

# Alpine Garden Club of B.C.



*Lomatia ferruginea*



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**Meetings are held the second Wednesday of each month except July & August, in the Floral Hall, VanDusen Botanical Garden. Doors and Library open at 7:00pm and Meetings start at 7:30pm sharp with the educational talk. Don't forget to bring a prize for the raffle which goes a long way to paying for the hall rental.**

**Cover:** [Universidad Central De Santiago De Chile](http://www.universidadcentral.cl/) , Facultad De Arquitectura  
**Escuela De Ecologia Y Paisaje:** Curso de Botánica Sistemática  
**Profesor:** Sebastián Teillier

*" Sorprenderse, extrañarse, es comenzar a entender"*



**PROGRAM FOR JUNE 14<sup>TH</sup> – Gary Lewis “Plants and Plant Ecology of American Deserts”**



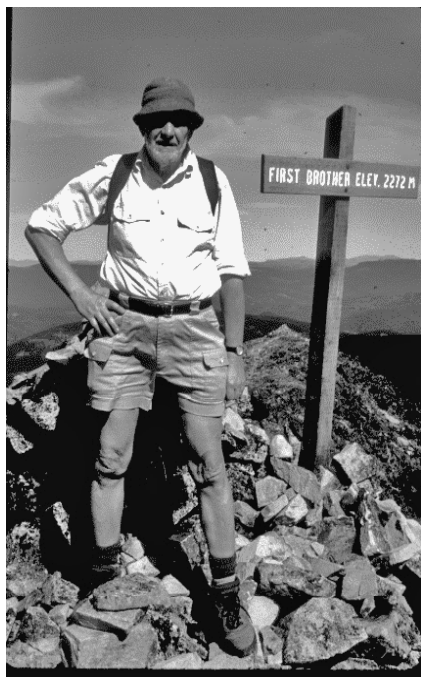
**IN MEMORIAM**

This winter saw the passing of two of our most respected members. They leave a place in our membership which will not be easily filled.

We will all miss them greatly and our sincere condolences go to their families.

**FRANK DORSEY**

**March 10<sup>th</sup>, 1927- March 12<sup>th</sup>,  
2006**



There was probably no one in the Alpine Garden Club of BC who was more admired and respected than Frank. He had a bright and mischievous personality, was a superb grower of alpine plants, a regular and enthusiastic member of the “Intrepid Trekkers” and a visible presence at all AGCBC activities. There is likely no show trophy which does not bear his name as a recipient, some many times over, and he was a regular recipient of the prize for highest show points. Many members have been recipients of his generosity with plants which he had grown and propagated. He had, for many years, been an active “Friend of the Garden” at the University of BC

Botanical Garden and he was our perennial auctioneer at the Christmas Auction with the proceeds going to the CKNW Children’s Fund. He had a rare talent for putting situations into perspective

Frank had a varied and adventurous life. Born in Hull on the east coast of England, he clearly had a good high school education, for he read widely over the rest of his life. School finished, he enlisted in the army on his seventeenth birthday. Having finished his basic training, Frank applied to become a glider pilot, responsible for flying a disposable wooden aircraft filled with soldiers and equipment on a one-way trip behind enemy lines. Though officially too young to qualify, he gave the selection board the right stuff and was accepted, duly passing

in this and parachute jumping. Fortunately these skills were not required by war's end and Frank found himself in Egypt by the time he was demobilized. He immediately transferred to the Palestine Police, charged with maintaining order in that volatile region, then run by Britain under mandate from the former League of Nations. In view of increasing tension and violence between Palestinians and Jewish settlers and refugees, survivors from the camps of the Nazi era, the position was untenable. With the declaration of the founding of the state of Israel, British forces were withdrawn and Frank returned to England.

There he applied to emigrate to Canada and soon made his way to a logging camp in Quebec at a time when portable chain saws were just coming into use. Logging didn't appeal and he applied for the Canadian Army. This was to be his major career. It was back to glider piloting. Different equipment and procedures required complete retraining, starting with qualifying to pilot small propeller aircraft over the prairies.

Frank was among the Canadians dispatched to the UN forces defending the Republic of Korea from invasion by North Korean and Chinese troops. In his time there he took some leave in Japan, travelling around some of its scenic areas. Returning to Canada, he later met and married Mary, who had also served in Korea as an army nurse. In almost fifty years together they raised three children in a succession of army postings, including service with NATO troops in Germany. Frank rose through the ranks to a commission and served in postings across Canada, finishing his service in Sardis in the Fraser valley here in B.C. Upon retirement from the forces, Frank completed a degree he had begun by correspondence and went to work for the B.C. Ministry of Social Services, largely dealing with child support cases.

Frank's initial horticultural interest was in rhododendrons and he remained active in the Vancouver Rhododendron Society, though he was able to grow few of the larger ones when the family settled in North Vancouver. Instead he concentrated on alpine plants and quickly became an important asset for the Alpine Garden Club. He grew numerous plants in pots and grew them well. He made a point of bringing a number to the Pot Show at each meeting, as also to the Spring Show. From numbers of entries and from the quality of the plants he was unbeatable in total points gained in both shows and held the respective trophies for years in succession. It was particularly satisfying to beat one of Frank's plants in the Pot Show, rarely though it happened. Plants he grew most enthusiastically were smaller rhododendrons and their ericaceous relatives, cyclamen, rhodohypoxis, pleiones, dwarf conifers and ferns among others.

Aside from growing plants Frank liked to propagate them and was very generous in giving away the resultant offspring, always donating plants to the monthly raffle, the Club tables at plant sales and to the Christmas auction. He excelled as our auctioneer, informed, amusing and shameless in squeezing out a few more dollars for the children's fund it benefits. He was devoted to children in general and to his

grandchildren in particular. Frank's parade ground voice was put to use as auctioneer and in making announcements at crowded gatherings like our plant sales. No other member has that voice.

Frank was a keen outdoors person and the guiding spirit of our hiking group. It was usually he who arranged hikes, decided where to go and often drove a number of passengers. He was an untiring hiker, always a cheerful companion and had the gift of having meaningful conversations with every kind of person. We saw many interesting plants together and he was always on the lookout for seeds. Those who have grown native plants from the Seed Exchange have benefited from Frank's collections.

On one occasion when Roy Lancaster, the British garden writer and traveller, was visiting, Frank was among the group including a number of Washington state nurserymen that gathered to take him for an exploration of Mount Townsend, Washington. After climbing up above the trees, a halt was called for lunch. It was during the break that Frank drew attention to the fact that they were sitting by a plant of *Potentilla fruticosa* with double flowers. No-one else had noticed it. This form is now in cultivation.

More recently Frank developed trouble with his back leg, as he put it. This limited his ability to hike, but knee replacement surgery and a determined effort to recover put him back to good fitness. Alas, not for long enough. He will be missed by his many friends in the Club, in the Friends of the Garden at U.B.C. and other groups to which he contributed. Our sympathy goes to Mary, his children and grandchildren whose loss is so much greater. ~ Ian Gillam & Ian Plenderleith



**VERA PECK**  
**1923 – April 2006**

Vera Peck was born in Prague, Czechoslovakia, in 1923, and after a war that turned her life upside-down, she met her husband-to-be, Frank, in a refugee camp. Together they came to Canada in 1949, and in 1964 bought a piece of land on the steep slopes of the North Shore Mountains and built their home. Vera began to sculpt an exquisite rock garden, following the contours of the land, and to grow the alpine plants she loved.

A friend told her of the Alpine Garden Club and in the mid-seventies she became a member. Her garden

was much visited by gardeners from far and wide, and in the spring she would welcome members on an Open Day, sharing plants and information with kindness and generosity. Over the years a succession of canine companions, always German Shepherds, would learn from their youth never, ever to put a paw upon a plant. "It's easy", said Vera, "you just say 'No'".

We all know how Vera loved to grow plants from seed and she corresponded with many friends, exchanging with them and subscribing to lists. Her scree, precipitous woodland slope and raised beds contained treasures often considered impossible but looking comfortable and in happy association.

Her contribution to the Club over the years was immeasurable. At each Plant Sale, spring and fall, she filled her tables with unusual plants, much sought after by members and the public. However, dearest to her heart was the Seed Exchange and for many years she and Frank would journey to the dryland B.C. Interior, and again, later in the summer, to the mountains of Montana and Wyoming, collecting seeds. For 11 years she ran the Seed Exchange with single-minded dedication, augmenting it from a few hundred native North American species to a list containing up to 2000 items. Those who attended seed-packing sessions were very fortunate to experience her profound knowledge, inimitable sense of humour and warm hospitality.

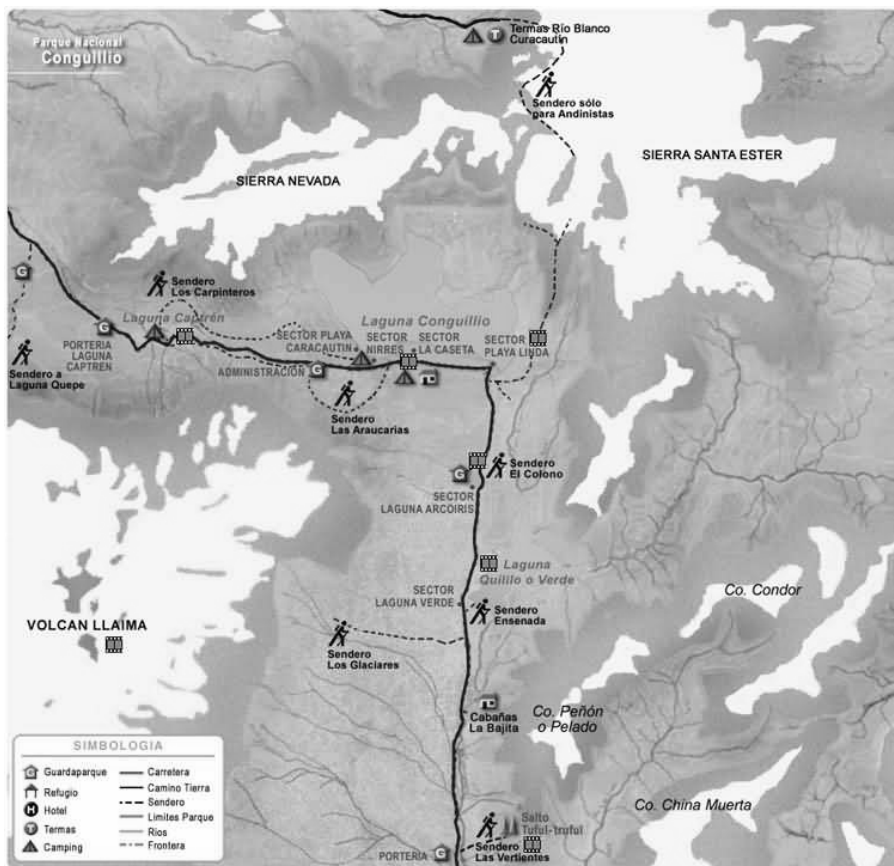
We extend to Frank our deepest sympathy in his loss. She leaves a huge hole in our midst. We miss you, Vera. ~ Pam Frost



**A TRIP TO CHILE**  
**Summary of a presentation by Philip Macdougall**  
**~ by Ian Gillam**  
*(All photos in this article by Philip Macdougall)*

Chile's varied flora has interested botanists and gardeners for centuries and many of its plants are cultivated abroad. Rather few are well established in the open ground in climates like ours, that is zones 7 or 8, despite attention by collectors over several recent decades. Interest continues, possibly increased by the absence of really hard freezes during a number of winters here. There is always the hope that we truly may get away with growing something that hadn't been considered hardy here.

It was partly to attempt to collect seed from high altitude and partly to see some of the fabled plants of highland Chile that Philip Macdougall took a recent trip there. Philip is a local Club member who works in another field but is a dedicated botanical traveler in his spare time. He was accompanied by another local member, Dave Demers, also an



experienced traveller. Philip described their experiences in Chile at our March meeting.

Chile occupies a long, narrow stretch of the Pacific coast of South America covering about four thousand km. Much of the population is concentrated in the central valley around Santiago. To maintain communications and services the government has built good highways running much of the length of the country. This and the development of ski resorts make the high mountain areas quite readily accessible by self-drive vehicle, though roads to high elevations may be rough and tortuous.

Arriving in Santiago in the third week of January for a two week trip, Philip and Dave hoped to catch mountain plants in flower yet also be able to collect seed. They drove in total about a thousand km south, as far as Puerto Montt, before turning back, stopping at various ski lodges and national parks along the way to explore and hike. At this time of year the mountain accommodation was open but almost unoccupied. A room for two overnight cost around \$40 (and that included dinner and breakfast). Philip described the food as made with recognizable ingredients if unexciting, adequate for a limited time.



***Viola atropupurea***

Their explorations were mostly between two and three thousand meters elevation, from around to beyond the tree line. Weather was quite good though sometimes cold. At one lodge there was heavy frost one night. An ambitious plan to record locations and elevations came to nought when the Global Positioning Satellite receiver was mislaid. It only turned up again at the end of the trip.

Without describing locations, some of the plants seen in flower included *Crinodendron hookerianum*, a shrub marginally hardy here, and *Embothrium coccineum*, cultivated in hardier forms. This latter grows to well above the tree line in quite exposed areas, where it is deciduous and should prove hardier still. *Drimys winteri* survives outdoors at UBC and was seen quite widely in Chile with one variety hardier than another. The spectacular *Philesia magellanica*, a weak shrub with deep rose bells, is related to the similar-flowered Chilean national flower *Lapageria rosea*. Neither seems to be grown outdoors here. *Philesia* requires constantly damp, shady and humid conditions and might do well in areas that stay wetter than Vancouver through the summer. Another shrub that is in cultivation here, though of doubtful hardiness, is *Raphiothamnus spinosus*. In the wild it has masses of white flowers followed by brilliant blue fruits (berries?). Alas, it seldom blooms in cultivation. Possibly there are more accommodating forms growing in the wild.

One shrub that is well known here was seen all along the way is *Fuchsia magellanica*. It seemed very constant in appearance wherever it was seen. It was sometimes accompanied by giant-leaved *Gunnera manicata* (or possibly *G. tinctoria*). The tiny creeping *G. magellanica* was also seen. Given a little protection these are hardy outdoors here.

Two plants were particularly sought for. One was *Araucaria imbricata*, the monkey-puzzle of the Victorians and well known in cultivation here. It forms actual forests at suitable elevation and was often visible along the skyline as seen from the highway. Older trees are massive with impressively spiky and angular heads on clear trunks, putting one in mind of the age of reptiles. It was pleasing to see that the groves often contained numerous seedling trees. The dominance of the species may depend upon fire removing competing trees, though presumably seedlings are not resistant.

The second group of plants particularly sought was the fabled rosulate violas of the Andes. It was with feelings of fulfillment that a flowering plant was seen in a rock crevice. A compact and geometric rosette of somewhat glaucous leaves, a little like a compressed *Echeveria*, bore small pansy flowers shading between white and pale violet. This was probably *V. cotyledon*. Later many more were seen. These plants are considered almost uncultivable and their habitat demonstrates some of the reason why. A relatively level area of black volcanic scoria, looking like a newly paved parking lot, was covered with clumps of rosettes of viola. They were scattered, each apart from its neighbour except for small satellite colonies, doubtless from its seed. The parent plants contained multiple rosettes and must have been years old. Between the colonies was level black pumice of pretty uniform grain size, no "weeds", no rocks, no shade. Clearly the plants have extremely sharp drainage, full, day-long exposure to the high-altitude sunlight and presumably reliable snow cover all winter. No wonder they don't survive in a wet climate near sea level! None of the plants on this scoria field was in flower and no seeds were evident. Philip found that choice of this intermediate season was generally not entirely successful as many flowers were over yet few seeds were ripe.

Philip recommended trying any species of *Ourisia* obtainable. One he showed, *O. microphylla*, was growing in a vertical rock crevice and was very reminiscent of *Phlox diffusa*, a compact tuft covered in light lilac flowers of similar colour and starry shape.

Mention must be made of the alpine amaryllids, some of which are in cultivation in California and the UK, possibly elsewhere. *Rhodophiala* is a genus close to *Amaryllis* (syn. *Hippeastrum*) and differing principally in smaller proportions and narrower leaves. The star is perhaps *Rh. rhodolirion* with pale flowers heavily spotted in deep red. Clumps produce several scapes of bloom after the leaves wither. *Rh. andina* (*andicola*?) has plainer flowers of red. *Placea bakeri* has open, yellow trumpets surrounding a small corona, thus resembling an amaryllis trying to become a narcissus.

Several terrestrial orchids were seen in flower, again possibly hardy in our climate. *Chlorea longipetala* is showy with a spike of quite large orchid blooms in dull yellow decorated with reddish veins.



*Conguillo National Park, Auricaria auricana with Viola cotyledon in the scree*



*Gaultheria pumila*

*Perezia pedicularifolia*





*Chlorea nudilabia*



*Chlorea longipetala*



*Rhodophiala* aff. *andina*

*Rhodophiala andina*



*Rhodophiala rhodolirion*

*Rhodophiala rhodolirion*



*Lomata ferrugina*

*Lomatia ferruginia*



*Philesia magellanica*



*Alstromeria angustifolia*



*Tropaeolum angustifolium*

Philip showed not only plants but their habitat in the Chilean mountains with picturesque scenery of lakes, waterfalls and volcanoes. Notable among these was Volcan Osorno, a symmetrical cone capped with snow. Indeed Chile has much to offer the tourist, particularly if interested in plants, and Philip and Dave saw only about a third of its total length!

### **Geographical note**

Chile extends very approximately from 17 to 55°S. The equivalent range of 38° of latitude in North America would extend from northern British Columbia south to about Mazatlan, Mexico City or the tip of Baja California. Consider that Chile also reaches from sea level to over six thousand meters and it is no wonder the flora is so diverse. Vancouver, around 49°N, would correspond to a point some 800 km further south of Puerto Montt in a region broken by fjords that prevent road access.



### **THE DESERT IN BLOOM ~ Linda Verbeek**

***(All the illustrations in this article are the work of the Author)***

It may seem incongruous that someone who likes alpine and rock garden plants should be excited about deserts. But if you think about it, the desert has many similarities with alpine habitats: the climate is extreme, the plants are mostly small, and the scenery is wide open; in both places you can see the bones of the earth. We have always loved deserts, but we had never seen a proper flowering of the desert. So, when this year (2005) turned out to be one of the wettest years southeast California has ever had, we decided to go and see it. We went from 14 - 22 February, and we spent a couple of days around Palm Springs, also visiting the southern edge of Joshua Tree National Monument, and the rest of the time in Anza Borrego State Park. From 1500 miles away, it is a little difficult to gauge exactly when is the best time to go (we used a website called deserts USA, but found out afterwards that they must base their evaluation just on the one splendid field mentioned below) - and there are commitments one can't break at home, too - so we actually came a little early. That is to say, there were places where the ground was indeed covered in flowers, the colour showing up from a great distance, but there were also places where the show was obviously still on hold, and I think if we'd waited two or three weeks longer, we should have seen more different species. Well, it will give us an excuse to go again, when the rains come back.

The last 4 or 5 years have in fact been excessively dry, and it showed. One difference between at least the American deserts and the alpine, is the presence of a sparse cover of shrubs and trees in the



*Phacelia minor*

desert, which by definition are lacking in the alpine. Many trees and shrubs were in bad shape. We saw a whole hillside of dead junipers, and most of the leguminous trees, which are such an important part of the flora, like Mesquite, Palo Verde and Ironwood, showed only a little bit of life in the centre of the tree. It gave the annuals all the more scope, and of course the annuals are where it's at in the desert.

We found many things to surprise us. One was that in spite of all the rain, and, one would think, a dearth of major grazers (what would they live on in a dry year??), most of the plants we found flourished in the shelter of a tree or shrub, however dead it might be. In a rich area the display might creep out from the edges of the trees, but you could always see that in the middle of the empty spaces there was less growth. One of the exceptions to this

rule was the lupine - it seemed to flourish quite happily in the open.

Another surprise was how many representatives of the family *Hydrophyllaceae* we found. With a name like Waterleaf family, you would hardly go looking for them in the desert. But we found many, and in several genera. The most widespread, and one of the dominant elements in the display, were members of the genus *Phacelia*. I keyed out 6 of them, and we undoubtedly saw a few more: you need the seeds to do a proper keying, and they were mostly just coming into bloom. They vary from sturdy plants with large flowers such as *Ph. campanularia*, with large gentian-blue bells, and the very similar *Ph. minor* - the main difference is in the colour of the flowers, which is more purple in this one, - to smaller-flowered ones like *Ph. crenulata* and *Ph. tanacetifolia*. Those two were massive, and they could grow



*Emmenanthe penduliflora*

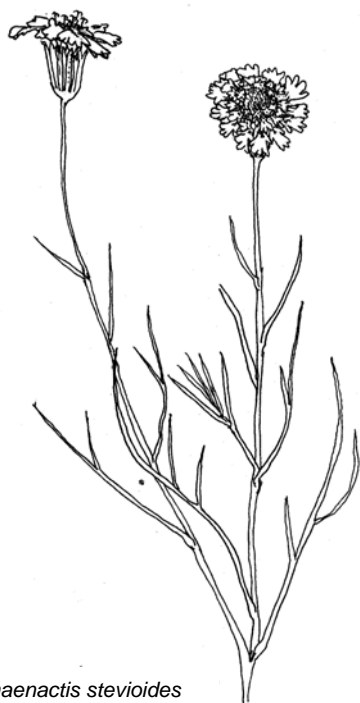
up to 50 or 60 cm tall, mostly in and around shrubs, and covered with flowers in the distinctive curved inflorescences.

Another *Hydrophyllaceae* was *Emmenanthe penduliflora* (p41) which has pale yellow flowers, that don't open very far. Apparently, in this one the corolla persists till the fruits ripen, but it dries up and turns papery, so it rustles in the wind. Needless to say, we didn't actually observe this phenomenon. Even if some had already dried up, they would hardly have rustled, because the weather stayed fairly damp and overcast while we were there, with occasional showers, even. Many plants keep the corolla around in this way, but I've never seen an explanation for this phenomenon.

The Phlox family (*Polemoniaceae*) are quite closely related to the *Hydrophyllaceae*, and we saw a number of representatives from this one as well, like *Nama demissa*, which is almost flat on the ground, with bright magenta flowers. A big plant can cover a patch of 15 or 30 cm square. *Langloisia setosissima* belongs here too, a dense, indeed very bristly if not prickly cushion, with rather small, pale pink flowers.

You expect to see daisies in the desert, and daisies we did see. One of the dominant shrubs on many hillsides is *Encelia farinosa*, or Brittlebush. It is a pretty shrub, very tidily shaped, like a cone-shaped section of a globe, with fairly large, entire, very silvery leaves. The flowers are yellow daisies, carried quite high above the foliage, and in full bloom they cover the plant. It must be very drought resistant,

because in many places they were either in bloom or in full bud, but we found many dead ones too. There are, obviously, other yellow daisies - one that made the most impressive display we saw was *Geraea canescens*, more like a short sunflower. In one place it must have covered a square mile of ground with a continuous canopy of yellow. Underneath them was a dense scattering of a large white Evening Primrose, *Oenothera deltoides*, and underneath that a layer of the pink Desert Sand Verbena, *Abronia villosa*. Altogether a most spectacular show. We found the *Oenothera* and the *Abronia* in other places, but we never saw such a show of the *Geraea* again. This must have been the place the website used for evaluating the display.



*Chaenactis stevioides*

The neatest daisies were two tiny ones. The first one looks like a small ox-eye daisy sitting flat on the ground. In fact, it is hard to find the leaves at all. This is called *Monoptilon bellidioides*, and in places it makes little drifts among the sand and the rocks. Since the sand is mostly fairly pale, they don't stand out from a distance, and sometimes you would almost step on them. But I for one would love to grow that, annual or not. The other little daisy is a relative of the Woolly Sunflower (*Eriophyllum lanatum*) that grows all over our Gulf Islands. This one is *E. wallacei*, and when you look close, you can see that the leaves remind you of the Woolly Sunflower, but the whole structure is only maybe 1 cm long, and very tightly curled. The flowers are a perhaps 3 cm across, and they come both white with a yellow centre, and pale yellow. You can find the two colour forms growing side by side. They are just a little taller than the *Monoptilon*, so they clearly sit off the ground.

Not all *Asteraceae* are true daisies. One very common one was the Desert Dandelion, *Malacothrix fendleri*. It is a little paler than an ordinary dandelion, and the centre of the flower is dark when it first expands. Fully open flowers, where all the little individual florets have expanded don't show this dark spot. Another oddball was *Chaenactis stevioides*, (see opposite page) with the very picturesque common name of Desert Pincushion. It looks mostly like a *Scabiosa* at first sight, with white flowerheads on very slender stalks. Less interesting, but peculiar, is *Palafoxia linearis*, with small pinkish flower heads, that never look quite open.

Another family that had a large number of representatives was the *Onagraceae*, especially the Evening Primroses. They all used to be *Oenothera*, but lately they have been split up into two genera, with - if I remember rightly - the ones that are still called *Oenothera* having a four-parted stigma, and being often night-flowering, while the new genus *Camissonia* includes all the ones that have a simple, nobby stigma. It was



*Camissonia refracta*

mostly *Camissonias* that we found, with the notable exception of *Oenothera deltoides*, mentioned above. The *Camissonias* were quite variable, there were small yellow ones like the Sundrops, e.g. *C. pallida* (not pale at all!), but others were quite tall, like *C. californica*, which might have a stem close to a meter tall, but never had more than 2 or 3 flowers at the time, plus a few red flags from the previous day's wilted ones. *C. brevipes* was much more impressive, not quite as tall, but with clusters of quite large yellow flowers at the end of the stems. Nor are all *Camissonias* yellow; *C. claviformis* and *C. refracta* are both creamy. The former has a maroon centre to the flower, which is quite striking, the latter has deep reddish buds, which hang in a cluster below the open flowers, also quite dramatic - and both quite widespread.

There were several more truly small plants, either because they are minuscule, or because they hug the ground. In the former class was *Mimulus fremontii*, I think the tallest one we found was 20 cm, but mostly they were so small that the large flowers appeared to be sitting almost on the ground. They are deep purply-pink, with two yellow ridges on the lower lip. The flowers almost always appeared to come in pairs.

Some of the flat-growing plants included *Allionia incarnata*, a relative of the Four-o'clocks (Fam. *Nyctaginaceae*). It has small purple flowers and can cover quite a bit of ground. The amusing thing about this is, that what looks like quite a normal flower with slightly notched petals, is actually a cluster of three highly asymmetric flowers surrounded by bracts. A similar flat growing plant is *Fagonia laevis*, in the *Zygophyllaceae*. It actually looks a bit like the *Langloisia* above, but the leaves are narrower and the flowers have loose petals, looking almost like tiny propellers.

A few oddballs: there was a very pale Blazing Star, *Mentzelia involucreta*, which seemed to differ from most *Mentzelias* in that the flowers never fully opened up, remaining cup shaped. It had almost the same colour - a very ghostly pale cream - as the Ghost Flower, *Mohavea confertiflora*, in the *Scrophulariaceae*. But the latter had darker markings in the throat, although you had to bend down quite far to see this, as the flowers - also more or less cup-shaped - definitely looked down. Both the *Mentzelia* and the *Mohavea* have an upright growth habit.

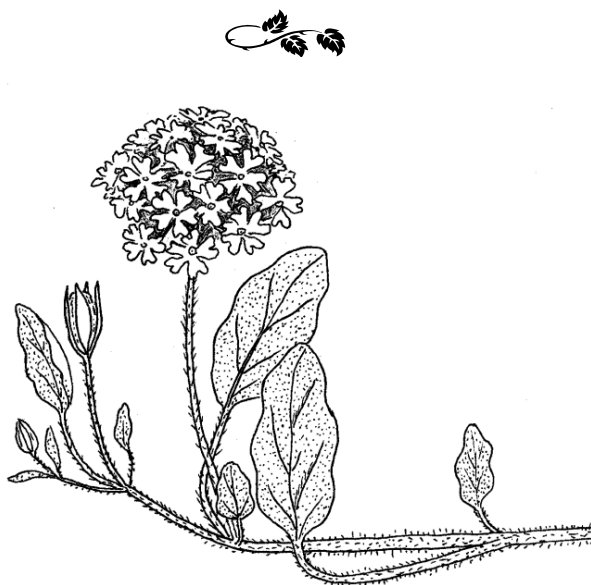
It is quite remarkable, when you are thinking of deserts and desert-like places in the Old World, how few bulbs there were. We found only two, the very spectacular *Hesperocallis undulata*, stout plants that can grow over a meter tall, apparently (we didn't actually see them that tall, but they were just coming out) with very lily-like, large white trumpets. On the outside the flowers were marked with dark purplish-green stripes down each tepal. The other one was *Dichelostemma congesta*, the ordinary Blue Dicks that grows all over California, it makes a slender stem of about 30 or 40 cm with a dense cluster of blue flowers on top.

We saw only one cactus in flower, but then they tend to come late. *Ferocactus cylindracea*, a tall barrel cactus, had one large red flower on

top. We saw another one with flowers along it, but they didn't belong to the cactus. There was a climbing snapdragon growing up it, *Antirrhinum filipes*. The stems are so slender, and the leaves so far down (and they are only small, linear leaves), that you really only see the bright yellow snapdragon flowers, appearing to be suspended in mid-air, or mid-cactus, as the case may be.

Some of the shrubs were in flower, but they were mostly not that showy. An exception is *Justicia californica*, in the *Acanthaceae*. It has very narrow, tubular, bright scarlet flowers, with yellow stamens sticking out the end. It makes a show because there are so many flowers, carried at the end of the stems. *Isomeris arborea* is in the caper family, and makes terminal trusses of bright golden flowers, which always look a little untidy. *Hyptis emoryi* belongs in the mint family and has lavender blue flowers. Unfortunately they are quite small and hidden among the leaves so it doesn't make much of a show. The same goes, in a way, for *Psoralea schottii*, a very densely branched, spiny shrub in the *Fabaceae*, with very deep purply-blue flowers. The colour of the individual flowers is quite amazing, but they don't make a splash in the landscape. On the other hand, they are tough even in a place of toughies, they were one of the few plants that had flowers when we first went to the Sonora desert in a really dry year.

As I said, we were a little early, and I know of a few things we'd have liked to see that we missed, but we saw enough to give us a flavour of the desert in bloom and I hope I managed to share some of it.



*Abronia villosa* ~ Nico Verbeek



## DRAINAGE – PART 1

~ Douglas Justice, British Columbia

When I was a teenager, I collected and grew cacti and other succulents. Basically, nothing else survived my somewhat erratic watering regimen. Despite the rough treatment, however, a surprising number flourished. When it came time to pot them up, I wanted to follow the best advice I could find. My grandmother (an excellent grower) and a number of cactus references agreed upon the need for a “drainage layer” at the bottom of a pot. The theory behind this went that freely draining material at the bottom of a pot would provide better drainage overall. I slavishly followed the advice for a while, but couldn’t help noticing that commercial growers didn’t seem to be in accord with it. How could they get away with not using drain rock? Hadn’t they read the books? I soon stopped using a drainage layer—it was either my experimental nature or laziness—and my plants didn’t seem to notice.

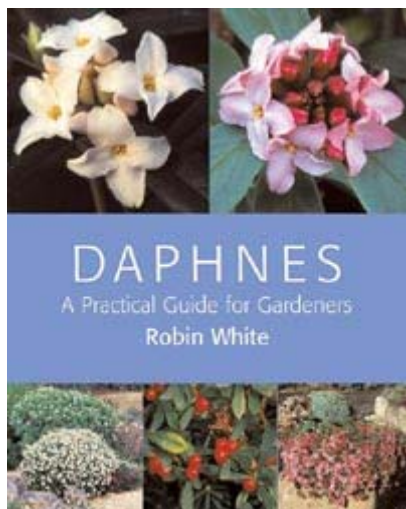
Try this experiment. Lift a sponge out of water and notice that it drains for a second or two, then drips a little, then stops. Although there’s plenty of water left inside, it doesn’t continue to drip. You have to squeeze it to release more water. So, before it was squeezed, why didn’t the water continue to leak out? Something was holding the water in the sponge against the force of gravity. Lay the sponge down in a kitchen drain rack. Does the water drain away? No it doesn’t. Now take a dry second sponge (of the same type) and lay the water-charged one on top of it. Will the second sponge get wet? Yes it will. Water will migrate from the wet to the dry sponge, but not to a non-absorbent surface, and it will not drip into the open air.

The explanation is that a certain amount of water is held in the smaller pores of the sponge, against the force of gravity, because the water is physically attracted to the sponge material. Imagine a similar, absorbent material in a flower pot. Let’s imagine the material is soil. Would a layer of coarse, non-absorbent material such as gravel at the bottom of the pot increase the drainage of the soil above? No, it wouldn’t. The air-spaces in the gravel immediately below the soil create a *discontinuity*, through which water will not easily migrate.

After a thorough watering when *all* of the pore spaces are filled up with water (like the sponge immediately after pulling it out of the water) water will drain across a discontinuity. Now, under saturated conditions, there is enough weight of water for gravity to be the prevailing force. However, once the “free” water has drained away, the remaining water is held fast in the smaller pores in the soil and the gravel below is merely a barrier to drainage. If you don’t believe me, get a couple of sponges and try it!



## BOOK REVIEW ~ by Ian Gillam



### ***Daphnes, a practical guide for gardeners***

by Robin White, Timber Press, 2006. 232 pp. US\$34.95

Robin White has grown daphnes for over thirty years and his Blackthorn Nursery in southern England is a leading supplier of numerous species and hybrids. Indeed he has raised and introduced a number of hybrid daphnes now becoming more widely available. In this book he presents descriptions of all the species and hybrids that he considers both hardy in a temperate climate and garden-worthy. Each plant is illustrated with one or more coloured photographs of good quality.

As its title states, this is very much a book for gardeners and it gives much useful information on growing and propagating daphnes. The author stresses that the plants require a well-drained medium, yet one that never dries out completely and where the roots are kept cool. His best plants grow in pots partly plunged into a bed of sand or planted directly into a raised bed topped with 20 cm of gravel. These plants are kept inside a polyethylene tunnel greenhouse with no auxiliary heating. This protection, primarily from winter wet, gives better growth and freedom from fungal diseases. The author notes that winters in southern England have become warmer and wetter over recent decades. Even so winter rainfall there must be much less than we experience here in coastal B.C., suggesting that protection from rain and dampness is likely to be even more important here.

Some of the daphnes described are hardy in colder climates and are indeed grown in colder parts of North America and Europe. They may well be easier to grow where winters are colder than here, particularly if combined with reliable snow cover.

The book is well written and well illustrated, covering all the points needed to grow a range of daphnes successfully. An annoying failing is the index. White and Brickell have elsewhere described and given botanical (Latin) names to ten hybrid daphnes, doubtless sound practice from a systematic point of view and following established usage. Different clones of each hybrid also have a cultivar name (in a modern language), descriptive or commemorative of some person. Other

hybrids, perhaps more recently produced, lack botanical names and have only trivial cultivar names. The index to the book contains entries only for the full names, botanical plus cultivar, where they exist. In a book primarily for gardeners it is frustrating to be unable to locate the reference to a plant when one knows the cultivar name, easily remembered, but not the full botanical name.

Thus the hybrid 'Lawrence Crocker' does not appear in the index and I had to go to the Internet to find it is classed as *D. X medfordensis*. Nor does that name appear in the index. Only some time later did I chance upon 'Lawrence Crocker' in the text, where it appears under *D. X susannae* 'Lawrence Crocker'. (*D. X medfordensis* appears to be an invalid name and is not mentioned.) How much more informative it would be if one could look up the cultivar name alone in the index.



**Phoenix Perennials** is holding a special shopping event! 25% of your purchase will be donated to HomeStart Foundation. HomeStart Foundation's mission is to redistribute safe, clean, functional furniture in a professional, dignified manner from those who want to share to those who are truly in need – while keeping anything worthy from ending up in a landfill!. We provide furniture to people who have been homeless with the goal of helping them achieve self-sufficiency, self-esteem and long-term stability. Have fun shopping for the botanically intriguing at one of the largest nurseries in the lower mainland, with over 2500 perennials in stock! **How it works: Saturday June 3rd and Sunday June 4th from 10 AM - 5 PM.** Come shopping at Phoenix Perennials. When you pay for your plants tell the cashier that you've come to support HomeStart Foundation and 25% of the price of your plants (or gift certificates.) will be donated to HomeStart. You must tell them why you have come to the nursery on that day or they won't know to donate the proceeds from your sale. Other than that it's pretty simple – all you have to do is shop! Phoenix Perennials: 3380 No. 6 Road in Richmond, BC (604) 270-4133.

Check out their list of rare and unusual plants at

[www.phoenixperennials.com](http://www.phoenixperennials.com)

The Alpine Garden Club of B.C. brings together people interested in alpine, native and other hardy plants both in cultivation and in the wild here and abroad. Monthly meetings are held at VanDusen Garden on the second Wednesday of the month and feature a speaker, show of pot-grown plants and discussions. Garden visits, field trips and hikes are planned during the spring and summer. Members participate in the seed exchange, spring show and displays at various events. Our Bulletin distributed to members is also available on our website [www.agc-bc.ca](http://www.agc-bc.ca).

Student memberships at a reduced rate of \$10 per year are available to those studying horticulture, ecology and related topics at recognized colleges and universities. The Club offers an introduction to a wide range of interesting plants, many of which are not commonly found in commerce.