. paradoxa*, from the Caucasus, is also fall

flowering. It has a long blooming period sometimes extending from August to October. It is more upright but does tend to trail. It is very attractive. Pale blue with dark stripes. They blend in well with *Cyclamen hederifolium*, both pink and white forms, which bloom at this time. When the cyclamen blossoms finish, the colorful foliage in dark green and silver carry on the show.

These companions are happily mingling with the rhodos. I am drawn to the dwarf and low growing rhodos, because they fit in so well with the over all scale and scheme of things in our garden. I much prefer the species but I have many hybrids as well. The species are *R. impletum*, *keleticum*, *williamsianum*, *cephalanthum* and *psuedchrysanthum*. I have some of the 'birds' from Peter Cox. Centered between two bright blue hepaticas, is *R. 'Ptarmigan'*. The hepaticas blossom slightly before *Ptarmigan*, but they are still in full bloom when the pretty white bells of the rhodo open. . 'Kim' another campylogynum hybrid is another favorite, even though Cox calls it muddy. *R williamsianum* with its pink bells is between *R. 'Ptarmigan'* and 'Egret', great contrast.

Also in this bed we have *Trillium hibbersonii*, a dwarf species native to Vancouver Island, about 5cm(2in.) tall with pink blossoms on three-inch stems and *Cyclamen coum* which blossoms in the spring. One other gentian which I have in the garden is *calycosa*, it grows to approximately thirty centimeters, has a large tubular, light blue blossom. This is a North American native, which is found from British Columbia to California growing in meadows,

In conclusion, think *Gentians*, there are over 400 species so there's quite a choice. Many different colors and size ranging from mat forming to the 100cm(36 in.) *G Lutea*, which is yellow and the root, is used to flavor Schnapps. I have mentioned the ones that are most likely available and the easiest to grow and they are the natural companions to rhodos. You might have to search for them at specialty nurseries, one of which is Mt. Tahoma Nursery, but they are worth every effort. For more information read "*Gentians*" by Fritz Kohlein or "*The Genus Gentiana*" by Josef J. Halda

(article was originally submitted to the "Journal of the American Rhododendron Society")

Bernie's Photos of Gentiana in His Garden



Gentiana acaulis



Gentiana asclepiadea alba



Gentiana asclepiadea in August



Gentiana brachypilla in July



Gentiana cachmerica in July



Gentiana clusii



Gentiana paradoxa in August - September



Gentiana puberulenta in July



Gentiana tibetica in July



Gentiana sino-ornata in October - November

PRAGUE ROCK GARDEN CLUB SPRING SHOW

On April 3rd Zdenek Zvolanek sent along some photos from the 10 day long Spring Show of the Prague Rock Garden Club, that had just ended.



Double Trough



Poloneza a Foxtrot



Primula x miniera 'Ute'



Saxifraga 'Snehurka'



Saxifraga 'Verona'



Saxifraga x Thalia

WE REALLY SHOULD STOP COMPLAINING ABOUT OUR WEATHER ON THE COAST !!

Here follows a report by **Jurgen Hornburg** sent along by Zdenek Zvolanek (March 12).
ZZ thought it would interest us:

Editor's Note:

Jurgen Hornburg has been growing alpine plants for close to 15 years at 1,000 metres near Horsefly, B.C. He and his wife, Sue Hemphill also have a large vegetable garden. He has many alpine beds with a lot of treasures. He starts seed from the seed exchanges every year in his greenhouses, which are used later in the season for tomatoes. Seedlings are moved

outside when the weather is conducive. They overwinter under the snow and then really get growing the second year. He also has a plant room upstairs in the house where his tomatoes especially get several months head start. There are lots of deer, moose and rabbits in the area, but the couples two dogs provide good protection for the gardens.

Jurgen writes:

"It is late February. Since the winter solstice, the sun has given us an additional 2 1/2 hours of daylight. In our latitude (53 degrees north), the days have become noticeably longer. But there are nearly 1.5 metres of snow covering the garden with a white, glittering blanket. The raised alpine beds look like buried Viking longboats waiting eagerly for the next journey.

A reality check cold snap has descended and the temperature is sitting at -22 degrees Celsius. The red polls, chickadees, and grosbeaks are eagerly gobbling up the sunflower seeds out of 3 feeders. Some are perched on shrubs against the south house walls, fluffed up to twice their size, soaking up the early sunrays. The stems of the red osier dogwoods are sparkling against the snow background.

Even though the hostile environment seems to exclude life on its surface, underneath, the efficiently, insulating snow cover sustains and protects a myriad of alpine plants. Just above the soil, where it meets the snow, a unique narrow layer of snow crystals is formed- pukak snow. They warn us to never build a house of pukak snow (pronounced (poo-cuck). This layer of pukak snow provides a haven for a variety of life like voles who use the pukak layer and build a devilish integrated network of tunnels. The grass stays green under this layer and provides nutrition for these animals. Unfortunately, so do the alpine plants!!

When the snow finally receded by April of 2011, a veritable intermingling of tunnels showed in the pukak layer. Later, with the snow totally gone, one could see the detritus of the voles meals along their former tunnels. Cruciferae seemed to be a favorite meal for these discerning guys. For example: of the two healthy spread out (diameter of 30 cm) of *Degenia velibicity*, only a sad stubble of miniature stumps was left. Another difficult loss was *Convulvulus boissieri*. Even though some of the alpine beds were raised with 40-50 cm steep, rock walls, a handful of other alpiners also fell to the ever present voles.

What to do about these voles? Get a cat? We have one along with two dogs that are avid vole hunters. Train an owl to hunt in your back yard-not likely. The pukak layer so important to protecting the alpiners also protects the voles from weather and predators. The voles are essential to the food chain. They are staple diet of a number of bird and mammal predators. For many owls and hawks, voles make up as much as 85 percent of their diet. Foxes, coyotes, bobcats and even wolves eat them. Voles have become an important link in the food chain between the grasses and the carnivores and birds of prey. Maybe even more important than alpine plants in the garden.

The trick is to have back ups-to anticipate possible losses. One can take cuttings or collect seeds which can help cover future losses. Or, there are the seed exchanges. What

unremitting joy they provide on a bleak winter's day. After, much painful selecting of the "must have" species, the seeds arrive and seeding turns into an almost euphoric activity. . There are about 220 pots with seeds sitting upstairs in the growing room. Already about 40 are showing hopeful and healthy seedlings. Another 150 pots from last year's seed harvest are sitting under the snow. By the spring equinox, they will be dug out and put into the warming green house. A month later, "Look Ma, there is *Clavonia lanceolata* and, over there is *Clintonia uniflora*!!!. Wow, the *Soldanellas* have made it, and there *Thlaspi caespitosa*. I can't believe it! Smell it!

In the end the combination of pukak snow for protection and hungry voles making to spots in the alpine bed are the duo that keeps me seeding and seeding.

Update to April 12: The snow has only been off the beds for about 5 days. So far there is no apparent damage to Jurgen's many treasures. His *Draba lasiocarpa* flowers first. Another treasure is a *Convolvulus boissieri*

GOOD READS / USEFUL LINKS

A LINK FROM BERNIE GUYADER following on Mike Miller's demonstration of creating a mini tufa mountain in a trough:

<http://www.tufa.bc.ca/what.php>

If you have items or ideas for new sections or articles, or would like to write on a topic, please contact the editor, Valerie Melanson, Melanson.valerie@gmail.com. Submissions would be very welcome. The newsletter will be sent out in the body of an email and as Word and .pdf attachments. If you do not have a printer and wish a paper copy mailed to you, please contact Valerie above. Submission deadline is 12th of month, with newsletter to be sent out circa 15th. Frequency - most months except December.

Next Issue:

Codonopsis - Climbing, Creeping Members of the Campanula Family



C. dicentrifolia



C. clematidea



C. pilosula