



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

Todd Boland
81 Stamp's Lane
St. John's, NF
A1B 3H7

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2002-03 Executive

Howard Clase	President	753-6415
Ron Payne	Vice-president	576-6472
Maggie Piranian	Secretary	754-7182
Carmel Conway	Treasurer	722-0121
Todd Boland	Editor	753-6027
Leila Clase	Director	753-6415
Heather Saunders	Director	368-6955

Winter Program:

Feb. 5: The Spring Wildflowers of Vancouver Island. presented by Todd Boland

Mar. 5: Fernald's 1910 Expedition to Newfoundland and Labrador. presented by Howard Clase

April 2: Botany on the Internet: a Workshop. This interactive workshop will look at some of the better botanical internet. If you have a favourite site(s) you would like to share with the members, please contact Ron Payne. **The meeting location is TBA.**

May 7: AGM and Members Slide Show. If you have any slides you would like to share with the group, now is your chance to show them off!

Unless otherwise stated, the meetings will be held in the Biology Lecture Theatre on Mount Scio Road, beginning at 8:00 pm

President's Message.

Memberships.

You should find your membership card secreted inside this issue unless you have it already. Our membership lists are now up to date again; we have 54 paid up members and one honorary life member. We also send out about half a dozen complimentary copies of *Sarracenia* to other organisations who reciprocate in some way. Most members are now in phase with our September to August membership year, with their current membership expiring at the end of August 2003 (2003.08). If your renewal date is different, please get in touch with the treasurer or president to find out how much to pay to bring your membership into line when the time comes to renew. If you know of anyone who wishes to join our society, a membership form can be printed from our website, www.chem.mun.ca/~hclase/wf/.

2003 Program

We have a tentative schedule for the rest of this winter's indoor meetings and for our summer field trips, full details of these will be put onto the website as soon as they are known and appear in the next issue of *Sarracenia* and you will also be reminded by e-mail or telephone closer to the events. I would like from anyone who is interested in joining our Southern Labrador field trip during the week of July 26 to August 2 as soon as possible, since bookings should be made soon. A draft schedule will be e-mailed to members and posted on the website shortly, maybe even before you receive this issue of *Sarracenia*. See p.31.

New executive.

During our May meeting we shall, as usual, be electing a new executive for 2003-4. Several members of the current executive have indicated that they do not want to continue, at least in their present positions. In particular, your president is anxious to assume the position of past president! Inside the back cover of this issue of the *Sarracenia* you will find a list of the tasks that should be performed to keep the society running and how they are presently divided up amongst the officers of the society. If you feel able to help with any one of these please let me or any one of the executive know.

Summer Fieldtrips:

St. John's Walks: We will once again hold first Sunday of the month afternoon walks throughout June to September (excluding August). This year we will walk various portions of the Grand Concourse Trails. Meeting location will be announced before each walk. The dates of these walks will be **June 1, July 6 and Sept. 7**. The walks will take place from 2-5 pm.

Day Trips: We have four day trip walks organized for the summer of 2003. They are as follows:

June 15: Hawke Hills

July 12: Trail from Harricot to the Tickers

August 23: Bistol's Hope and area

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

Major Summer Field Trip: July 26-Aug. 2

This year we will spend a week in southeastern Labrador, botanizing along the new highway from Red Bay to Port Hope Simpson. See p. 31.

Further details on these trips will be provided in the Spring issue of *Sarracenia* or on our website.

Latin Demystified part 2: Epithets used to Describe Plant Habitats

by Todd Boland

In the fall 2002 issue of *Sarracenia*, I wrote the first in a series of articles that will help explain how plants are given their Latin specific names. In that article, I covered Latin (or Greek) epithets that are used to describe the colour of a plant, whether that colour applies to the blooms or the entire plant. In this issue I'll cover the epithets that describe a plant's habitat preferences, whether they be specific habitats, such as a swamp, or general such as the arctic. Again, I will use local plant examples to help illustrate the epithets used. Note that the epithets given are the masculine form.

Specific Habitats:

algidus - growing in the cold e.g. *Agrostis algida* (now *Phippsia algida*, icegrass)
alpestris - growing in alpine areas e.g. *Athyrium alpestre* (alpine lady-fern)
alpinus - growing in alpine areas e.g. *Arabis alpina* (alpine rockcress), *Cerastium alpinum* (alpine chickweed), *Astragalus alpinus* (alpine milkvetch)
amphibius - growing in and out of water e.g. *Persicaria amphibia* (water smartweed)
aquaticus - growing underwater e.g. *Subularia aquatica* (water awlwort), *Rumex*

aquaticus (western dock), *Eriocaulon aquaticum* (pipewort)
aquatilis - growing in water e.g. *Carex aquatilis* (water sedge), *Ranunculus aquatilis* (white water crowfoot)
arenarius - growing in sand e.g. *Elymus arenarius* (now *Leymus arenarius*, dunegrass)
arvensis - growing in cultivated areas e.g. *Thlaspi arvense* (field pennycress), *Cirsium arvense* (Canada thistle), *Myosotis arvensis* (field forget-me-not)
campestris - growing in grazed fields e.g. *Artemisia campestris* (field wormwood), *Lepidium campestre* (field peppergrass)
capensis - growing on a cape e.g. *Impatiens capensis* (jewelweed), *Potentilla usticapensis* (Burnt Cape cinquefoil)
fluviatilis - growing in rivers e.g. *Equisetum fluviatile* (water horsetail)
frigidus - growing in cold places e.g. *Petasites frigidus* (arctic sweet coltsfoot), *Euphrasia frigidus* (arctic eyebright)
glacialis - growing near glaciers e.g. *Carex glacialis* (glacier sedge)
lacustris - growing in lakes e.g. *Isoetes lacustris* (lake quillwort), *Carex lacustris* (lake sedge)
maritimus - growing along the coast e.g. *Armeria maritima* (sea thrift), *Mertensia maritima* (sea lungwort)
montanus - growing in mountainous areas e.g. *Cystopteris montana* (mountain bladder-fern), *Sisyrinchium montanum* (mountain blue-eyed grass)
monticola - a mountain-dweller e.g. *Alchemilla monticola* (hairy lady's-mantle)
nemoralis - growing in woods e.g. *Aster nemoralis* (now *Oclemena nemoralis*, swamp aster), *Euphrasia nemorosa* (common eyebright)
nivalis - growing near or in snow e.g. *Gentiana nivalis* (snow gentian)
palustris - growing in swamps e.g. *Epilobium palustre* (marsh willowherb), *Caltha palustris* (marsh marigold)

pratensis - growing in meadows e.g. *Tragopogon pratensis* (meadow goatsbeard), *Trifolium pratense* (red clover)
rivularis - growing along rivers e.g. *Saxifraga rivularis* (alpine brook saxifrage), *Geum rivale* (purple avens)
rupestris - growing on hills e.g. *Carex rupestris* (rock sedge)
salinus - growing in saltmarshes e.g. *Carex salina* (saltmarsh sedge)
saltuensis - growing in forests e.g. *Poa saltuensis* (forest bluegrass)
saxatilis - growing on rocks or cliffs e.g. *Galium saxatile* (heath bedstraw), *Carex saxatilis* (russet sedge)
sylvaticus - growing in woods e.g. *Gnaphalium sylvaticum* (woodland cudweed), *Senecio sylvaticus* (woodland ragwort), *Myosotis sylvatica* (woodland forget-me-not)
sylvestris - growing in the wild e.g. *Anthriscus sylvestris* (wild chervil)
tectorus - growing on rooves e.g. *Crepis tectorum* (narrowleaf hawksbeard)
terrestris - growing on the ground e.g. *Lysimachia terrestris* (swamp candles)
uliginosus - growing in marshy areas e.g. *Solidago uliginosa* (swamp goldenrod), *Vaccinium uliginosum* (alpine bilberry)

General Habitats:

arcticus - from the Arctic e.g. *Lesquerella arctica* (arctic bladderpod), *Rubus arcticus* (plumboy)
arctophilus - arctic-loving e.g. *Salix arctophila* (northern willow)
australis - from the South e.g. *Limosella australis* (southern mudwort), *Phragmites australis* (common reed)
borealis - from the North e.g. *Linnaea borealis* (twinflower), *Hedysarum boreale* (northern sweetvetch)
hyperboreus - from the far North e.g. *Platanthera hyperborea* (northern green orchid), *Sparganium hyperboreum* (northern burreed)

nesophilus - island-loving e.g. *Gentiana nesophila* (island-loving gentian)
orientalis - from the East (Asia) e.g. *Conringia orientalis* (hare's-ear mustard)
septentrionalis - growing in the North e.g. *Castilleja septentrionalis* (northern paintbrush)
subarcticus - from the sub-arctic area e.g. *Rhododendron tomentosum* subsp. *subarcticum* (northern Labrador Tea)

Where Have All The Newfoundland Asters Gone?

By Henry Mann

An article in a recent issue of "Blue Jay", the journal of Nature Saskatchewan, noted that all of the 16 prairie asters had disappeared from the new plant lists of that region. Likewise, those of us familiar with the two most recent lists for Newfoundland, Rouleau (1978) and Meades et al. (2000), have noted that suddenly we have gone from 14 asters in Rouleau to one aster in Meades et al. What is going on?

Fortunately, there is no need to be alarmed. The aster species have not become extinct, decimated by some unnoticed catastrophe. These "missing" species are still out there in nature displaying their late season blooms for all to see as they have done for millennia. Progress has simply dictated that their scientific names be changed, much to the distress of those of us who were just starting to associate the "aster names" with real plants out in the field.

The one remaining Newfoundland aster in Meades et al. (2000) is *Aster radula*, the rough aster. New names for the others include the following:

Aster acuminatus = *Oclemena acuminata* (sharpleaf aster).

Aster x *blakei* = Nfld. reports are now included in *A. radula*.

Aster foliaceus = Symphyotrichum ciliolatum
(fringed blue aster).

Aster lanceolatus = Symphyotrichum lanceolatum (lanceleaf aster).

Aster linariifolius = Ionactis linariifolius (stiff aster) - no longer listed for Nfld.

Aster macrophyllous = no longer listed for Nfld.

Aster nemoralis = Oclemena nemoralis (bog aster).

Aster novi-belgii = Symphyotrichum novi-belgii (New York aster).

Aster puniceus = Symphyotrichum puniceum (purplestem aster).

Aster subgeminatus = Nfld. reports now included in S. ciliolatum.

Aster subspicatus = Symphyotrichum subspicatum (Douglas' aster). - no longer considered to occur in Nfld.

Aster tradescantii = Symphyotrichum tradescantii (Tradescant's aster) - no longer considered to occur in Nfld.

Aster umbellatus = Doellingeria umbellata (flattop white aster).

“Why must plant names change?” is a question often asked by annoyed students and naturalists alike. The Newfoundland asters provide good examples and some insights into why more recent plant lists differ from older ones both in number of species and in new nomenclature. A casual perusal of the Meades et al. list will note the many synonyms (older names) under some species. These are all names that were applied to that species at some time in the past. Botanists named and described plants in different regions without the knowledge that others had or were also doing likewise. As knowledge increased with more detailed studies, and regional floras were compared, it was recognized that the same species had been named and renamed one or more times. The “rule of priority” then dictated that the

earliest validly published name became the official one, unless there was some good acceptable reason why this should not be so. Thereafter the plant would be known worldwide under that official scientific name and all others would be relegated to synonym status. Although recording the major synonyms for a plant greatly increases the length and complexity of a list, the information is essential if one needs to access the older literature for that species. The large standard work which provides all North American plant species names and all their synonyms is now in digital database format and can easily be updated in the future (Kartesz and Meacham, 1999).

Plant taxonomy and the resulting classification systems have two major goals. One is the production of a labelling and filing system which allows for the efficient identification, storage, and retrieval of all information about each species. Species must have universally accepted names, must be described in such a way to be recognized and distinguished from other species, and all information about the species must be readily accessible. This is the first step in acquiring knowledge about any species provided by the science of taxonomy.

Secondly, a classification system attempts to show relationships among species. Those species more closely related are grouped within a genus which is separated from other genera by readily recognizable characteristics. Similarly, related genera are grouped into families, and so on up the grouping hierarchy. As more detailed studies are carried out, especially recently at the molecular genetic level, new knowledge about relationships comes to light and regrouping may become necessary at the genus level or even at the family level. Sometimes species are reshuffled within existing generic names to show more accurately “who is related to who”,

sometimes totally new names need to be created for new groups, and sometimes names of formerly accepted groups are resurrected. This is what has happened to our asters. The plants have not changed, they have simply been regrouped under “new” names to better show their natural relationships. Often this is a matter of personal opinion based on incomplete information. In addition, plants are ever changing/evolving, so coupled with increasing knowledge, this renaming/regrouping process potentially may be with us for a long time.

A nuisance? Yes! A pain? Yes. Confusion? Yes! Students especially find such changes irritating, considering this as extra, unnecessary information to be remembered. In reality, however, such is the nature of life. Entities which cannot or will not change are dead, or soon will be, including organisms and classification systems. The ability to adapt and change with changing circumstances is probably the most universally important attribute of living things and our classification systems must also reflect this attribute. Interestingly enough, the common names by which we know our plants do not or need not change. A bog aster is still a bog aster whether officially in the old Aster group or in the “new” Oclemena genus; at least one small triumph for the amateur botanist!

From the new list we also notice that several “asters” are no longer considered to occur in Newfoundland. This change is usually the result of recent field and herbarium studies which determined that certain specimens were incorrectly identified so that no authenticated records or specimens exist for that species in our province. Without undisputed evidence, usually in the form of herbarium specimens, such species must be dropped from our lists.

Then there is the New England aster (Symphotrichum novae-angliae = Aster novae-angliae) which is quite hardy here and overwinters very well. It has been grown for years in gardens in Corner Brook and Pasadena, and even an escaped roadside ditch specimen was collected several years ago. It is a tall plant up to 2 meters in good garden soil and blooms profusely in late September and October in warm years with a long growing season. Its beautiful blossoms make wonderful indoor bouquets long after light frosts have put other perennials to bed for the winter. It cannot spread vegetatively and even the best growing seasons rarely allow it to set seed in Newfoundland accounting for its natural absence from our flora and relegating it to a very late blooming horticultural curiosity here on the Island. This year (2002), with a long cold spring and a somewhat erratic growing season, the New England aster just barely opened its first blossoms before the hard frosts of October. So correctly, this species is not likely to establish itself in Newfoundland under the present environmental conditions and should be excluded from the self-perpetuating flora. But with potential global warming, who knows whether its natural range will someday spread into our province.

Having used the asters as examples, we should note that a number of other name changes at the generic level also occur in the new list. Some of these include Packera for a few former Senecio, Neotorularia for Braya humilis, Rhodiola for Sedum rosea, Chamerion for two Epilobium, Photinia for Aronia, Sibbaldiopsis for Potentilla tridentata, and so on. Even our esteemed labrador tea has become a Rhododendron! Perhaps someone has the time and energy to compile a complete list of changes from Rouleau (1978) to Meades et al. (2000) for some future issue of Sarracenia, (?).

Thankfully, newly revised lists for a given region have normally only appeared every twenty or thirty years giving sufficient latitude

for “old timers” to react to the new names. Many Newfoundland botanical enthusiasts grew up with the Fernald (1950) and the Gleason (1952) manuals, then Rouleau’s lists (1956, 1978), the Gleason and Cronquist (1991) manual, and now the Meades, et al. (2000) list. Fortunately or unfortunately, depending on your point of view, we now have little choice but to switch to the new list with its changes. But times have also changed and the “twenty year” cycle is gone! Plan to begin making notes in the margin of your new list because more changes are already “blowing in the wind”. As the volumes of the Flora of North America project slowly appear, we may see a few more name changes soon. Both the Meades et al. (2000) list and the Flora of North America exist/will exist in electronic database format which can easily and quickly be updated so in the future change will theoretically, and eventually actually, become a continuous process.

C’est la vie!

Post Script; with apologies to Pete Seeger, and Peter, Paul and Mary (but I just couldn’t resist!)

Where have all the asters gone, long time passing?
Where have all the asters gone, long time ago?
Where have all the asters gone?
Taxonomists have renamed them everyone.
Oh, when will we ever learn?
Oh, when will we ever learn? (i.e. the new names!)

Selected References

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BOOK REVIEW: OAXACA JOURNAL by: OLIVER SACKS. Reviewed by: Carmel Conway

This is a book I am certain that most wildflower members would thoroughly enjoy. It has caused me to have a much stronger appreciation for ferns. Oliver Sacks, the renown neurologist, and writer, is a member of the American Fern Society, a society which was founded in the 1890's by four amateur botanists. Oaxaca Journal is Sack’s personal diary of their 30-member field trip to Southern Mexico. Located on the Pacific Ocean, Oaxaca is a remarkably fertile region, and boasts about 700 fern varieties, in addition to being a birder’s paradise.

Sacks grew up in London in the 1930's and lived outside the Natural History Museum. He would often visit the Kew Gardens, where he was fascinated by the towering tree ferns, with fronds twenty to thirty feet high. His mother had a love of ferns and had a fern conservatory. She, in turn, inherited her passion from her father, who had emigrated from Russia in the 1850's, when England was in the great Victoria fern craze. As Sacks explains, "all the coal that heated our home, my mother told me, was essentially comprised of ferns and other primitive plants, greatly compressed, and one could sometimes find their fossils by splitting coal balls. Ferns had survived, with little change, for a third of a billion years."

The members of the field trip consisted of an odd medley, mostly professionals, older and retired. There were botanists, chemists, engineers, illustrators, photographers, ordinary housewives and a bus driver. Many were meeting in person for the very first time, having come from as far away New York, Los Angeles, Montana, and Atlanta. But despite such diverse backgrounds, Sacks is awed by the ease and comfortableness of the group spending an entire week together. As he remarks, all seemed to have the same power of observing and remembering, and what is most crucial here is not necessarily their professional training, but their naturalist's eye. He was especially transfixed by the botanical couples within the group, the ultimate romantic match! I could not help but think of a several couples in our society blessed with such a passion!

He explains that the great Linnaeus in the 18th century did not know how ferns reproduced, and Linnaeus coined the term "cryptogams" to denote hiddenness, the mystery of their reproduction. It was only in the middle of the 19th century that it was

discovered that in addition to the familiar fern plant with its spore bearing fronds, the sporophyte, there also existed a tiny heart shaped plant, very easily overlooked, the gametophyte, which bore the actual sex organs. Fern spores from the fronds, if they find a suitable moist and shaded habitat, develop into tiny gametophytes and it is from these, when they are fertilized, that the new sporophyte, the baby sporophyte grows. And so, for the fern lover, part of the fun of ferning, is the turning over of the fertilized fronds and spotting the sporangia.

Sacks has a preference for the so-called fern allies: club mosses (*Lycopodium*), horsetails (*Equisetum*), spike mosses (*Selaginella*). Oaxaca has many species of *Selaginella* and one of the most interesting is the so-called "resurrection fern" (*Selaginella lepidophylla*). It has a flattened rosette of dull green that comes to startling life as soon as it rains. He also describes the quite dangerous existence of the beautiful bracken fern. A pleasure to look at, with its solitary spreading frond, light green in the spring, darkening later, it makes a comfortable bed to lie on as it absorbs and insulates. However, when eaten! Brackens contain an enzyme, thiaminase, which destroys the thiamine necessary for normal conduction in the nervous system. Animals lose their coordination and if they continue to ingest, will suffer convulsions and die. It can also play tremendous havoc with insects. The young fronds release hydrogen cyanide and as soon as the insect's mandible tears into them, it if does not immediately kill them, a much crueler fate awaits! Brackens are loaded with hormones called ecdysones, and when ingested by insects cause uncontrollable molting. The Romans, he says, used to cover their stable floors with a litter composed of bracken. The bad news for humans is that bracken contains a powerful carcinogen, and though cooking destroys most of the bitter tannins and thiaminase, for those who consume large quantities of bracken fiddleheads over a long period of time, they are more apt to develop stomach cancers.

The book is, fortunately, not loaded down with botanical intricacies, but written in a language that is very accessible. There are many beautiful illustrations. While Sacks has a sharp eye on his ferns, he is also a magnificent cultural observer. He takes the reader on that bus for a cultural ride as well! One learns of the sophistication of the Mayan in mathematics, the Aztec in their amazing communication systems, and one learns of the impact of Cortes and the conquistadors.

On the outskirts of Oaxaca, they visit the famous 'tule tree'. It is a colossal bald cypress in the churchyard of Santa Maria del Tule. It stands about 150 feet high, but its girth about 200 feet wide around the trunk. It was felt by the explorer Alexander von Humboldt, who visited it in 1803, to be at least 4000 years old. They explored the mineral springs and the petrified falls at Hierve el Agua. In the town of Mitla, they admired the spectacular adobe architecture. In the village of Mataltan, they saw how a whole community is immersed in the home production of mescal, a substance consumed by the group in copious amounts while enjoying many fine Mexican meals!. In Teotitlan del Valle, they were introduced to Don Isaac Vasquez, the distinguished master weaver, whose famous carpets and blankets are sold throughout the world. In San Bartolo Coyotepec, they admired the famous black pottery, and on nearing the end of their trip, they visited the ruins of the ancient city of Monte Alban and learned about Tomb 7, a treasure discovered to be the Mesoamerican equivalent to Tutankhamen's tomb.

As someone who visited Mexico many years ago, I have always remained intrigued by Mexican culture and history, and this book by Oliver Sacks has only reinvigorated my interest. It is a very fascinating book!

Should any member wish to borrow, please e-mail me at
abcrhynd@roadrunner.nf.net.

Diapensia on Cheju Island, South Korea..... and Musings on Origins by Robin Day

Well north of Okinawa and 270 km south of the Democratic Republic of Korea (South Korea) is the roughly oval and largely volcanic island of Cheju (33,30 N.). It is best known as a resort island, a big producer of mandarin oranges, and having the longest lava caves in the world. It is also the only place to find *Diapensia lapponica* ssp. *obovata* in Korea. This plant is an evergreen, woody, white-flowered cushion-plant with leaves changing from a burgundy-wine colour in the cold periods to an olive green in summer. The plant has dispersed around the northern arctic-subarctic world and colonized some temperate alpine areas in New England, Japan and Scotland. Water poses only a small barrier. *Diapensia* seed is carried on the wet feet of birds and/or blows across sea ice. It has even reached Iceland.

Some Background Research

I studied *Diapensia* for several years in Newfoundland and most of what I learned/ discovered is collected in the bibliography of my Atlas of Labrador Plants Vols. 1 & 2 (Memorial University, Queen Elizabeth Library, Newfoundland). Internet correspondent Prof. Ulf Molau (Gothenburg U.) has extended some of this work in northern Sweden by measuring plant clump diameter and thus estimating age of individuals. Some large plants are more than 700 years old. 20% of the northern Swedish study population has been killed off by global warming (discussed, 2002, Rural Delivery magazine, Nova Scotia). Newfoundland and Korean populations are not being monitored for die-off.

Mount Halla and Destructive Hikers

High on top of Mount Halla (1950 meters) at the center of Cheju Island is the extinct volcanic cone, last active about 1007 AD, around 200 years before the Mongol invasion (1230 AD). As I climbed I felt more and more at home surrounded by twisted spruce, fir and birch. I even saw a miniature gentian growing in wet gravel. It had a single blue bloom like Newfoundland's *Gentiana nesophila*. The subarctic and temperate alpine regions are really very much alike. Near the crater cone is where *Diapensia* grows in the cool air, often surrounded by fog. You may think I saw the plant with my own two eyes but I did not, though I have visited Cheju three times since 1997. The last few kilometres on the trail to the volcanic cone are closed to the public, and guarded, and have been since I arrived in 1996. Disappointing. Korean hikers typically stray off the paths crushing the plants and soil and this has produced severe erosion. I have even witnessed hikers breaking off walking sticks along the way. Most mountain vegetation can sustain small impacts but Korea's 45 million people put a lot of strain on the trails. The park authorities have placed soil-filled, beige, plastic, mesh bags over the eroded areas. These are gradually being colonized, especially by rushes and sedges.

Some History of Cheju Island

Cheju was not an island in the last glacial period (10,000 BP). The sea level was about about 100-125 meters lower and Cheju was connected to China and S. Korea, perhaps Japan. At that time the climate was colder and the vegetation and animal life had a more northern character. *Diapensia* may have dispersed to Cheju in these colder periods. The original people inhabited Billemot Cave as early as 40,000 B.P. in the mid-paleolithic

period and Eurasian Brown Bear also lived in this same cave (now extirpated or killed out). Sitka Deer, Boar and a small wild cat species have been killed out in recent times, as a result of human pressures. The original people of Cheju were the Tamna or Tamla and I believe they spoke a different language from the mainland Koreans. Remnants of this language have survived and is now incorrectly referred to as a dialect. The original matrilineal Tamna people have been culturally and genetically swamped by patrilineal Koreans since contact with the Baekjay Kingdom period (18 BC-600 AD), though this is not acknowledged or discussed here.

Diapensia in the Chinese Himalayas...home origins

Years ago, 1980-81, while at the U. of Ottawa, I borrowed numerous *Diapensia* species from Edinburgh's Royal Botanic Gardens. This great garden and herbarium has been a center of study of alpine plants for decades, with special expeditions into the Tibetan, Chinese and Nepalese Himalayas. Explorers collected some new *Diapensia* species and viable seed. After examining these plants I concluded informally that *D. lapponica* was most similar, in fact, almost identical to white-flowered north Chinese specimens of *D. purpurea*! In other words, *D. purpurea* is almost identical to *D. lapponica* other than the fact that its flowers are violet-purple.

Here then in northern China was the likely home of *D. lapponica*, and from here it struck north, both east and west into the circumpolar arctic during one of the earth's many glacial oscillations.

The purple flower colour is a minor trait and the two species may best be lumped. The name *Diapensia lapponica* has priority and *D. purpurea* would be discarded, as Linnaeus described it very early after his Lapland

plant collecting in 1731. Mainland Chinese botanists (and the staff at the Edinburgh Gardens) are in the best position to answer this question. An alternative view/hypothesis would be that *Diapensia lapponica* actually grows in north China but has been mislabeled as *D. purpurea* var. *alba*. This needs to be sorted out. Any new students interested? There would be some hurdles. *Diapensia* is notoriously difficult to cultivate at low altitude/latitude, but Edinburgh has succeeded.

Evolution of *Diapensia*

Diapensia is adapted to a cool, humid, arctic-alpine environment. *Diapensia*'s early ancestors would have had larger leaves and more flowers on the peduncle. They probably looked very like the bigger evergreen members of the family in the distant past, species such as *Shortia* and *Galax*. These resemble the *Pyrola*. Today *Diapensia* resembles *Pyxidantha* most closely. This trailing, evergreen, small-leaf genus grows only in the New Jersey Pine Barrens, and is threatened by habitat loss. *Diapensia* may have been adapted to life under an open forest canopy. Many alpine species are believed to have started this way and were literally lifted to high altitude over geological millennia while evolving more compact forms. Someone else said it before: these alpine plants are truly older than the hills. In their history and protoplasm they hold many untold stories.

Robin Tim Day
Foreign Faculty
Dongseo University
Jurye, 617-716
Busan City
South Korea
(cowboy4444@hotmail.com)

Preliminary itinerary for Labrador trip.

I have made provisional reservations for blocks of 10 rooms as follows. Please confirm your accommodation directly with the various hotels etc. with your own credit card information, mentioning that you are with the Wildflower Society by the end of February at the very latest, and let me know too so that I can keep track of things. If you are thinking of going but haven't made your mind up yet let me know too. Botanical details later.

July 27 & 28: Motel 138, Blanc Sablon,
(418-461-3222)

July 29: Riverlodge Hotel, Mary's Harbour
(709-921-6948)

July 30: Battle Harbour Inn, Battle harbour
(709-921-6325 until May 31)
Ferry fare \$40 return.

July 31: Alexis Hotel, Port Hope Simpson
(709-960-0228)

Aug 1: Northern Light Motel, L'Anse-au-Clair
(709-931-2332)

You will also need to book ferry crossings on the Apollo to and from Blanc Sablon on July 27 and Aug 2.

There is also B&B and cabin accommodation available in most of these areas, but you will have to find those out for yourselves or call me for phone numbers.

Howard.

Officers and suggested tasks.

These are the tasks that need to be performed to keep the Society running. It's not rigid, sometimes it's more convenient for another person to take on a particular task, e.g. during the current year the president is keeping the mailing list up to date and the vice-president is meeting coordinator.

President.

- Chair general meetings.
- Draw up agenda for exec meetings.
- Call exec meetings.
- Chair exec meetings.

Secretary.

- Receive mail and respond as appropriate.
- Send cheques to treasurer.
- Notify membership secretary of new members and renewals.
- Notify members of meetings.
- Deal with correspondence.
- Keep minutes of exec meetings.
- Record indoor meetings.
- Prepare summary for Sarracenia.
- Issue press releases if needed.

Treasurer & Membership Secretary.

- Keep accounts.
- Accept and bank cheques and cash.
- Write cheques for expenses.
- Keep up to date membership list.
- Print address labels for Sarracenia.
- Distribute up to date lists as required.
- Keep stock of spare Sarracenia copies for new members etc.

Indoor Meeting Coordinator.

- Arrange speakers.

- Book Room.
- Introduce speakers.
- Thank speakers.
- Advertise meetings.

Sarracenia Editor.

- Edit magazine.
- Solicit articles.
- Prepare master for printing.
- Maintain archive of masters on disk.
- Keep hard copies of masters.
- Arrange printing.
- Send articles to web-page.

Field trip Coordinator.

- Plan Schedule.
- Arrange for leaders.
- Motel bookings (long trip).
- Appoint recorder for each trip.

Field trip recorder. (as available)

- Record plants.
- Prepare account for Sarracenia.

Web Master.

- Find permanent site.
- Maintain and update web-site.

Miscellaneous.

- Mail out issues of Sarracenia.
- Deal with complimentary magazines.

General Membership.

- Write articles for Sarracenia.
- Make suggestions for meetings and field trips.
- Plan to join exec next year.

Wildflower Society of Newfoundland & Labrador. Membership Form.

Name _____

Street/P.O. Box etc. _____

Town _____ Province _____ Post Code _____

Country (if not Canada) _____

Tel. _____ E-mail _____

If you have a Memorial University connection and we may use internal mail to save on postage please give your departmental address:- _____

Our subscription year runs from September 1 of each year.

Renewing members should pay \$10 by December 31st at the latest.

New members should pay \$10 if joining between May and December or \$15 if joining between January and April for membership until August 31 of the NEXT year.

Mail completed form and cheque or MO (sorry we cannot accept credit cards) to:-

The Treasurer

Wildflower Society of Newfoundland & Labrador

c/o Botanical Garden, Memorial University

St John's, NL, A1C 5S7 (Canada)

Or bring along to our next meeting.
