

Bulletin
of the
Alpine Garden Club
of
British Columbia



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Alpine Garden Club of BC

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Meetings are held the second Wednesday of each month except, July and August, in the Floral hall, VanDusan Botanical Garden. Doors and Library open at 7:00 pm and the meetings start at 7:30 pm. Please bring plants for the plant draw; the proceeds of which go toward paying for the hall rental.

*Front Cover: Spiraea beauverdiana, Richardson Mountains, Yukon.
Photograph by A. S. Tracey*

Programs:

May 13: Gary Lewis will speak on the flora of Eastern Australia.

June 10: **June 10:** Adrian Young will give a presentation entitled: **Waterperry: 75 years of Saxifrages.** Adrian has studied Kabschia and Silver saxifrages in the wild across Europe, France, Italy, Spain and Greece. In 1972 he accepted the responsibility of caring for the collection at Waterperry. In 1990 he co-founded the Saxifrage Society.

Open Gardens:

The owners of open gardens go to considerable effort in order to prepare their gardens and to accommodate visitors from the club. It is a great disappointment when few people show up. Please plan on attending these gardens.

On May 23 there will be 3 open gardens in Surrey: open from 11 a.m.-4 p.m.

Wilhelm and Karla Bischoff:

Featured in Gardens West, this garden has a huge rockery and water plant basins. Tropical orchids are grown in 2 greenhouses. There are many ericaceous plants, cyclamens and succulents in containers. The City of Surrey has given awards to this garden several times.

Chris and Sue Klapwijk:

A mature 3 acre hillside woodland garden created by Vern and Gordon Finley featuring rhododendrons, azaleas and companion plants.

Philip MacDougall:

A five year old garden on a one-half acre lot. Philip has converted a flat lawn into a garden landscape. In Philip's words: it includes a semi formalized take on the woodland garden, there are 15 troughs in various states of decline and renewal, a collection of dwarf Rhododendrons and a large scree area. Two greenhouses hold a large collection of very unusual plant material. There is also a collection of several dozen species of Polygonatums and relatives,

most of them from Asia. This should be the first year they start reaching their potential.

Seed Exchange:

Note from Pam Frost

Many, many thanks to all who collected, cleaned and sent seeds to our Exchange. We are most grateful. I did enjoy connecting once more with many of our out-of-town and overseas members who donate seeds, but this coming year the dedicated Packagers and Fillers-of-Orders are sharing the load so that it does not all land, for what can seem like a very long time, on one person! Accordingly, Marilyn Plant, who has been involved with seeds at least as long as I have, has kindly volunteered to handle the Seed Reception and her address will appear in the next Bulletin, along with the Instructions for mailing, deadline, etc.

May I encourage all members to collect seeds, whether hiking, or in their own gardens. The more variety we receive, the more interesting the Seedlist, and even if there are only a few from a treasured plant, someone else may also send seed, so there is enough for the List. I wish everyone a very happy Spring and Summer from what seems to be the coldest March we have ever experienced in Vancouver.

The Spring Plant Show 2009

Report from Ian Gillam

Each year these reports seem to begin with a brief history of the difficulties of the previous winter. As with most of the mid-northern hemisphere this last was a really bad winter, near record cold and snowfall and long periods with daily maximum temperatures below average. Cold weather continues into a late spring. The inability of several talented growers to participate this year coupled with concerns about the economy, the international situation and so forth spread general gloom to prospects for the Show. However members, rallied by Show Secretaries Diana Hume and Karen Thirkell, presented an excellent show with a wide variety of well-grown plants

and a welcome display of blooms. There were fewer than in past years but they filled the slightly fewer tables required with no noticeable gaps. Members and visitors spent considerable time absorbing the marvels on display. On Saturday, a beautiful sunny but cool day, there was a steady stream of visitors. Easter Sunday was cold, dull and very wet and was pretty quiet. It did mean visitors who came could receive individual attention and allowed photographers full access to the plants.

The *Primula* section was also reduced in quantity though not necessarily in quality. Unfortunately show auriculas (not to every alpine grower's taste but amazing flowers of impeccably alpine descent) were not present, due in part to absence of one grower combined with the effect of the late season. *P. marginata* was well represented in a variety of forms and hybrids, as was *P. allionii*. That the latter were still in flower was another indication of the lateness of the season. An eye-catching pot of *Primula denticulata* from Mark Demers had a number of rosettes each bearing a perfect drumstick of violet flowers. A few years ago Mark had been in the garden department of a big home improvement store shortly after a delivery of these primulas arrived. He chose this as pick of the litter and has grown it on since. This wholesale approach to nursery growing does give us good buys at modest prices but this trade demands novelty and leads to the loss of smaller nurseries growing a wide variety of specialties in smaller number. A possible case in point, double primroses were available in quantity in the past few years, clearly propagated by tissue culture. This year they have not appeared. Your reporter's double primrose entry achieved the distinction (shared with one other exhibitor in another class) of being awarded the white ribbon of a third place in a class with only two entries. (An eagle-eyed judge noted a couple of damaged or yellowed leaves had been missed.)

The class for "Any Other *Primula*" attracted two plants of *P. maximowiczii*, small rosettes of smooth, thick leaves producing a 25cm scape bearing a head of flowers with narrow petals slightly reflexed and of a striking orange-red colour. (Each of these features tends to suggest the way in which *Dodecatheon* may have developed.) The American *P. rusbyi* was also represented though its flowers were only in bud.

We like to claim that almost everyone is guaranteed to find some



interesting plant they have never seen before and this year Best in Show and Best Plant in the "Rare or Difficult" class went to Philip MacDougall's *Bereuxia yunnanensis*, a plant only recently in cultivation and unknown to almost everyone. With its low clump of glossy, evergreen leaves and spikes of small but elegant white flowers

a cynic suggested that if *Persicaria* (late *Polygonum*) *affinis* were Liza Doolittle then this plant might be the product of Professor Higgins' refinement. In fact the plant is a member of decidedly aristocratic family, the *Diapensiaceae* that includes *Galax*, *Pyxidantha*, *Schizocodon* and *Shortia* and of course *Diapensia*. With this knowledge, not available during the show, it's possible to see a relationship to *Galax*, for example. This one is unlikely to enter the big-box stores.

There was only a single gentian in the show, a *G. verna* plant with a large number of brilliant blue flowers in peak condition. The rather stretched nature of the stems suggested it had been brought on in artificially warmed conditions but its flowers were welcome. Mark Demers won the "Best Cushion Plant" trophy with blooming cushion of *Dionysia tapetiformis*. This typical high alpine was here about the diameter of the central circle of the rosette it was awarded, about 5cm, and in full bloom with numerous small yellow flowers. Visitors usually require an explanation as to why so insignificant a plant can win a trophy over so much showier entries on other tables. In our wet climate and close to sea level such high alpiners do require an effective alpine house to survive and not many of our members have such dedicated facilities. Consequently more members tend to grow woodland plants from many parts of the world. There was good representation of trilliums from the tiny B.C. native *Trillium hibbersonii* (syn. *T. ovatum* ssp. *hibbersonii*) to the large *T. kurabyashii* from California, with blotched leaves and dark red flowers. There were several entries of plants that came from Club seed as a hybrid between *T. ovatum* and *T. rivale*. These represent seedlings raised

from a plant originally found in the wild in Oregon that appeared to be a hybrid between the two species, whose ranges overlap there. The several plants in the show appeared similar to *T. rivale*, relatively small with deep pink flowers somewhat spotted in deeper shades. Flowers and leaves showed little sign of *T. ovatum*. (A member reports that she has one of these seedlings, as yet unflowered, that is larger in growth and leaf. It would be interesting to have laboratory confirmation of hybridity of any of these plants and to hear from others who have raised plants from this seed.) (Eds. note: Recent morphological and molecular analysis of Trilliaceae has shown that *T. rivale* is distinct from other trilliums and should be placed in its own genus as *Pseudotrillium rivale*. S. B. Farmer, E. E. Schilling: Systematic Botany (2002), **27**, (674-692).)

The best supported class was for “Woodland or Bog Garden Plants not native to the Pacific Northwest”, principally woodland plants of eastern North America, several forms of *Anemonella thalictroides*, double- and single-flowered, as well as *Dicentra cucullaria*, of which an unusual “pink form” (only slightly pink) appeared elsewhere. The class was led by Philip MacDougall’s *Corydalis curviflora*, a blue-flowered species with the spur continued in a crescent shape. Like many of its owner’s plants it comes from China.

Philip also won the class (and trophy) for a dwarf rhododendron. His entry was said to be an undescribed species of the *Maddenii* series. It had a low, spreading habit, medium-sized leaves and many quite large, open flowers. These were white, blushed with pink on the exterior and margins. Anthers were brown and some people found the flowers strongly and pleasantly scented. The judges pointed out a resemblance to *R. leucaspis*, certainly true of the habit and flower.

True to the inclusive nature of our alpine garden show there are even classes for bonsai plants, of which there were a number of examples, with that judged best being a larch belonging to Mark Demers, noted above as an expert grower of truly alpine plants. The bonsai fancy almost took over the class for miniature gardens, previously taken to mean trough gardens with rock garden plants. The only trough garden was joined by four “bonsai on rocks” collations. A visitor remarked it looked like a show put on by a convention of miniature railroad enthusiasts. (I must declare an interest as owner of the trough in question. It did manage a second place.)

The B.C. Primula Group is largely a subset of AGC members that has a separate existence. The Group has traditionally mounted a non-competitive primula display in the hall during the show. Until this year it has been created by Roxanne Muth, featuring primulas in a setting decorated with her collection of obsolete gardening equipment, sections of aged fence, old prints and books on primulas. Alas, Roxanne is incapacitated by illness and Ruth Anderson agreed to mount the display. This turned out to represent the dining area of a couple of primula enthusiasts, called away from their breakfast (lunch?) while sowing seeds and taking cuttings at the same table. A patio filled with (what else?) primulas was outside the nearby window. Interesting, amusing and educational. Well done, Ruth. In fact, well done everyone who participated in a rewarding show that was appreciated by the visitors. If only there were a few more of them....

Where's Morrison?

Ian Gillam

Our 2008 seed list contained a page of entries to be collected in Taiwan. This was a list of seeds anticipated to be available and published about the time our members were on the expedition. Due to the exigencies of collecting not all were obtained, though some seeds not on the list were added.

Among those listed are species of *Acer*, *Berberis*, *Cotoneaster* and *Sedum*, each with the specific name *morrisonensis*, -e, as well as *Rosa transmorrisonensis* and *Spiraea morrisonicola*. A modern map of Taiwan shows no such location as Morrison. The name is as obsolete as the former name of the island, Formosa, that occurs as the specific name *formosanus*, -a, -um for a number of plants (and animals).

While Taiwan was known to western sailors and traders since the 15th century and in the following century was competed over as a trading centre by the Dutch, Spanish and British, these traders had little interest in the inaccessible interior. It was not until the mid-19th century that the captain of an American freighter leaving harbour in Formosa (as it then was known in the West) noted in his log the

island's highest mountain. In western maps it later received the captain's name as Mount Morrison. At 3,997 m/13,113 ft it is higher than Mount Robson, the highest point in the Canadian Rockies, and just higher than Mount Waddington, the highest in the Coast Range of British Columbia. The astonishing part of the mountain's elevation is that it is located on an island only about 12% larger than Vancouver Island.

Taiwan was a part of the Japanese empire from 1895 to 1945 and the mountain, higher than Mount Fuji, received a Japanese name, *Niitakayama* (New High Mountain). Japanese botanists described many new species from Taiwan in this period. One such endemic on our seed list is *Photinia nitakayamensis*. With Chinese the official language in Taiwan the mountain's name is now *Yu Shan* (Jade Mountain). Possibly all the higher plants of the region have already been described and I am not aware of any taking the specific name *yushanensis*.

Flora of South Africa's Cape Province

Linda Verbeek

When I was a botany student nearly 50 years ago, I learned about dividing the vegetation of the world in various different ways. One of these ways used the taxonomic composition of the flora of different regions, and the largest divisions in this scheme were called Floral Kingdoms. They are still accepted today, and there are only six of them, of wildly varying sizes. The largest is the one called Holarctic, which comprises all of the northern Hemisphere north of the tropics. Then there are the Palearctic (in the tropical regions of Asia and Africa), the Neotropic (ditto in the Americas), the Australian, and two small ones, the Antarctic (in the southern tip of South America and the few vegetated areas of Antarctica), and, at 0.04% of the total land surface of the world, by far the smallest, the Cape Province of South Africa. Ever since then, I have wanted to go and see this flora which was so special on such a small area, but it didn't happen till late summer of 2008.

Of course, the flora of the Cape Province is not only very distinctive, it also has an inordinate amount of pretty flowers. A good many of our

summer annuals come from there, as do some of our bulbs, like the Gladioli. What I didn't know until we arrived there, is that it also has a larger contingent of geophytes than any other region in the world.

The Cape Province (as a Floral Kingdom) occupies a stretch of land that is more or less boomerang-shaped along the south and west coasts of South Africa, extending inland for only few 100 km or less. It is defined by the winter rainfall pattern. As you go north, the rainfall lessens, as you go east along the south coast it increases. There are several mountain ranges, mostly parallel to the coasts, which also influence the climate.

There are two main vegetation types in the Cape Province: *fijnbos*, which is a kind of heath vegetation, dominated by *Erica*'s (South Africa has something like 600 of them, and they all occur in the *fijnbos*) and *Proteaceae*. There are smaller plants between them and in openings, but most of what you see are shrubs. The name "*fijnbos*" refers to the mostly needlelike leaves of the plants, it literally means 'fine brush'.

The other vegetation type occurs in drier areas or on heavier soils, and consists of shorter, more widely spaced shrubs with lots of room for annuals and small bulbs. You find no *Erica*'s or *Proteaceae* in these areas, but among other things, lots of *Mesembryanthemaceae*, or iceplants.

The main flowering season in the Cape Province is spring (which actually translates into late winter). We arrived at the very end of August, and left again on the 21st of September, so technically we didn't see spring there. But certainly in the more northern areas, the blooming season was coming to an end – although the seasons are not as strict as in more temperate areas, and you can probably find something in flower somewhere in any month of the year.

The weather was a bit of a surprise, mostly much cooler than we had expected. We arrived on a day with blustery southern winds (straight from Antarctica), the odd shower, and a temperature of 8°C! That was the low point, and we had a number of beautiful, sunny days – although also more rain, but there were only a few occasions that we didn't need at least a jacket when walking around.

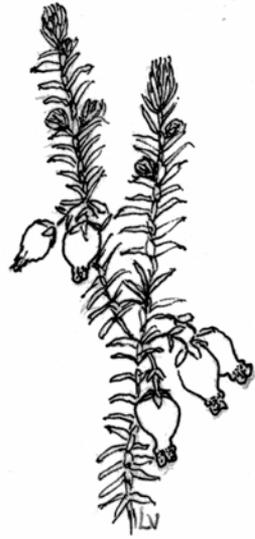
The first 10 days we spent with an organized tour, specifically geared for seeing plants. We had tried to find a local (South Africa) company to go with, but hadn't found any that would guarantee to tell us Latin names. So it was an English group we were with. Even so, the names are sometimes difficult: there are at least 7000 species in the region, and there is no flora to cover them all. And if there was, it would be impossible to carry it. The South African Botanical Society has put out regional guides with photographs, but even then they cover only the more spectacular and/or more common species, so sometimes you have only a guess. After the tour we drove around by ourselves for another 10 days.

Another surprise was how difficult it actually was to find good stands of native plants. The *fijnbos* tends to like slopes, and especially along the south coast there is still quite a bit of it, but most of it is not accessible by road, and it is anyway impossible to walk through *fijnbos* without a trail. The other vegetation type occurred on soils that were very suitable for agriculture, and in fact, when you drive around the area, that is mostly what you see: wheat fields, olive orchards, vineyards, fruit orchards, pasture..... Even the roadsides generally have just European weeds. You have to know the little reserves where the wildflowers occur, and some of them are pretty obscure: who would know to stop at a commercial, wholesale orchid nursery to find one of them?

In the course of our trip we probably saw several dozen species of *Erica*. Some are very similar to the European *Calluna vulgaris*, same habit, same short flowers, and even the same colour, some are like the decorative heathers in our garden, but many are quite spectacular. *Erica longifolia* is a tall shrub, with outward-facing flowers clustered towards the end of the stems. They are tubular, at least 2 cm long, and brilliant red. *Erica blenna* is a shorter shrub, with pendant flowers that have an elongated drop shape, orange with a greenish edge. *Erica mammosa* is a tall shrub again, and it gets covered in clusters of swollen-tubular, candy-pink flowers. *Erica curviflora* is a tall, somewhat willowy, grayish shrub with very long, tubular flowers, slightly flared at the end, of a somewhat dusky rose, with a marked white accent where the anthers protrude. This one actually grows with its feet in water, as does the next one, a short, compact shrub with stiff ranks of outward-facing, lemony yellow flowers, named *Erica patersonii*. We saw many more, both in the

wild, and in the fantastic botanic garden of Kirstenbosch, near Cape Town, but you get the idea.

The Proteaceae have several important genera. They are all woody plants, characterized by small, tubular flowers arranged in heads, with long to very long, protruding styles, that also serve to present the pollen to the pollinators. In some, the styles produce the main show, in others there are colourful bracts. The genus *Protea* itself has showy bracts. The largest one we saw, King Protea (*Protea cynaroides*), had rosy pink bracts around a heart of white flowers, the whole head about as large as a dinner plate. The others are usually more the size of a good-sized artichoke, and sometimes they don't open up very far, like *Protea neriifolia*, a common one, which also has pink bracts, edged in this case with black fringes. The bracts hardly spread far enough for the flowers to be visible, though I imagine the pollinators can find them. *Protea compacta* is also pink, but the bracts have no black beards and open up to about 45 degrees.



Erica blenna
var. *grandiflora*

The *Leucadendrons* also produce the show with bracts. Almost all of them are yellow(ish) and in fact are much of a muchness to look at. They are very common and can colour whole hillsides. Most are medium-sized shrubs, but one is a tree of up to 10 m. *Leucadendron argenteum* has silvery-white leaves, and white flower heads (though we didn't see those), deserving the local name of Silver Tree. They do show up from a long way on the hillsides. It has a very localized distribution right around Cape Town.

Mimetes, which is a small genus, uses both bracts and the styles for display. In this genus, the bracts don't enclose all the flowers in one big head. Instead, the flowers are grouped in bunches of 6 or 8 or so, subtended by one bract, and these groups are arranged in a dense,

somewhat elongated head. The styles protrude from the red bracts as little bunches of feathers, a very striking effect.

Leucospermum use mainly the styles for display. The flower heads are as spectacular before they open as they are afterwards. It is typical for the Proteaceae that the unopened flower already has the long style protruding as a hook – the stigma is still inside. A whole flower head of these hairpins, arranged in an almost mathematical



pattern, is quite a sight (Figure: *L. formosum*). The flowers open in succession from the outside inward, so in full bloom the heads look more spiky and less regular. They have the most outrageous names. *Leucospermum hypophyllocarpodendron* is a creeping shrub in sandy coastal flats. The yellow flower heads lie on the ground around the foliage. *L. oleifolium* has heads in two different colours. They come out yellow, and later turn red, and as they are clustered at the tip of the branches, you get both colours together. This kind of behaviour in plants is often aimed at the pollinator: keeping the pollinated flowers around increases the size, and thus the effectiveness, of the display, but the change in colour tells the pollinator not to bother with those particular flowers. This way the pollinator doesn't waste time on empty flowers, which might make it leave prematurely. *Leucospermum cordifolium* has large heads of pink to orange.

Not all the plants in the fynbos belong to these two groups. There are various Rutaceae, which are quite common. *Agathosma* and *Coleonema* are smallish shrubs with dense clusters of small white or pink flowers, which can cover the top of the shrub. *Adenandras* have larger, individual white flowers, and *A. uniflora* was especially pretty, with its white flowers that are marked with a red line down the centre of each petal.

The Bruniaceae are a family that is endemic to the Cape Province (endemic families are one of the criteria for making this a Floral Kingdom). They are related to the Asteraceae and also have their tiny flowers in dense heads. The most common and most striking were the *Berzelias*. There were two species, but they were very similar, heather-like shrubs with panicles of round, creamy fluffy flower heads, for all the world as though someone had suspended masses and masses of tiny cotton balls in them.

The common European milkworts (Polygalaceae) are very small, creeping subshrubs, and the North American ones aren't all that much bigger, but in South Africa they are sizable shrubs. The genus *Muraltia* (several species) look somewhat like gorse, stiff and prickly, but they are covered in small, brilliant purple flowers with a white lower lip. *Polygala myrtifolia* is a laxer shrub with pink flowers, and *P. bracteata* had even bigger flowers. All of them are fairly common. There was also a *Lobelia (pinifolia)*, but this was another heather-like shrub. The flowers looked just like the ordinary garden annual, but they were rather sparse.

Asteraceae do occur, but they are rather a minor component. Some



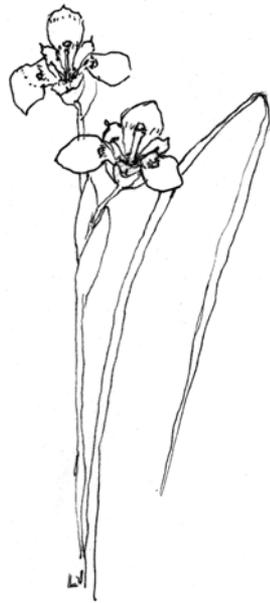
are shrubs, too, like *Osmitopsis asteriscoides*, which is a tall shrub with fairly large, brilliant white daisies, growing in water. *Oedera capensis* is a well-armed little shrub, with triangular, very sharply pointed leaves growing in tight ranks up the stem. The whole gives a rather architectural effect. The bright yellow flowers sit on top of the stems. A couple of Asteraceae even look like straw flowers: *Syncarpha vestita* had ovate, somewhat untidy looking creamy heads, which opened to show a yellow centre. *Phaenocoma prolifera* (see Figure) had tidier flower heads with beautiful rosy pink bracts and a white centre that goes dark

as it ages. Both plants are shrubs.

A few annuals do show up: *Dimorphotheca pluvialis* is a very widespread, low growing annual, with large, shiny white flowers. This

one does grow even on roadsides; there were carpets of them along the road across the sandy flats east of the Cape Peninsula. We saw it nearly everywhere. There were other small daisies, too. And several kinds of *Nemesias*, mostly not looking like the garden variety at all. All the *Nemesias* we saw were very wispy annuals, and usually the flowers were less fat-faced. In the fijnbos there was a blue-and-white one.

The fijnbos is also not as rich in monocots as the more open vegetation, and we saw only a few, but I think that was partly because they would be blooming later. Also they like a fire – at the very end of our trip we spent a morning hiking in a nature reserve along the south coast, where a fire had burned about 8 months before. The fire had stopped on one side of the trail we were on, and it was fascinating to see how so many of the shrubs were just sprouting from the roots again. Fire is a fact of life in that climate, and the plants are mostly adapted to it. On that hike we saw more bulbs blooming in the fijnbos than anywhere else. *Geissorhiza ovata*, a small plant with upward-facing, open white flowers that are nearly symmetrical, *Gladiolus hirsutus*, with funnel-shaped, white and rose flowers (as well as several other species of gladiolas). There we also found one of two *Aristea* we saw, *A. spiralis*, again a fairly short plant with large, pale lavender, outward facing flowers. The other *Aristea* was a small thing somewhat like blue-eyed grass. *Moraea lurida* was a weird flower. Taxonomists have been busy with *Moraeas* and included a number of other genera within it, but the ones that always were *Moraeas* look quite a bit like Irises (they are Iridaceae, like more than half of all the bulbs in South Africa!). This one looked more like a *Tigridia* (also an Iridaceae) with an obvious



Moraea lurida

cup in the centre, and the three outer petals reflexed from that. The inner petals are very small. It is of a curious, dark purply-pink colour.

Dempster Highway, Yukon

Alan Tracey

To many people, the Yukon is a region of mosquitoes, blackflies, and Grizzly bears with little to recommend it. Yet, it is a magnificent expanse of largely untouched country. A region popular in the lore of the Northwest Mounted Police and the great Klondike Gold Rush, it is also a land of imposing landscapes and wonderful plants.

The Yukon is considered an exotic location by many, yet it is readily traversed from its southern border to its northeastern border with the Northwest Territories and, from there, to the vast Mackenzie River delta on the Arctic Ocean. From near the geographic centre of the Yukon, the 736 kilometers of the Dempster Highway leads northward and, in so doing, traverses muskeg, mountain ranges, tundra and the Arctic Circle. Two-thirds of its length is in the Yukon and the remainder in the Northwest Territories. Wilderness starts at the shoulders of the road and rolls out eastwards and westwards, farther than even the most intrepid of past explorers would have imagined.



The Dempster Highway cuts through two mountain ranges, the Ogilvie Mountains in the south and the Richardson Mountains in the north. These mountains, in conjunction with the high mountains of the Pacific Coast, shield the region between them from extensive precipitation and, in the past, prevented the advance of the continental glaciers of the ice ages. The northern Ogilvie Mountains (Taiga Ranges), the western slopes of the Richardson Mountains and the area between were not glaciated. Remnant populations of both plants and animals are found in this region.

The Southern Ogilvie Mountains are composed primarily of sedimentary rock interspersed with intrusions of igneous rock. The Tombstone Range is one such intrusion. Its twisted walls and jagged peaks, the highest in the Ogilvie Mountains, are the centre piece of Tombstone Park. The Taiga Range consists predominantly of limestone deposits and examination of the weathered rock will reveal the origins of these mountains in ancient coral reefs. North of the Arctic Circle, much of the Richardson Mountains obviously originated from shale deposits of a long bygone era. Except possibly for the Tombstone Range, all of these mountains provide relatively easy hiking conditions for most of the length of the Dempster highway.

The vegetation zones can be put roughly into three categories. White (*Picea glauca*) and Black (*P. mariana*) Spruce commonly dominate the lower elevation zone, together with willows and poplars in more open areas and areas that have been burned. Numerous shrubby willows and birch (*Betula glandulosa*) together with spruce, interspersed with open tundra-like areas characterize the sub-alpine zone. With increasing elevation, the larger shrubs give way to dwarf willows, grasses and other plants of the alpine zone.

Although many plants occur within all three vegetation zones, there are some notable exceptions. Two cyripedium orchids are found in the lower elevation zone, albeit in very different habitats. *Cypripedium passerinum* seems to be found most abundantly under poplar trees in light to quite heavily shaded locations. For the majority of the flowers, the white pouches have red spots inside but occasionally red markings are also found on the upper exterior of the pouch.

There is no sense looking for *Cypripedium guttatum* unless the soil is limestone-based. The densest stands seem to be on low, rather open slopes of the Taiga Range where there is some, but minimal, protection provided by spruce trees. This orchid will provide one of the highlights of any trip to this region.

The sub-alpine and alpine habitats give rise to numerous showy flowering plants including polemoniiums, saxifrages, anemones, pedicularis, poppies and gentians. *Polemonium acutiflorum* is a particularly nice example of its genus. It grey-blue flowers with the

black markings in the throat are exceedingly attractive. There are five species of windflowers which vary in colour from purest white (*Anemone narcissiflora*, (See Figure)), to clear yellow (*A. richardsonii*) and bright purple (*A. multiceps*). Other more well-known flowering plants are found here, such as *Silene acaulis*, *Gentiana glauca*, and *Saxifraga oppositifolia*.



Douglasia gormanii is a wonderful plant of exposed rock bluffs. Its compact cushions and bright pink flowers are replaced farther north by a somewhat more loose but equally good plant, *D. arctica*. Pink is also the colour of two of the *Pedicularis* genus, the white-woolly *Pedicularis lanata* and the much less woolly but similarly coloured *P. langsdorfii* ssp. *arctica*. Both are wonderful plants, as are other pedicularis found in this region. *Pedicularis lanata*, in particular, is a plant that keeps the photographers busy.

If one is lucky, while scrambling across the tops of the Taiga Mountains one might come across the wonderful poppy, *Papaver walpolei* (See Figure). This is a densely caespitose poppy with 3-lobed, somewhat leathery leaves. Its white, though reportedly sometimes pale yellow, flowers are held 6 or so cm above the plants. Other, much more common poppies that will be encountered throughout the region include *P. lapponicum*, *P. macounii* and *P. mcconnellii*. All are yellow-flowered.



Two eritrichiums can be found along the Dempster Highway. Both have the brilliant blue flowers associated with this genus. *Eritrichium aretioides* is more prevalent and may be found both in limestone-based turf where it is often associated with *Androsace chamaejame*

and in gravelly exposures at higher elevations. *Eritrichium splendens*, is indeed a splendid plant but one not readily found. In its open rocky exposures on alpine slopes it makes a splash of purest blue.

One of the great displays in the Richardson Mountains is provided by *Phlox alaskensis* (see Figure). Although found throughout this region, it seems to love the Richardsons. Here, it varies in colour from white and light pink to almost red or mauve. The shape of the petals and the markings on the petals are also highly variable so that no two plants seem alike. Its mats of flowers on gravelly alpine slopes of the Richardson Mountains are not soon to be forgotten.



Photographs from this region can be found in our Alpine Garden Club of BC photograph gallery (www.agc-bc.ca) and in the Mountainflora website (www.mountainflora.ca). The hiking, in most part, is easy, the flowers are wonderful and the skies are generally clear. The days are long and often quite hot. June is the month for flowers and September for autumn colour.