

Alpine Garden Club of British Columbia



Erysimum duriaei in the Picos de Europa

photo David Sellars

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September 10th, 2014 Grahame Ware: Prometheus Unchained- Exorcising Pontius Pilate So That Mountains Can Be Savoured- The True Fathers of Alpine Gardening in the West. Your Bulletin editor takes a cultural and historical look at the beginnings of alpinism. A fresh and revealing take on how our attitudes and beliefs of mountains and alpine gardening have changed.

Saturday, Sept 20th, 2014 AGCBC Fall Plant and Bulb Sale Van Dusen Floral Hall. The best plant sale at this time of year anywhere on the west coast. Don't miss it! Note that it is being held on Saturday this year.

Oct 8th, 2014 Erica Wheeler: Allium Species in N America. A presentation about the diversity and evolutionary relationships of *Allium* species native to North America. This presentation has many pictures of plants and places and some discussion about whether groups of species considered to be closely related based on morphology are actually closely related based on molecular systematics. Dr. Wheeler is the Collections manager/Botany at the Royal BC Museum in Victoria. She holds a PhD in Biology from the University of Missouri, where her research focused on the molecular systematics of wild onions (genus *Allium*) in North America.

Nov 12th, 2014 Ron Long: Alpine Photography. A *how to* lecture on how to get the most from your camera and your shots. Note- this is not a workshop but should kick-start and improve your photography of plants especially alpine. Ron Long is a retired scientific photographer and an active field photographer with a special interest in Pink Mountain. This area is one that he is active (along with the support of the AGCBC) in procuring ecological preserve status from the provincial government.

The Annual General Meeting will also be held on this date so please do turn out to find out more about the club and its executive as well as a practical talk on photography.

Dec 10th, 2014 Christmas Pot Luck Supper and Rare Plant Auction fundraiser.

>>>Consider helping out in the packaging and processing of seed orders this year. Kindly contact Diane Hume dhume9@gmail.com<<<



Need some Tufa? Here's a few 'chunks'!



the **Trona Pinnacles of Tufa**, Searles Dry lake basin, California

Located in the dried out basin of the Searles Lake, about 10 miles south of Trona, California, are the Trona Pinnacles. Located at an elevation of about 1,800' ASL, they're considered to be one of the most unusual geological landmarks in the California Desert. The tufa spires were formed from the lakes interaction with other bodies of water. This interaction occurred almost 100,000 years ago when a massive runoff from the Sierra Nevada occurred. The pinnacles are mostly calcium carbonate.

Favourite Links

A great pdf entitled, **Seed Cleaning Made Easy** by Vic Aspland on the AGS web: http://www.alpinegardensociety.net/pdf_files/seed/Bulletin_pg293_298.pdf

While its still fresh in your mind, you might want to see what daffs have won the **Wister Award**. This is an annual award administered by the **American Daffodil Society**. It recognizes the those cvs that are the most reliable and floriferous daffs from all over N America. http://daffodilusa.org/wp-content/uploads/2013/10/Wister_Daffodil_Awards.pdf Some of the recent winner include **Thalia**, **Misty Glen** and the good rock garden cvs **Sun Disc** and **Hawera**.

A really excellent journal entry this month by **Tim Ingram** in his **Kent Alpine Gardener's Diary** on the AGS website. <http://www.alpinegardensociety.net/diaries/Kent/+June+/576/> He explores and provides some good historical and contemporary writers on the subject of growing plants in lawns or using the dry and droughty edges of one's property.



The dry garden at Hyde Hall with *Iris bucharica* growing in pebbles

Ingram ends this great look at lawns and sand beds and the artistic scope of this style with the following comments: *"The great benefit of developing a garden in these ways is that the success with certain plants well-suited to any particular garden can lead on to a greater sensitivity to many others. And, although there is always the tendency for the plants-person, to want to grow plants in greater variety, it can be remarkable how discovering microclimates and simple ways of growing particular plants (eg: sand beds) extends the garden and makes it so much more exciting."*

Ingram's point of view is seconded by **Ian Young** in his Bulb Log and some 20 years ago by **Jack Elliott** in his seminal "Alpines In The Open Garden" (Timber Press, 1991). Note that crevice beds and troughs are great for a narrow range of alpines but many alpines and bulbs (as well as dryland shrubs) can be grown beautifully in sand beds.

This season was an impressive one for *Epimedium* in my garden. They take time to establish but one's patience is rewarded. I found the following links very useful:

1) http://www.epimediums.com/wp-content/uploads/2014/05/GV_6Pg_2.pdf

A terrific photo collage of a huge range of *Epimedium* species and cvs from **Garden Delight Nursery** in Massachusetts

2) **Tony Avent** has a really fine *Epimedium* article on his Plant Delights website that he did originally for **The Plantsman**: <http://www.plantdelights.com/Article/Epimedium-Fairy-Wings> This is undoubtedly the best available article on *Epimedium*.

3) *Epimedium* guru **Darrel Probst** pens a feature for **Fine Gardening** magazine <http://www.finegardening.com/and-coming-epimediums>

4) **John Lonsdale's** Edgewood Gardens houses a lot of fine *Epimedium*. Here is an extended photo gallery of the best he has.

www.edgewoodgardens.net/Plants_album/The%20Plants%20-%20%20Complete%20Collection/Berberidaceae/Epimedium/index12.html



Epimedium 'Bandit' in editor's garden

Picos de Europa: The Alpine Garden of the Cantabrian Mountains

text and photos by David Sellars



Hepatica nobilis

We were craning our necks scanning the sheer cliff face looking for spots of yellow on the blank walls. Some in the group were distracted by the bright crimson wings of the Wallcreepers flying about and perching on the huge boulders by the path. The occasional patch of foliage high on the cliff could be the site of a Wallcreeper nest or the rare *Saxifraga felineri* coming into flower.

We had arrived in the Picos de Europa at the end of May and had joined a field trip organized by the Saxifrage Society. The Picos are a limestone range in the Cantabrian Mountains of northern Spain home to a number of endemic Saxifrage species including *Saxifraga felineri* which is only found at the highest elevations in the Picos. We had waited for a bright sunny day to take the Fuente Dé cable car up to 1900 m, well above the tree line and had hiked towards the massive cliffs below Peña Vieja, the highest mountain in the Picos.

With patience and the help of binoculars we eventually discerned the bright yellow flowers of *Saxifraga felineri* like splotches of paint on the blank walls but they were too far away for detailed photos. Subsequently we were rewarded by the discovery of specimens on more broken cliffs that could be easily reached by scrambling up the rocks. *Saxifraga felineri* had previously been classified as a form of *Saxifraga aretioides* and has only been recognized as a separate species since 1997.

The Iberian Peninsula (Spain and Portugal) is the second most diverse floral area in Europe exceeded in species richness only by the Balkans. The peninsula was spared during the last Ice Age and rather like the Olympic peninsula in Washington State, is geographically isolated. This factor has resulted in the evolution of hundreds of endemic species. The species richness has also been facilitated by the remarkable climatic diversity in the peninsula which produces niches where plants of different tolerances can survive. The Cantabrian Mountains which stretch across most of northern Spain have a relatively mild and wet climate influenced by the proximity of the Atlantic Ocean and spring comes early to the Picos. In late May and early June the snow has usually melted at high elevations and alpenes are flowering in profusion. At that time of year there is the added bonus of flower displays in the mountain valleys so that both habitat types can be enjoyed.

Despite the interest in endemic flora in the Picos, the first thing that strikes you is the prevalence of plants that are commonly grown in the garden. The large white flowers of *Arenaria montana* glistened from small outcrops by the roadside together with deep blue mats of *Lithospermum diffusum* creeping over the rocks. The *Lithospermum* was a much more attractive form than seen in most west coast gardens probably because of the influence of the winter snows keeping the plants prostrate. In sub-alpine meadows, there were large groupings of *Trollius europaeus*, *Viola cornuta*, *Malva moschata*, *Ornithogalum umbellatum* and *Centaurea montana*. In alpine areas we were delighted with diminutive *Helleborus viridis* and on the rock outcrops, cushions of *Androsace villosa* and *Draba dedeana*. Both *Androsace villosa* and *Draba dedeana* can be grown in the open garden in coastal British Columbia though *Androsace* tends to be short-lived.

We saw *Erinus alpinus* growing in beautiful mats on the limestone rocks and it is clearly a perennial in its natural habitat. In our garden it does not survive the wet winters but happily seeds around so that we can enjoy the flowers at different locations the next year.

The most surprising “garden” plant we found in the alpine was *Hepatica nobilis*. This plant is usually found in the wild in light woodland but in the Picos it was emerging after snowmelt in open terrain together with *Soldanella alpina*. The exquisite *Hepatica* flowers poking out among white limestone rocks were an amazing sight. We have seen *Hepatica* in woodland areas in the Alps and Pyrenees but we have never seen it before in open rocky alpine meadows.

Blue was the dominant colour in the alpine zone with outstanding specimens of *Globularia repens* clinging like limpets to the white limestone rocks and *Gentiana occidentalis* lighting up the green turf. The dark purple flowers of *Horminum pyrenaicum* provided a marked contrast. The endemic mossy Saxifrages were mostly white but what fabulous plants they were! Huge cushions of *Saxifraga canaliculata* graced the limestone outcrops while *Saxifraga pentadactylis* swung like hanging baskets from the acidic cliffs. The most unusual Saxifrage was *Saxifraga coniferera* with foliage like tiny pine cones. This plant occurs only in high alpine areas in limestone crevices often on huge boulders.



Gentiana occidentalis

We were delighted to find bulbous plants in the high alpine meadows including *Fritillaria pyrenaica* in a very dwarf form, without any shade or protection from other plants. Tiny *Narcissus asturiensis* carpeted the alpine turf in drier areas; it was surprising to see a daffodil so small. At lower elevations we found pure white forms of *Narcissus triandrus*, the Angel's tears daffodil and elegant *Tulipa australis*.

It is relatively easy to access alpine flora at a number of places in the Picos. Beside the road that crosses the pass Puerto San Gloria there are extensive fields of wild daffodil, *Narcissus pseudonarcissus* ssp. *nobilis* and numerous *Saxifraga granulata* 69



Narcissus nobilis

on a ridge above the pass we found *Teesdaliopsis conferta*, which has flowers like *Iberis* and elegant light green basal leaves. On limestone outcrops near the road that crosses the Puerto de Piedrasluengas there are fine specimens of *Globularia repens*, *Asperula hirta* and the endemic *Erysimum duriaei* (see Bulletin cover picture). The rock outcrops and alpine meadows at the top of the Fuente Dé cable car are the home to a variety of alpine species including *Matthiola fruticulosa*, *Draba dedeana*, *Androsace villosa* and *Ranunculus amplexicaulis*.

Despite the amazing diversity of the flora in the Picos, one family of plants was particularly outstanding. Without a doubt, orchids provided the most varied flower displays. The alpine meadows were studded with exquisite white and pink spikes and the deep valleys were the domain of the more exotic species. "The Orchids of the Picos" will be the focus of Part 2 of the Alpine Garden of the Cantabrian Mountains in the next issue of the Bulletin.

Reference: Flowers of South-West Europe, A Field Guide by Oleg Polunin and B. E. Smythies. Oxford University Press 1973.

Trillium hibernsonii-The Fugitive Species of Vancouver Island

by Grahame Ware with grateful assistance from Hans Roemer and ZZ



Hans Roemer photo

There are many disconnects in life and none more so than in horticulture and formal botany. Time and time again, the gardener that gets closer and closer to a plant or group of plants invariably questions the classification of the botanist. One disconnect that has plagued temperate woodland gardeners on British Columbia's west coast for years has been what is officially called *Trillium ovatum* var. *hibernsonii*. This wee thing is truly an endemic of BC and, as we shall see, this *Trillium* is not an *ovatum* at all. It is an ecologically and horticulturally distinct species that hails from a narrow zone on the far west coast of Vancouver Island. But in the hard world of botany, it is a vagabond by decree and a *nomen nudum* coined by Wiley.

Still, it is as pretty a fugitive of taxonomy as you are likely to encounter and, as things progress, will no longer be just Wiley's waif. Ecologists often refer to the native habitat of *Trillium hibernsonii* as hypermaritime i.e. very wet. However, the caveat here is that *Trillium hibernsonii* grows on rock outcrops and often can be found as clumps in small swales of oceanic rock ledges cavorting with lichens and mosses and taking on the full brunt of Pacific coast storms.

This is drainage with a capital "D" coupled with thin, low nitrogen soils. Quite often seedlings will start off in rock clefts to gain a seepage advantage in this relatively dry (from a substrate point of view) environment.

Surprisingly, *hibbersonii* has had very little scholarly treatment in British Columbia given its endemic, red-listed nature along with the fact that it also has the cute factor going for it due to its dwarf stature. The most significant professional monographic treatment to date has been that of Darlene M. O'Neill as part of her Master's Thesis at the University of BC. In her dissertation, she makes a very persuasive argument that it should be raised to species level. However, it should be noted that publishing a thesis and having it published in a recognized journal are two different things. The former precludes authorship and acceptance into the formal world of taxonomy.

Botanical History

As Adolf Ceska, long time BC Museum taxonomist, pointed out in *Trillium L* in January 2011, "*Trillium hibbersonii*" was first described as a *forma* of *Trillium ovatum*: *Trillium ovatum* f. *hibbersonii* T.M.C. Taylor & Szczawinski and then elevated into the variety: *T. ovatum* var. *hibbersonii* (T.M.C. Taylor & Szczawinski) G.W. Douglas & Pojar Canadian Field Naturalist Vol. 115(2): 343. 2001.

"*Trillium hibbersonii*" was suggested as a good species by O'Neill, Darlene, M. 1995. Taxonomic study of *Trillium ovatum* *forma* *hibbersonii*. M.Sc. thesis, University of British Columbia, but the formal transfer has never been done."

Ceska then affirms that this is the reason that *hibbersonii* is not included in the Kew List. Go to this link for O'Neill's full thesis <http://hdl.handle.net/2429/4187>

Six years after O'Neill's paper, new BC provincial taxonomists, Douglas and Pojar, raised *hibbersonii* to subspecies or varietal level of *Trillium ovatum*. Obviously they were not swayed by the overwhelming morphological, horticultural and phytochemical testing that showed that *Trillium hibbersonii* is, indeed, a distinct species. Or, perhaps, it would appear that unfortunately they did not read O'Neill's thesis that included a considerable amount of field work and testing as well as detective work in the herbarium.

The Real Differences between *hibbersonii* and *ovatum*

We agree wholeheartedly with O'Neill and will thus refer to *hibbersonii* as a species. In her Master's Thesis, she summarizes the essential differences between the two species. It is clear why *hibbersonii* should be referred to as *Trillium hibbersonii*. To summarize O'Neill, here are the main differences.

- A wide difference in germination and dormancy requirements. *T. hibbersonii* does not require seasonal delay mechanisms whereas *ovatum* does.
- The stigma/stamen position indicate that outbreeding is a prerogative in *T. hibbersonii*
- The lack of morphological intermediates unlike *T. ovatum* with no proof provided by any botanists to the contrary that there are any *T. hibbersonii* intermediates

- *hibbersonii* flowers are pink in bud throughout flowering from bud to flower drop which is unlike *T. ovatum*
- Experiments to cross-pollinate it with *T. ovatum* have all failed
- Attempts to cross *hibbersonii* with a similar species, *T. rivale*, resulted in viable seed
- The high levels of anthocyanin in *hibbersonii* indicate a distinct adaptation to sun protection on the rocks and cliffs as well as reflected light of the oceanside
- *hibbersonii* has a distinct and different ecological niche compare to the shade-loving habitat of *T. ovatum*

With so many differences on so many levels between these two, one would think that anointing *hibbersonii* as a full ranked species would be, in current lingo, a 'slam dunk'. The one thing that always caught my attention was the presence of elevated levels of anthocyanin in *hibbersonii*. O'Neill states further in her work, "The increased presence of anthocyanin in *hibbersonii* was denoted by red margins on the leaves and sepals as well as the presence in the stem, pedicel, petals and anther connective tissue."



Trillium hibbersonii showing red margins on leaves and pedicels Hans Roemer photo

Ian Gillam- In Memoriam

compiled by the Editor

Longtime members of the club were saddened with the news in June of the passing of one of our club stalwarts, Ian Gillam. Ian contributed greatly to the Club, as Secretary for many years as well as Show Secretary then finally as Membership Secretary, a role that he was active in virtually to the end. He was always at Club Sales, encouraging visitors to become members and was a frequent contributor of articles for the Bulletin.

Ian was also an integral part of the Club's Seed Packaging group. **Pam Frost** recalls, "For many years and we all enjoyed his company, his wisdom and his wry and inimitable sense of humour. He was extremely knowledgeable and a source of information on all plants, particularly his favourites - *Geranium*, *Erodium*, *Primula*, *Dianthus*, *Daphne* and small bulbs, especially dwarf *Narcissus* and *Galanthus* which he grew so well. The knowledge he shared was often accompanied by a classical allusion, an apt quote or a demonstration of seed behaviour, delivered in a quiet, unassuming and often unexpected way. We will miss him so very much."



I can remember when I joined the club in the early 90's and expressed an interest in a few lovely *Daphne* cvs that he had. This was at the Spring show. The following Spring, he presented me with robust, rooted cuttings of *Daphne* 'Somerset variegated' and *D. Carol Mackie*'. These were lovely gifts for a young member. They did so well for me in the capricious climate of the N. Okanagan. Ian was born in Bebington, Cheshire, England. He graduated from University of Cambridge with his BSc., and then gained a Doctoral degree in chemistry from the University of Manchester. Shortly after, in 1958, he came to the United States pursuing his research career at Ohio State University, and University of Kansas. In 1963, he came to Vancouver, BC to continue his research career at the Department of Biochemistry, University of British Columbia. He worked there until his retirement. Ian had great interests in nature, plants and photography. Besides being a member of our club, he was also a very active member of the Geranium and Pelargonium Society, the UBC Friends of the Garden, and the Primula Society. He was more than just an enthusiast on *Pelargonium* however- he was one of the world's leading breeders. Over the past 40 years he made many inter-species crosses and crosses between species and regal or zonal cultivars doing pioneering work with the variegated Stellar types. Likely his best known creation was 'Vancouver Centennial', a dazzling red-bronze foliaged cv that was bestowed with the status of an AGM by the Royal Horticultural Society.



'Vancouver Centennial' winner of an RHS Award of Garden Merit (AGM)

Besides Vancouver Centennial, he bred many other very popular *Pelargonium* cvs including: Lotusland, Elsie Gillam (named for his mother), Shirley Gillam (named for his wife), Shirley's Sister, Jericho (some enthusiasts consider this one of Ian's best and are now using it to breed even better ones!- see pic below), Spanish Banks, Kitsilano and many others.

Gwen Ward, a *Pelargonium* specialist in the UK, recalls a visit to this great breeder one winter. "Ian was famous for keeping his new raisings on the kitchen windowsill, but he also kept many of them in his basement surrounded by a silver foil 'fence' with a dayglo light above." This was the stripped-down, Zen approach of a no nonsense, no frills research scientist.

The International Geranium Society devoted its entire Summer 2002 issue to Ian Gillam and his hybrids and his breeding story.

If you'd like to see a stunning, visual step-by-step account of Ian's *Pelargonium* breeding practices, go to this link: <http://www.cdngeraniums.com/articles/pollination-final.pdf> This excellent pollination piece on basic yet specific techniques has broad genera applications.

The plants he created live on with many others besides us in the Club.

>>>Take note of the following event honouring Ian.

Celebration of Life in Remembrance of Ian Gillam

Date: Saturday September 27th, 2014

Location: UBC Botanical Gardens Reception Room, 6804 SW Marine Drive

Time: 11:00AM

Remembrance Service with Light Lunch Social to follow.

