

Sarracenia

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Newsletter of the Wildflower Society of Newfoundland and Labrador
c/o Botanical Garden, Memorial University of Newfoundland, St. John's, NL, A1C 5S7

Any articles from members would be most welcomed and may be sent via email to tboland@nfld.com or via regular mail

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Summer Fieldtrips:

Grand Concourse Walks: We will continue to walk various portions of the Grand Concourse Trail at various times over the summer. The dates of the next walks will be **Wednesday Aug. 6** (Regatta Day) and **Sunday Sept. 7**. The walks will take place from 2-5 pm. Meeting places will be announced.

Other upcoming field trips:

August 23: Bristol's Hope and area

September 14: Swift Current and the upper portion of the Burin Peninsula

A Botanical Expedition to Southern Labrador.

M.L. Fernald

{M.L. Fernald was one of the last century's foremost North American botanists. In 1910, while a young Harvard Professor, he spent July and August exploring the West Coast and Northern Peninsula of Newfoundland with three companions who also went on to make their names in their own fields. During this trip he crossed the Straits of Belle Isle for a few days and explored the area around Blanc Sablon crossing into southern Labrador. As well as publishing many scientific papers based on his collections he gave a more popular account of his expedition at a meeting of the New England Botanical Club on March 3 1911 which was subsequently published in July 1911 in Vol. 13 No. 151 of Rhodora, the club's journal. Since some members of our society will be visiting this area this summer I thought members might like to read of Fernald's experiences there and have extracted this account from the much longer paper. I am grateful to the current editor of Rhodora for letting me know that we don't actually need her permission to reprint this selection! I have edited what follows slightly, correcting a couple of obvious typos and omitting the references and most of the footnotes. I have left in his scientific names, but where they differ from the currently accepted ones as in the "New Checklist" I have added these in {curly brackets}. I have also omitted the two plates since the quality would be too poor. The first month or so was spent based in Birchy Cove {Corner brook} so he was in Labrador at about the same time as our expedition. Howard Clase}

Now came the longest flight, the whole party like the Newfoundland fishermen migrating to the Labrador - not very far into Labrador, but north of the Straits of Belle Isle and east of the

Canadian boundary. In earlier days the name Labrador was used in a general way for the entire peninsula north of the lower St. Lawrence and the Gulf, but in 1876 the jurisdiction of the Government of Newfoundland was defined as that portion of the Labrador Peninsula lying east of a line drawn directly north from Blanc Sablon to 52° N. latitude, thence along the height of land to a point on the mainland shore nearly south of Port Burwell, Cape Chudleigh. West of this boundary the region is Canadian, the southern tract being Saguenay County, Quebec, the northern Ungava. Many of the older collections made on the Labrador Peninsula prior to this delimitation, and a few more recent ones, from west of Blanc Sablon River are designated as coming from "Labrador" and upon such specimens many so-called Labrador records have been made and new species based — for example, *Calamagrostis labradorica* Kearney, the type from Bonne Esperance, Saguenay County, Quebec, and *Galium labradoricum*, deriving its name from an old specimen presumably from the North Shore of the River or Gulf of St. Lawrence. If we wish our geographic citations to be as generally intelligible as possible it seems wisest to refer to the regions in the Canadian portion of the Peninsula by the most definite designations available (Saguenay County, etc.) and to reserve the name Labrador in its restricted sense (as opposed to the more general Labrador Peninsula), as is done in most if not all up-to-date atlases, for the outer coastal strip of the Peninsula. In these notes the official boundary is recognized as it is in the most pretentious publication yet available upon the flora, Delabarre's Report on Botany in his *Report of the Brown-Harvard Expedition to Nachvak, Labrador*.

In the latter work, which in 1902 enumerated all the plants seen on the coast of "Labrador proper" during the summer of 1900 by Professor Delabarre, nearly 200 vascular plants

were listed. The work which may yet be accomplished by trained and discriminating explorers is shown by the fact that in Wiegand and Kittredge's one day at Forteau and my five botanizing days at Blanc Sablon, where I once more had the genial companionship of Kidder (principally absorbed in gathering Esquimaux arrow-heads), 331 species of flowering plants and ferns were collected, and of these more than 200 are not in Delabarre's list.

As just intimated, Wiegand and Kittredge went to Forteau, Kidder and I to Blanc Sablon. This division of the party was made in order to compare these two regions having similar geological and geographical conditions, which will become clear by a brief description of Blanc Sablon and the neighboring coast. West of the Straits of Belle Isle the entire north shore of the Gulf and the lower River St. Lawrence is composed of Laurentian gneiss and allied rocks, except at the Mingan region, which is limestone. But the words of Sir William Logan describe the general conditions with authority: "Between this exposure [the Mingan Islands] and Bradore Bay, the distance is about 300 miles. The shore, which is very much indented by bays and inlets, and fringed with a multitude of islands, presents an almost continuous line of bare rock; but in no part of it have there been observed any strata, but such as belong to the Laurentian series. On the east side of Bradore Bay, which is situated near to the entrance to the Straits of Belle Isle from the Gulf of St. Lawrence, the palaeozoic rocks again present themselves. Resting on the Laurentian gneiss, they run along the north coast for nearly eighty miles, with a breadth of probably ten or twelve miles." At Blanc Sablon the flat country through which the river runs is a floor of Laurentian gneiss, in many places converted to shifting sand. Each side of the river the Cambrian limestones and calcareous sandstones rise as five terraces until at an altitude of about 350 feet (115 m.) they reach the tableland which stretches west

or east and north until cut through by other streams; Here was an ideal place to study the vegetation of a highly calcareous region side by side with the plants of a silicious and gneissoid area, and if anyone doubts the dissimilarities of these floras he can find no better spot in which to undeceive himself than at Blanc Sablon. And if he is received with the hospitality and desire to make his stop successful which were extended to us by our wide-awake host, Mr. Edwin G. Grant, manager of the cod-fishing "room," and his son and daughter in their large and comfortable summer residence—more than a hundred years old, but with electric push-buttons, typewriter and other signs of contact with the world not looked for on the Labrador as ordinarily described; or if he is entertained as we were by Mr. Grant's friendly rival and neighbor, Mr. Thomas Morel, manager of the fishery on the Canadian side, and his good wife, with pictures and accounts of their home in Jersey, with music and discussions of European galleries and theaters, and with lettuce salad dressed with real Jersey cream and a sight of their garden with a patch of carefully sheltered cucumbers coming on; he will feel that the open-handed hospitality which we read of in early accounts of the Hudson Bay Company is equally dispensed by the Labrador fisherman.

The botanizing at Blanc Sablon furnished such an embarrassment of riches that it is now possible to mention only a few characteristic plants. As representative a day as any was Saturday, August 6, the last field-day I had there. Starting from the settlement on the Labrador side, where the shore is bordered by a broad strand-terrace of gneissoid gravel and sand covered by a broad belt of Strand Wheat (*Elymus arenarius* {*Lymus mollis*}), with *Catabrosa aquatica*, *Montia lamprosperma* Cham. {*M. fontanum*}, *Stellaria crassifolia*, and *Ranunculus hyperboreus* Rottb., a little creeping buttercup with only 3 lemon-yellow petals, in the damp

hollows, I made my way through the group of Esquimaux dogs, which all summer hang about the fishery, across the sandy and rocky plain which extends from the river to the terrace-slope. As I remember writing home, the *commonest flower* of these Laurentian plains is *Carex rariflora*, though with singular regard for its specific name it is by all means the rarest of its genus in New England. In some places on the drier part of the plain the turf was composed of, *Carex stylosa* C. A. Meyer, an Alaskan species which, like many other Alaskan plants, reappears along the Straits of Belle Isle. In the sand-blows were *Luzula spicata* and a viviparous form of *Festuca ovina* L., var. *supina* (Schur.) Hack., subvar. *pubiflora* Hack. {*Festuca brachyphylla* Schult. ex Schult. & Schult.f. subsp. *brachyphylla*}, and here were the common plants of the granitic barrens of Newfoundland, Gaspé, or northern New England: the Whortleberry {*Vaccinium uliginosum*} the Bearberry (*Arctostaphylos alpina* {*Arctous alpina*}), the Curlew-berry (*Empetrum nigrum*) both the typical black-fruited plant and the var. *purpureum* {*E. atropurpureum*} with bright coral-red berries, Baked Apple (*Rubus Chamaemorus*), Dewberry or Plumboy (*Rubus arcticus*), Partridge-berry or Red Berry (*Vaccinium Vitis-Idaea*, var. *minus*) and *Loiseleuria*, *Diapensia*, *Betula glandulosa*, *Salix Uva-ursi*, etc. The bogs were everywhere brilliant with Cotton Grasses, *Eriophorum angustifolium*, *gracile*, *tenellum* and *callitrix*, but handsomest of all the splendid bronze-topped *E. Chamissonis*, and, its known range now extended across from Newfoundland, the recently described *E. callitrix*, var. *erubescens* Fernald {*Eriophorum vaginatum* L. subsp. *spissum* (Fernald) Hultén}. Coming now to the head of a cove the trail passed back of the Strand Wheat, with here and there a colony of the crimson *Rumex occidentalis* {*Rumex aquaticus* L. var. *fenestratus* (Greene) Dorn} or of some perplexing *Epilobium*, clumps of the handsome sunflower-like *Senecio Pseudo-Arnica*, the splendid whitish-green grass, *Poa*

eminens, and the bronze-purple *Calamagrostis lapponica* (Wahlenb.) Hartm., like *C. neglecta* with very long spikelets, and soon reached the foot of the limy terraces.

Immediately the vegetation changed. The brooks tumbling and interlacing every few rods along the slopes from the summit-tableland were bordered by a luxuriant thicket of coarse herbs and low shrubs which, in early August, made as rich an alpestrine meadow as one could well imagine. Here was a tangle as high as one's head, with *Salix Candida*, *S. vestita* Pursh, *S. Pseudo-myrsinites* Anderss., and several variations of *S. cordifolia* Pursh, strange Goldenrods and Asters, *Angelica atropurpurea*, *Heracleum lanatum*, and a strange villous *Urtica* composing the taller thicket. In making my way up the course of one of these brooks to the crest I encountered more than 175 species of vascular plants, surely a good number for one day's collecting on a Labrador meadow and one difficult to match in our more amiable climates. The brook-margins and moss-bordered rills were everywhere brilliant with Marsh Marigold (*Caltha palustris*) still in bloom, with white masses of *Arabis alpina* L., looking almost, exactly like our garden species, the Old World *A. albida*, golden spires of the boreal Yellow Rocket (*Barbarea orthoceras* Ledeb.) and blue carpets of the northern Speedwell (*Veronica humifusa* {*Veronica serpyllifolia* L. subsp. *humifusa* (Dickson) Syme}), while a beautiful gray-green Ladies' Mantle (*Alchemilla* sp.) made a misty fringe at the edge of the tumbling waters. Occasionally in the wet moss there was a delicate carpet of *Cystopteris montana* (Lam.) Bernh., suggesting a compromise between a broad-fronded *C. bidifera* and a stockily developed *Phegopteris Dryopteris* {*Gymnocarpium dryopteris* (L.) Newman}; or a colony of *Pinguicula vulgaris* with rich violet flowers, ordinarily mingled with various Saxifrages and Drabas or the little white *Parnassia Kotzebuei* C. & S. (of southern

Labrador, the Gaspé Peninsula, and the Alaskan area). On the exposed rocks at the crests of the terraces were great colonies of *Cerastium*s, differing from any we had got in Newfoundland and adding two more to the plants we had already collected which, by matching in the herbarium, we are forced for the time being to call vaguely "*Cerastium alpinum*." Occasionally in more open springy spots there were strange sedges and rushes: the chestnut-colored *Kobresia caricina* Willd. [*Kobresia simpliciuscula* (Wahlenb.) Mackenzie], its range in eastern America now extended south from Greenland, or *Juncus triglumis* L., an extremely neat little species suggesting *J. stygius*. Near the top of the upper terrace was a meadow crimson and orange-scarlet with *Senecio pauciflorus* Pursh [*Packera indecora* (Greene) Á. & D. Löve] which has discoid heads, the involucre crimson-tinged, the corolla-lobes orange-red, and the anthers yellow.

I had hardly reached the crest at supper time and before turning back could have only the sad satisfaction of seeing for myself that beyond for miles stretched an alluring and to botanists unknown area of alpine meadows, bogs, pools and dry ridges which the approaching night and the call to supper, not to mention the serious difficulty of carrying more plants, forced me to leave until "next time." Returning to the plain, I descended the terrace by a new route, haunted by the consciousness that I was passing by innumerable good things, but stopping only once in the hasty descent to gather a conspicuous lilac-flowered *Erigeron*, the new *E. acris*, var. *oligocephalus*, [*Erigeron elatus* (Hook.) Greene] and again to look over some brackish rocks along shore. Here was a Scurvy Grass (*Cochlearia officinalis* L.) in splendid development, flowering and fruiting plants and new rosettes of thickish round leaves. I was curious to eat some of the plant which for centuries had been credited with great virtues and found it a most palatable salad, in texture crisp and somewhat fleshy, in flavor

like horse-radish. Near by was an attractive and strange grass which proves to be *Hordeum boreale* Scribner & Smith [*Hordeum brachyantherum* Nevski subsp. *Brachyantherum*], a species heretofore known only from Alaska to northern California. But it was growing late and I had so often been tardy at Mr. Grant's table that I hastened back this last day to leave if possible a better impression of my punctuality and appreciation and found a Labradorian meal which would please the most epicurean palate, - a choice of young puffins or young divers, with greens of *Atriplex patula*, var. *hastata* {?}. Although the boreal plants above enumerated and many others not here mentioned are the species which at first attract the New England botanist visiting the Straits of Belle Isle, they are after all surpassed in geographic interest by a large number of species which one might be tempted to ignore. Mingled with the northern species on the terrace-slopes are the following and many more which to the New Englander make a very tame list: *Phegopteris Dryopteris* [*Gymnocarpium dryopteris* (L.) Newman] and *polypodioides*, *Botrychium virginianum*, *Equisetum scirpoides*, *Milium effusum*, *Cinna latifolia*, *Carex Deweyana*, *vaginata*, *laxiflora*, var. *leptonervia*, and *capillaris*, var. *elongata*, *Clintonia borealis*, *Streptopus amplexifolius*, *Microstylis monophyllos*, *Ranunculus abortivus*, *Actaea rubra*, *Mitella nuda*, *Ribes triste*, *Geum macrophyllum*, *Viola Selkirkii*, *Viola renifolia*, *Conioselinum chinense*, *Chiogenes hispidula*, *Galium triflorum*, *Linnaea borealis*, var. *americana*, *Solidago macrophylla*, and *Petasites palmata*. If one were to enumerate the more typical woodland plants of northern New England and eastern Canada I am quite sure that all of these would be in the list. And it is for just this reason that their occurrence on the terraces and tablelands north of the Straits of Belle Isle is of greatest interest.

In such accounts as I have found (except possibly Cartier's) the coasts of the Straits of Belle Isle are described as desolate and bare, and even Cartier, in 1534, entering the Straits and anchoring at Blanc Sablon, was so impressed with the barrenness that he wrote: "If the land was as good as the harbors there are, it would be an advantage; but it should not be named the New Land *{Fernald's note: Cartier had just come up the east coast of Newfoundland and apparently took southern Labrador to be part of the same region.}* but [a land of] stones and rocks frightful and ill shaped, for in all the said north coast I did not see a cart-load of earth, though I landed in many places. Except at Blanc Sablon there is nothing but moss and small stunted woods; *{Fernald's note: At Blanc Sablon the shores and flat country back of the shores are covered with drifting sand.}* in short, I deem rather than otherwise, that it is the land that God gave to Cain;" and again on his second voyage, in 1535, he wrote: "The whole of the said coast from the Castles as far as here *{Fernald's note: >From Chateaux bay as far as Brest, west of Blanc Sablon}* bears east-northeast and west-southwest, ranged with numerous islands and lands all hacked and stony, without any soil or woods, save in some valleys." 3 And at the present time the people at Blanc Sablon insist that there has never been any forest there and that no timber exists within four or five miles of the Straits. Yet, the first day I saw upon the terraces east of Blanc Sablon such plants as have just been enumerated I was convinced that a forest must have been there, since these are so distinctly woodland species and so decidedly not plants typical of the Arctic barrens and tundra. So my delight can be imagined when, crossing with Kidder the tableland east of Blanc Sablon, we came upon buried logs in the bog and soon after found numerous stumps protruding from the moss. Some of the stumps, now much crumbled, were still a foot or more in diameter and indicated an ancient forest of considerable size.

Just when this forest lived it is difficult to say, but if it still throve in the 16th century Cartier did not give a very clear indication of it. Only by such indefinite expressions as "except at Blanc Sablon there is nothing but moss and small stunted woods" and "without any soil or woods, save in some valleys" did he indicate a possible forest covering. But here at least was a remnant of the forest which had once sheltered *Carex Deweyana*, *Actaea rubra* and *Viola Selkirkii*, though at the present time only shrubs or dwarf straggling trees, as described by Cartier, thrive on the bleak and wind-swept shores of the Straits of Belle Isle; and that the forest was an extensive one and presumably once fringed the entire length of the Straits we are safe in assuming from the presence at Bonne Esperance, L'Anse au Clair, Forteau, Red Bay, and Chateau (as shown by the collections of John A. Alien and others) of a relict forest vegetation (sometimes further augmented by *Onoclea sensibilis*, *Osmorhiza obtusa* *{Osmorhiza depauperata* Philippi), *Pyrola secunda* *{Orthilia secunda* (L.) House}, etc.) such as abounds on the terraces of Blanc Sablon.

The "Home" *{coastal boat}* which we had expected back from Battle Harbor Saturday night came Sunday evening and we found ourselves sharing a stateroom with two professors from the Methodist College at St. John's, who were making a circuit of Newfoundland collecting plants for their newly organized Natural History Society. As loyal British subjects they were trying to identify their plants by means of Bentham's Handbook of the British Flora; and I am sure they were able thus to identify nearly half the species they found, for of the known vascular plants of Newfoundland (scarcely 1000 species) more than 400 occur in Scotland, northern England or Ireland, though about 825 of them are found in the "manual region." *{Presumably the region covered by Gray's Manual of Botany.}*

{After this the party returned to the Island for a few more weeks. Wiegand and Kittredge could find no satisfactory accommodation at Forteau and had left the area more or less botanically unexplored.

The reference to the Natural History Society is interesting since the present NHS executive had no knowledge of its existence this early.

If you find these few pages entertaining and informative then I recommend that you read all 60 odd pages of the full article. I would be happy to help anyone obtain a copy. HJC}

Latin Demystified Part 3; Epithets Used to Describe a Plant's Habit. By Todd Boland

In part three of Latin Demystified, I will cover those epithets that are used to describe a plant's overall shape, size or growth habit. The tenses used here are the masculine.

caespitosus - tufted e.g. *Sagina cespitosa* (tufted pearlwort), *Saxifraga cespitosa* (tufted saxifrage)
clavatus - club-shaped e.g. *Lycopodium clavatum* (running clubmoss)
complanatus - flattened e.g. *Diphasiastrum complanatum* (formerly *Lycopodium complanatum*, groundcedar)
compressus - compressed e.g. *Juncus compressus* (compressed rush), *Poa compressa* (Canada bluegrass)
congestus - congested, crowded e.g. *Senecio congestus* (marsh ragwort)
curtus - shortened e.g. *Euphrasia curta* (short eyebright)
decumbens - prostrate stems with ascending tips e.g. *Danthonia decumbens* (heath grass)
dumosus - bushy e.g. *Gaylussacia dumosa* (dwarf huckleberry)

elatus - high, tall e.g. *Erigeron elatus* (angular fleabane)
erectus - upright e.g. *Potentilla erecta* (erect cinquefoil)
fruticosus - shrubby e.g. *Potentilla fruticosus* (shrubby cinquefoil)
giganteus - giant e.g. *Agrostis gigantea* (redtop)
grandis - large e.g. *Glyceria grandis* (tall mannagrass)
horizontalis - lying flat e.g. *Juniperus horizontalis* (creeping juniper)
humifusus - prostrate e.g. *Arenaria humifusa* (low sandwort), *Stellaria humifusa* (saltmarsh starwort)
humilis - low growing e.g. *Erigeron humilis* (low fleabane), *Salix humilis* (small pussywillow)
laxus - loose e.g. *Myosotis laxa* (small forget-me-not)
majus - larger e.g. *Plantago major* (common plantain)
maximus - largest e.g. *Heracleum maximum* (cow parsnip), *Glyceria maxima* (rough mannagrass)
minus - smaller e.g. *Arctium minus* (common burdock)
minus - smaller e.g. *Betula minor* (dwarf white birch), *Pyrola minor* (lesser pyrola)
nana - dwarf e.g. *Crepis nana* (dwarf hawk's-beard)
natans - floating e.g. *Sparganium natans* (small burreed)
nodosus - knotted e.g. *Sagina nodosa* (knotty pearlwort)
patens - spreading e.g. *Spartina patens* (saltmeadow grass)
procumbens - prostrate e.g. *Loisleuria procumbens* (alpine azalea)
pumilus - dwarf e.g. *Betula pumila* (dwarf birch)
pusilla - small e.g. *Tofieldia pusilla* (small false-aphodel)
pygmaeus - dwarf e.g. *Ranunculus pygmaeus* (dwarf buttercup)
recta - upright e.g. *Potentilla recta* (sulphur cinquefoil)

repens - creeping e.g. *Epigaea repens* (trailing arbutus), *Linaria repens* (striped toadflax)
stoloniferus - producing stolons e.g. *Cornus stolonifera* (red-osier dogwood), *Amelanchier stolonifera* (running chuckleyppear)
strictus - upright e.g. *Oxalis stricta* (European woodsorrel), *Primula stricta* (coastal primrose)
supinus - lying down e.g. *Gnaphalium supinum* (dwarf cudweed)
vescus - little e.g. *Fragaria vesca* (woodland strawberry)

A Trip to the Hawke Hills.

By Glenda Quinn

Sunday, June 22, 2003

A spectacular, fogless, day at the Hawke Hill [Alpine Barrens] Ecological Reserve. Our group had planned a visit there in the afternoon. John Maunder and I showed up a little earlier; the others a little later. But, the twain did not meet!

Afterwards, I was talking to Todd Boland, the trip leader, and he said the main group had parked at the bottom of the hill and explored for plants while walking up the hill, eventually reaching the summit near the communications towers. By then, John and I - thinking we were the only ones who had turned up - were well up along the main ridge near the middle of the Reserve; on the other side, beyond the summit. I was reminded of the children's book Blueberries for Sal. Sal and her mother were picking blueberries on one side of the hill while Mother Bear and her cub were eating blueberries on the other; both parties oblivious of each other's proximity.

The highest point on the Avalon Peninsular (300m above sea level), the Hawke Hill site was designated an ecological reserve in 1990. "An excellent display of features related to

the latest glaciation," according to the Newfoundland and Labrador Travellers's Guide to the Geology. The Hawke Hill Ecological Reserve - a little over a square kilometre - is also home to some very interesting plants. Bracing winds and cooler temperatures have forced the species that live there to adapt to the daily rigors of a very harsh local climate. While walking around, we saw circular patches of gravel, devoid of vegetation, rimmed with stones. "Frost boils," John announced. "They're caused by the thawing and freezing of water and are common to arctic ecosystems."

Many of the acidic rocks are covered with a yellow-green lichen with black lines and spots woven between the bright colours. Inside the reserve border nothing is to be picked or plucked or trampled, not even a rock, so, if you would like a sample of this Map Lichen *Rhizocarpon geographicum*, collect it outside the borders. .

Lilliputian plants are dispersed all over the hilltop, and their sizes are quite amazing and amusing. The Starflower and Wild Lily-of-the-Valley are so minuscule they would fit into your grandmother's thimble and still not peep out over the edge.

The crème de la crème of the plants on the hill is the Diapensia *Diapensia lapponica* which has given the area its recognition. This glossy, little alpine grows in a mound or cushion; its striking growth pattern illustrating just how wonderfully plants are able to adapt to their environment. An evergreen, Diapensia's leaves are tightly compacted to help the plant retain heat and moisture. It has are two blooming periods, one in late May-early June and the other in mid-late July. Only the scientific community can attempt to expound theories to explain this peculiar occurrence. The topic could be a feature article in Sarracenia someday. Our group visited the hill a little too late to catch the first blooming

period, though a single flower [!] was seen. Unfortunately, we missed out on seeing the little alpine in its glory. How kind of this plant to give us a second chance to see it bloom again, a little later in the summer. Maybe some of us will catch the next show in July. The flowers of *Diapensia* are white with five rounded petals. To see a closeup of this diva of the hills, go to John's web site, <http://nfmuseum.com/flora.htm>, where it is featured both on the homepage, and more fully, on the Diapensiaceae Family page, http://nfmuseum.com/flora._diapensiaceae_index.htm. Plants or people, we just keep missing each other!

One of our daintiest spring plants, whose colloquial name, Goldthread, conjures up all sorts of imaginative thoughts, were nestled beside a moist depression, across the path from a small colony of Mocassin Slippers *Cypripedium acaule*. Did fairies use the bright yellow, tangling, threadlike roots to mend their tattered clothes? At first glance, Goldthread could be confused with the Starflower *Trientalis borealis*, because the 5-7 petal-like white sepals look as if they could be twinkling celestial bodies. John pointed out, by looking closely with a lens, you could see the 5-7 small, fleshy, yellow-tipped, spoon-like petals below the numerous slender stamens and the three to nine, peculiar, long-stalked pistils. The scientific name for Goldthread is *Coptis trifolia*. *Coptis* translates from Greek, "to cut," referring to the divided leaves, *trifolia* means three leaves. Like the other plants of the Hawke Hills, these little evergreens are mini versions of the Goldthread growing in a less severe habitat. It is a member of the Ranunculaceae family and holds the distinction of being one of the few evergreen perennials in that family. In constant demand in earlier times, indigenous people used the roots to treat mouth ulcers and later, because of its medicinal properties, the plant had some commercial value in North America until 1930.

Neighbouring plants "thriving" (or should I say, clinging on for dear life), on the acidic barrens were, Wild Lily-of-the Valley *Maianthemum canadense*; Newfoundland Dwarf Birch *Betula michauxii*; Chokeberry *Photinia [=Aronia] sp.*; Mountain-Holly *Ilex [=Nemopanthus] mucronata*; Wild Lily-of-the-Valley *Maianthemum canadense*; Chuckley-Pear *Amelanchier spp.*; and some representatives of the Heath Family: Bog Rosemary *Andromeda glaucophylla*; Mountain Bilberry *Vaccinium uliginosum*; Bog Laurel *Kalmia polifolia*; a most attractive trailing shrub with deeply netted veins on the shiny leaves, Alpine Bearberry *Arctous [=Arctostaphylos] alpina*; Labrador Tea *Rhododendron [=Ledum] groenlandicum*; Northern Blueberry *Vaccinium boreale*; and for me, the most intriguing heath of all, the Alpine Azalea, *Loiseleuria procumbens*, a small shrubby evergreen, whose pink flowers are the size of a dried split pea. For trivia buffs- the plant was named for Jean Louis Auguste Loiseleur-DeLongchamps (1774-1849), a French botanist.

Because botany is a hobby for me I can be very selective over the plants that interest me and can quickly dismiss the plant families that are complicated and difficult to identify, especially if they don't have a colourful corolla. Clubmosses, lichens, sedges, grasses, and rushes can be interesting but distinguishing one from another takes patience, and skill in using keys. At least, with the flowering plants, there are field guides with very helpful descriptions and pictures. Just getting to know the contents of Newcomb's as it applies to the province is challenge enough. Hmm, but the clubmosses, well maybe. After all, there are only a dozen or so, and, after looking at them with John, I think I could recognize three of them. It would be fun to visit the Hawke Hills to search for them and note their differences, especially if the *Diapensia* has finished

blooming. Nice way to idle away a morning or an afternoon.

Clubmosses are primitive vascular plants that evolved 375 million years ago. The ones existing today are relics of huge tree-like forms that inhabited the earth during the Carboniferous, and eventually, formed our modern-day coal deposits. Millions and millions of years later, clubmosses hug the ground and unless you were an ant, it would be difficult for you to visualize members of this family, the Lycopodiaceae, as they existed on earth eons ago. More closely related to ferns than mosses, clubmosses do not have flowers, fruits or seeds, but reproduce by spores. They are vascular plants because of their nutrient and water-conducting system; have true roots and leaves (unlike mosses) and the reproductive structures (strobili) have a club-shaped appearance. Clubmosses generally grow horizontally on acidic soils in the temperate regions, but in tropical zones some species are epiphytes. They have something in common with orchids and bromeliads!- some are terrestrials and some are epiphytes. These plants and the spore powder they produce have been used for some weird and wonderful things. When photography was in its infancy, spore powder which is very flammable, was used in the photographic flash. Whole plants used for upholstery stuffing, powdered infusions made from the plant to treat flatulence, and dusting powder for surgical gloves were some more of its varied uses. The one I like the best is its use at holiday times for wreaths and decorations, not that I have seen a Christmas wreath made of *Lycopodium clavatum* (but Martha Stewart does make one with *Cladonia rangiferina*!). Many of these uses have been discontinued because of habitat destruction and over collecting.

During our Hawke Hill outing, I learned the name of a clubmoss I have seen many places in the province, Common Clubmoss *Lycopodium*

clavatum, and it is very easy to identify. It is a large plant that runs over the ground for quite some distance. *Clavatum* means club-shaped, in reference to the club-shaped, spore-producing structures.

I was surprised to learn that there were at least seven species of clubmosses on the hill. In addition to *L. clavatum*, John identified five more: *Diphasiastrum complanatum*, *Diphasiastrum sitchense*, *Diphasiastrum tristachyum*, *Huperzia selago*, and *Lycopodium annotinum*, or in the same order, Northern Running-pine, Sitka Clubmoss, Blue Ground-cedar, Northern Firmoss, and Bristly Clubmoss. He didn't find the rare one, Fan Clubmoss *Diphasiastrum digitatum*, because it is very similar to *D. complanatum* and really needs mature fruiting structures if it is to be spotted on such a terrain. To further aid you, checkout John Maunder's "A Digital Flora of Newfoundland and Labrador Vascular Plants, <http://nfmuseum.com/flora.htm>, where you will find excellent photographs of some of these clubmosses. Look under Ferns and Fern Allies. Maybe we could press the Curator of the Museum's herbarium- that is, into a presentation of Clubmosses at one of our next meetings or lead us on another trip to the Hawke Hill.

John Maunder is the Curator of Natural History at the Newfoundland Museum. Thanks, John, for keeping me on track with the changes in the taxonomy and for proofing-reading this piece.

Profile of Artist (and Member)

Joyce Cho

by **Carmel Conway**

I am certain that most wildflower members are familiar with that special Newfoundland edition of Wildflower Magazine (winter 1993). Of particular interest to me was the beautiful watercolour illustration of the Newfoundland Bakeapple (*Rubus chamaemorus*) which graced its cover. It was created by long-time wildflower member and artist **Joyce Cho**. Since that time I have been a great admirer of her artwork.

Originally from British Columbia, Joyce came to Newfoundland in 1958, settling into married life and raising three children. She studied fine arts at the Ontario College of Art, Pennsylvania State University, Memorial University Extension Services and also private study in Japan.

In July of 1998, Joyce was one of twenty-two wilderness artists who were invited by Wildflower Magazine to participate in a special art camp in the Temagami Wilderness of Ontario. All the participants were provided with meals and lodging, in addition to being transported by float plane and boat into the very remote forest. The artwork that was created was auctioned off to raise money to save the old growth red and white pines of Temagami. Joyce was truly honoured by the invitation.

In March of 2002, her work was further recognized when one of her botanical art, *Myrica pensylvanica* was chosen for the Second Annual Botanical Art Show, as part of the Canada Blooms Exhibition in Toronto. The judges' criteria in their selection was three-fold; the painting had to be scientifically accurate, aesthetically pleasing, and of quality craftsmanship. Three of Joyce's pieces were selected for this year's

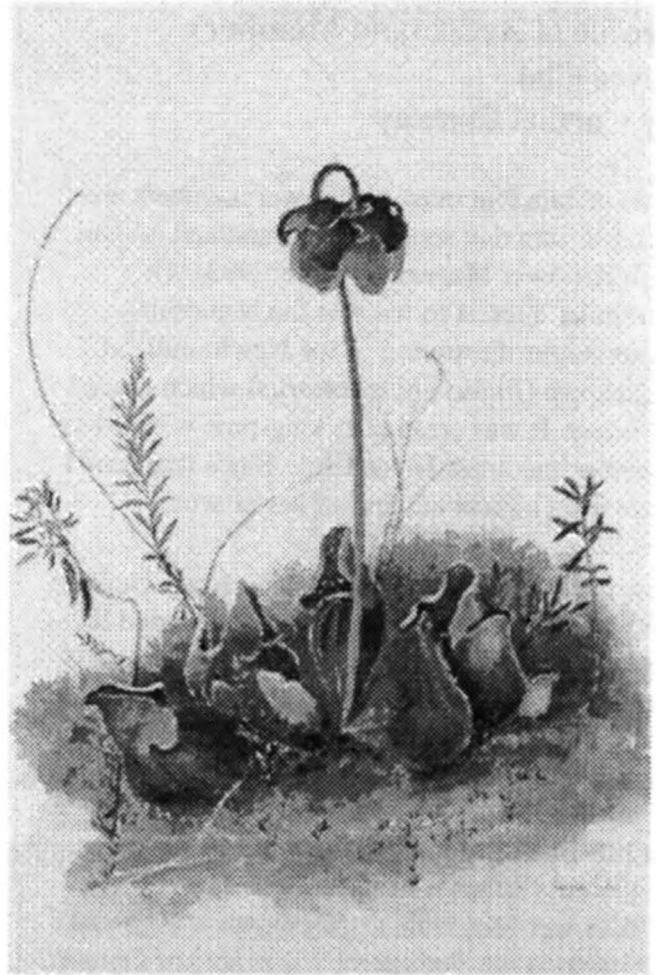
exhibition. Without a doubt, 2002 and 2003 has been a busy time for Joyce. In the fall of 2002, she entered a number of her paintings in an Australian Exhibition entitled "The Nature of Islands- Contemporary Botanical Artworks from Islands around the World". To Joyce's immense delight, three of her botanical art were selected: pitcher plant (*Sarracenia purpurea*), hammered shield lichen (*Parmelia sulcata*) and Sweetgale/bog-myrtle (*Myrica gale*).

According to Joyce, this was the first time that Newfoundland had participated. In fact, of the 200 submissions and 86 chosen paintings, Joyce's pitcher plant was one of the ten selected for the exhibitional brochure-see picture opposite. Some of the islands that were highlighted included Japan, Ireland, Madagascar, sub-Antarctic, Macquarie Island, England, Cayman Islands, Sri Lanka, as well as Australia. The exhibition ran in Launceston, Tasmania, Australia from March 24th to May 15th, 2003. Our society extends our sincere congratulations to her!

Back here in Newfoundland, Joyce recently had an exhibition of her artwork at the Canada Forest Services in Corner Brook come to a close. It was a collection of botanical artwork of forest related subjects and included such flora as braya, chanterelles, Indian pipe, lichen and spruce cones.

Members should keep an eye out for a new art book hot off the press entitled "Visual Artists of Newfoundland and Labrador". It is a collection of works by some forty two artists, and includes three of Joyce's. The book is available at Red Ochre Gallery on Duckworth Street, and would make a great gift idea!

When Joyce was asked by James Hodgins, editor of Wildflower Magazine, to explain where her inspiration came from, she replied "The natural and unspoiled beauty of Newfoundland, especially its wild flora has been my constant source of artistic inspiration" I think that the beauty of Joyce's work has been an inspiration for many of us!



Sarracenia purpurea - pitcher plant.

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