

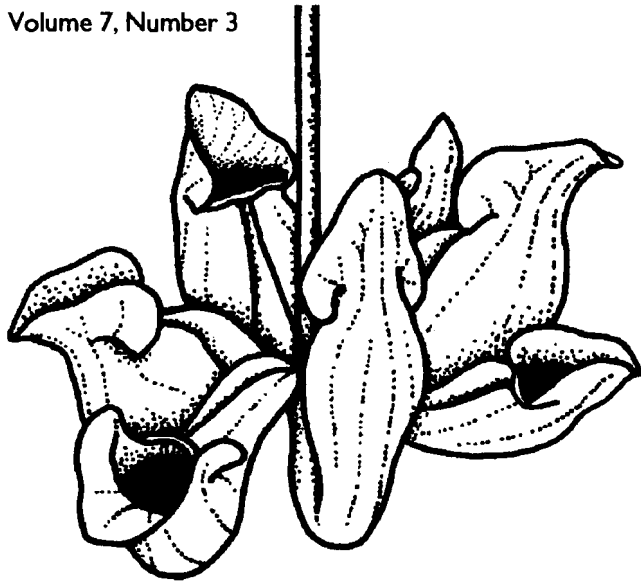
# SARRACENIA

Newsletter of the Canadian Wildflower Society

Newfoundland Chapter

Volume 7, Number 3

Fall 1997



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## Fall Schedule

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**October 1: Wetland conservation in Newfoundland.** Gerry Yetman will talk about the move to conserve wetlands by Municipalities across the Island of Newfoundland.

**November 5: Overlooked but not forgotten - A closer look at the lichens of Newfoundland.** Greg Stroud (Terra Nova National Park) will discuss the variety of lichens that occur in Newfoundland Boreal Forest, where they live and some of their special adaptations.

**December 3: Christmas get-together with a slide show by Ken Knowles.** You are all invited to our annual Christmas party. Ken will show slides of our Annual Field Trip. As well please bring any slides/pictures of "unknowns" collected during the summer. We will all have a go at them! Perhaps we will figure out those orchids!?

**Meetings at 8 p.m. at the MUN Botanical Gardens, Mt. Scio Rd., St. John's.**

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## Notes from the President

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As Fall ignites the foliage of our deciduous trees, and the cooler weather reminds us of the long winter ahead, we can reminisce about our summer field trips. Again this season, our society has enjoyed many excellent field trips and talks. Our annual CWS field trip to the Port-au-Port and the Codroy Valley had a record number of participants (20) and captured numerous new "dots" (not to be outdone by the "twitchers"! ). I would like to extend the Society's thanks to Henry Mann and Lois Bateman for planning and carrying out such a successful trip. Many thanks for all your effort! The trip ended in a gala salmon dinner, complete with a new "Miss Piggy" award (ask Henry the details!), and lots of laughs and tall tales. Both Howard Clase and Todd Boland have recounted the field trip saga in articles this newsletter. We all anxiously await what next year's trip will uncover. The executive (listed below) would like any suggestions as to where that trip might be. The Burin Peninsula has been suggested. Let us know your thoughts as soon as possible and we will discuss possible destinations at the December meeting.

I would like to thank Past-President Gordon Ringius for all the time and effort he contributed to the "Wildflower" cause in the past few years. We hope you continue to lend your expertise to the Society. I would also like to thank Gordon Ringius, Helen Jones, Howard Clase, Joe Brazil, Todd Boland, John Maunder and Lydia Snellen for the talks given last fall and winter, and Tom Smith, Glenda Quinn and John Maunder for leading summer field trips. All of you helped enrich our group. Hopefully in the future we will have a documented record of the plant species found at each field trip.

The very best news our Society could hope for finally materialized Friday October 3. Minister Sandra Kelly declared the **Burnt Cape a "Provisional Ecological Reserve"**! We congratulate the Minister on her decision to move ahead on this most urgent designation. See the attached News Release. We will send a letter from the Wildflower Society congratulating her department. Congratulations go to Past-President Sue Meades, as she unrelentlessly lobbied

the government to stop gravel quarrying on Burnt Cape, got the people of Raleigh involved in saving the Cape and carried out much of the reconnaissance of this wondrous arctic site. Good on 'ya Sue! Her efforts also earned her an Environmental Award from the national Canadian Wildflower Society in Toronto. Thanks also go out to Sue for all the work she has contributed in editing the *Sarracenia*. Glenda Quinn is taking over, as Sue has lots of other commitments in Ontario. We all appreciate Sue's wonderful floral illustrations.

As well, we have a number of new projects we hope to initiate this year. Howard Clase is spearheading a move to start a "Flora of Newfoundland" based on the model of the British Isles. At the present time we do not have a systematic overview of our flora, and this long-term project will begin to tackle this problem. In future issues Howard will outline how this project will be implemented. Also together with Wilf Nichols and Madonna Bishop of the Memorial Botanical Gardens, Henry Mann and myself hope to start a "PlantWatch" in Newfoundland and Labrador. This programme records the blooming time of native and cultivated species to track long-term changes in climate. I have included an article on what "PlantWatch" is.

The Society has developed a spirit of co-operation, and we have all benefited. Let's all get involved!

- Luise Hermanutz

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## Where Was The Newsletter ?

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Missed your newsletter lately? Sorry for the delay! Although we had anticipated the responsibility of the newsletter to pass on to Glenda, this was not yet possible, so we asked Sue to put this issue together. However, her responsibilities teaching *Ecology* at Algoma University College and then finishing the vegetation mapping of Burnt Cape had to be completed before she was able to work on this issue of *Sarracenia*. Sorry for the inconvenience. Look for your next issue shortly!

**NEWS RELEASE - by the Minister of Tourism, Culture and Recreation**

***Burnt Cape is designated as a Provisional Ecological Reserve - Province Moving Ahead on Protected Areas Agenda***

Sandra Kelly, Minister of Tourism, Culture and Recreation, today (Oct. 3) announced the creation of a new ecological reserve for Newfoundland and Labrador. "It gives me great pleasure to announce here today that the Government of Newfoundland and Labrador will grant provisional ecological reserve status to Burnt Island," Minister Kelly said. "This progressive move will protect a significant natural area while at the same time strengthen this province's eco-tourism potential."

The small peninsula of Burnt Island is located north of Raleigh, at the tip of the Great Northern Peninsula. The site, considered the most important botanical site in insular Newfoundland, contains 34 rare species of flowers and is the only known location in the world for a certain type of Cinquefoil known as the *Potentilla usticapensis*.

Rebecca Goodwin, National Projects Director for The Nature Conservancy of Canada, said, "Burnt Island is a site of national significance and The Nature Conservancy of Canada is pleased to work with the Province and take definite action to

recognize the site and preserve its irreplaceable natural assets. This site will further distinguish Newfoundland and Labrador as a rich and diverse location for rare botanical and geological features," she said. "This is a true partnership effort among the Conservancy, the Town of Raleigh, WERAC, and the provincial government."

The Provisional Ecological Reserve designation will ensure that Burnt Island is protected under the Wilderness and Ecological Reserves Act. The "provisional" status will grant the area full protection under the Act until government and interested groups complete a full assessment of the site and hold consultations with stakeholders.

"This is the first all-important step in establishing Burnt Island as a provincial Ecological Reserve," Jennifer Caines, Chairperson of the Wilderness and Ecological Reserves Advisory Council (WERAC) said. "WERAC sees this site as a priority area and we are, therefore, fully supportive of this initiative to preserve its natural inherent values."

Cyril Taylor, Mayor of Raleigh said, "The designation of this site is a significant boost to Raleigh's tourism industry, and specifically its eco-tourism product. I am pleased that Burnt Island is receiving the provincial recognition that this special area so rightfully deserves."

Today's announcement was made during the annual Parks Ministers' Meeting which was held in St. John's this year. Provincial ministers from throughout the country and federal representatives from Parks Canada attended the meeting to discuss parks related issues of regional and national significance.

Minister Kelly said, "The Government of Newfoundland and Labrador remains committed to preserving natural areas and to the development of a natural areas systems plan for the province." Minister Kelly noted that in 1991 Premier Wells said, "the Government will make every effort to complete a system of protected areas by the year 2000." The Minister also noted this commitment was further reaffirmed in 1992 when Newfoundland and Labrador joined with other governments across the

**General Announcements**

**CWS-NF chapter Executive for 1997-1999**

- President.....Luise Hermanutz  
(737-7919 (w); 895-6851 (h)  
e-mail: lhermanu@morgan.ucs.mu.ca
- Vice-President.....Howard Clase  
(737-8748)  
e-mail: hclase@morgan.ucs.mun.ca
- Treasurer.....Alice Close  
(579-1474)
- Secretary.....Glenda Quinn
- Executive board members.....Todd Boland  
& Tom Smith
- Sarracenia Editors.....Glenda Quinn & Sue Meades  
e-mail: sjmeades@sympatico.ca

country to make a national commitment to protected areas.

In cooperation with the Protected Areas Association of Newfoundland and Labrador, considerable work has been undertaken since that time to identify the possible elements of a natural areas system plan. The Minister said that the next step in the process is to release a discussion document for public review. This public review process will allow all land users to make their views known on the direction for further protection of our eco-regions and special natural features.

"After public consideration, the government will complete the systems planning process," Minister Kelly said. "Our goal is to adopt a systems plan which will make significant strides for protected areas as well as provide a stable business environment for resource industries and other land users."

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**BACKGROUNDER:** For Immediate Release  
October 3, 1997

### Province Moving Ahead on Protected Areas Agenda

Newfoundland and Labrador currently has 15 ecological and wilderness reserves, namely: Cape St. Mary's, Witless Bay, Funk Island, Hare Bay Islands, Gannet Islands, Avalon Wilderness, Mistaken Point, Watt's Point Calcareous, Table Point, Hawke Hill, Fortune Head, West Brook, Bay du Nord, Baccalieu Island, and King George IV. The province also has one provisional reserve, Redfir Lake-Kapitagas Channel.

The province's newest provisional ecological reserve Burnt Island, has had its botanical significance cited in a number of natural history journals including *Canadian Wildflower*, *Canadian Museum of Nature*, and *Sarracenia*. The size of the designated area is 3.8 square kilometres. The province is collaborating with The Nature Conservancy of Canada to establish Burnt Island as an Ecological Reserve.

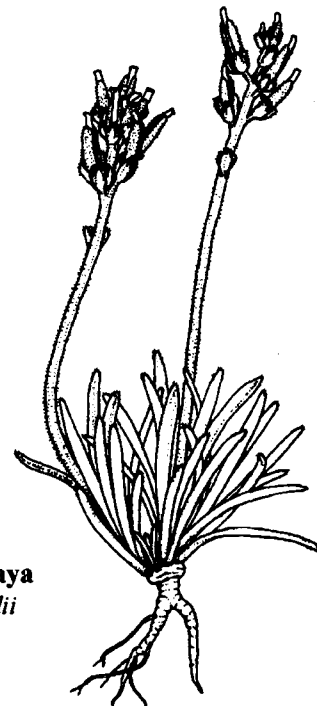
This year, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) added a species known to Burnt Island, **Fernald's braya** (*Braya fernaldii*), to its list of threatened plant species in Canada. The site also possesses other

significant eco-tourism characteristics. For example, the site boasts: a southern example of an Arctic environment; an interesting fossil location; a number of accessible limestone caves; and a good viewing point for whales and icebergs.

Burnt Island is a prominent limestone peninsula, consisting of an island that emerged from the sea after post-Wisconsin deglaciation and later became connected to the mainland by an isthmus of sand. The island consists largely of limestone, 470 to 480 million years old, that was part of an ancient tropical, shallow water shelf. The limestone was thrust westward over sandstone and shale of the same age. Both the limestone and sandstone/shale are fossiliferous and contain about 40 species of trilobites, some of which are previously undocumented species. Other fossils present

The Parks and Natural Areas Division of the Department of Tourism, Culture and Recreation is responsible for establishing Ecological and Wilderness Reserves within Newfoundland and Labrador, and has been doing so since the Wilderness and Ecological Reserves Act was put in place in 1980.

Contact: Laura Cochrane, Director of Communications, Department of Tourism, Culture and Recreation, (709) 729-0928. Thea Silver, Projects Consultant, The Nature Conservancy of Canada, (416) 932-3202



**Fernald's braya**  
*Braya fernaldii*

## CWS-NF Chapter Excursion '97 - The (almost) Orchid Free Report. by Howard Clase

This year's annual field trip was to the south-western corner of the Island: the area from Stephenville to Rose Blanche on the south coast. This area has the mildest climate of the Province and, like much of the west coast also has large areas of limestone. Both of these factors influence the flora. Port-aux-Basques being the main surface gateway to the Province also makes the area the first toe-hold of many opportunistic plant travelers. Stephenville is also a site for some interesting alien plants, most likely the result of the American military presence there.

Most of the unusual plants are thus likely to be northern limits of mainland species, either as relics or recent introductions, or more exotic aliens starting their march across the Island. There was also the hope of finding some southward range extensions of some of the arctic species found on the Northern Peninsula on higher, more exposed sites. But we weren't only interested in rare plants, it was also interesting to compare common plants across the Island. I have been asked to write about the plants other than the orchids, and even then there are far too many for me to include them all. What follows is a personal account of what one of the party found most interesting.

The highlights of the first day on the limestone Port-au-Port Peninsula were our stops at Cape St. George and the highlands between there and the community of Mainland. The Cape was the only known Newfoundland site of a rather attractive purple-flowered pea, *Hedysarum boreale* ssp. *mackenzii*, a Siberian and Western Arctic species, whose two eastern outposts (the other is Anticosti Island, PQ) indicate a wider distribution in the past. We found it growing in the company of its more common relative, *Hedysarum alpinum*, which has smaller, more numerous, and bluer flowers and is at the southern limit of its range at Cape St. George, and an even more familiar pea, *Oxytropis campestris*, which grows along the West Coast from tip to toe. The hedysarums are distinguished in fruit by the "string of pearls" appearance of the seed pods, but it was too early to see this - to the regrets of some of the party since *H.b. mackenzii* in particular shows promise as a rock garden plant! The same thought arose when

we discovered the yellow flowers and silvery leaves of another limestone specialist, *Lesquerella purshii*. Blue-eyed grasses are common all across the island, but the ones at Cape St. George attracted our notice since they seemed much smaller and paler blue than usual. No one could remember all the distinctions between our two species, *Sisyrinchium montanum* and *S. bermudiana*, but Rouleau's *Atlas* shows only the latter from this site. Pale blue flowers are characteristic of this species and the small size was probably determined by the rigours of the location.

They need more careful investigation on a future visit. The Cape was covered with the plants we have by now come to expect on such exposed sites on the West Coast. Beachhead iris (*Iris setosa*), small-flowered anemone (*Anemone parviflora*), Huron tansy (*Tanacetum huronensis*) were all in flower and there were signs, if not many flowers, of hyssop-leaved fleabane (*Erigeron hyssopifolius*), Laurentian primrose (*Primula laurentiana*), yellow and purple mountain saxifrages (*Saxifraga aizoides* and *S. oppositifolia*), arctic bearberry (*Arctostaphylos alpina*) and mountain avens (*Dryas integrifolia*) to mention but a few; but no moss campion (*Silene acaulis*) could be found, to Luise's (Hermanutz) disappointment.



northern hedysarum  
*Hedysarum boreale*  
ssp. *mackenzii*

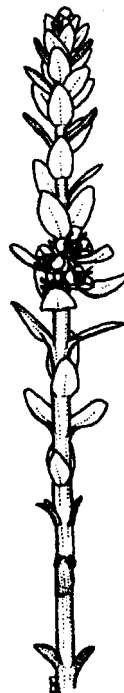
The new road across from Cape St. George to Mainland has given access to some highland areas that have probably never been closely botanized before, and it was quite a rewarding stop. The flora here was much more like that of the Northern Peninsula. The first thing that we noticed were the yellow flowers of *Arnica lonchophylla* (syn. *A. chionopappa*) growing in moderate profusion alongside the road; like many of the plants at this site it is a west coast lime lover and near the southern limit of its range in Newfoundland. I was a little disappointed with my first sight of an arnica, it seemed a bit untidy, perhaps some of the other species are better looking! A second site for *Hedysarum boreale* ssp. *mackenzii* was also discovered, even if only about 10 km away from the first, and even more remarkably Sue (Meades) came back clutching the seed pod of a *Calypso bulbosa* about 200 km from the two "dots" at the top of the Northern Peninsula and a leaf of **Selkirk's violet**, *Viola selkirkii*, which is just about at the southern limit of its known range here. An attractive yellow-flowered cinquefoil found growing in the roadside gravel, which Sue recognised as *Potentilla pensylvanica* (syn. *P. pectinata*) was another range extension found at this site. The plant had many semi-prostrate stems spread out into a circle about 30 cm across and was much photographed. The **false asphodel** (*Tofieldia pusilla*) was also seen here, as were large cushions of blooming Moss Campion.

Our final stop at the beach at the end of Long Point produced the usual variety of seaside plants. Most memorable was the **sea milkwort** (*Glaux maritima*); it is a common enough plant in such sites, but its tiny white flowers clustered on 10 cm stems were very attractive when viewed at ground level from about six inches.

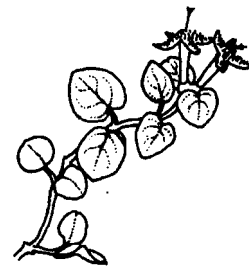
Next day, Sunday 20th, our botanising began with the aliens in the driveway to Dhoon Lodge where we found a **bull thistle** (*Cirsium vulgare*) just coming to flower and some interesting cinquefoils: Sue noticed one with seven narrow leaflets characteristic of the **sulphur cinquefoil** (*Potentilla recta*) alongside some specimens of the **rough cinquefoil** (*P. norvegica*), which has three broad leaflets. Then someone found a plant with five leaflets of intermediate width - a

hybrid? Unfortunately the suspected *P. recta* was not in flower as its pale sulfur yellow petals would have confirmed its identity; according to the atlas it has so far only been collected in St. John's, while *P. norvegica* is widespread across the Island. The **cat's ear** (*Hypochoeris radicata*) was also found around the Lodge, it is much more common as a roadside plant throughout the area of our trip than it is around St. John's.

An hour or two spent searching a fen near the White's Rd turning failed to turn up the orchid (*Liparis*) we were seeking, but we were able to compare the two native **huckleberries** (*Gaylussaccia dumosa* and *G. baccata*) white and red flowered respectively and both in full flower. While the white one is also found on the Avalon *G. baccata* is a more western plant. These both have horticultural potential for the "heather" bed, nicely filling in the flowering gap between the spring flowering heaths and the fall flowering heathers as long as they will grow in a dryer site than they favour in the wild. Another interesting plant we found hiding in the grass at the edge of the fen was the small semi-parasitic native **cow wheat** (*Melampyrum lineare*), it was quite common but easily overlooked.



sea milkwort  
*Glaux maritima*



two-eyed berry  
*Mitchella repens*

After the rest of the morning spent dodging thunder showers and a lunch break in a nice coffee shop during a torrential downpour we set out for Stephenville airport, only to meet the security cordon set up for The Matthew's visit. Having one vehicle marked "Newfoundland Museum" and another bearing the Memorial University crest must have made our convoy look official enough for us to be allowed through for just long enough for us to find most of the plants we were looking for. We easily found the two plants which are unique to this spot in the Province and which must owe their origin to the days of the military base even though they have only recently been discovered. The **common reed** (*Phragmites australis*) was growing up to two metres high around one pool and the **kidney vetch** (*Anthyllis vulneraria*) with its large heads of yellow pea flowers is well established at the edge of the airport and along nearby roadside verges. Both are common further south although the vetch hails originally from Europe. *Convolvulus* has always been one of my favorite flowers and I was pleased to see the American variety of the **hedge bindweed** (*Calystegia sepium* var. *americana*) growing amongst the reeds, its pink flowers are much more attractive than the white form we have in St. John's.

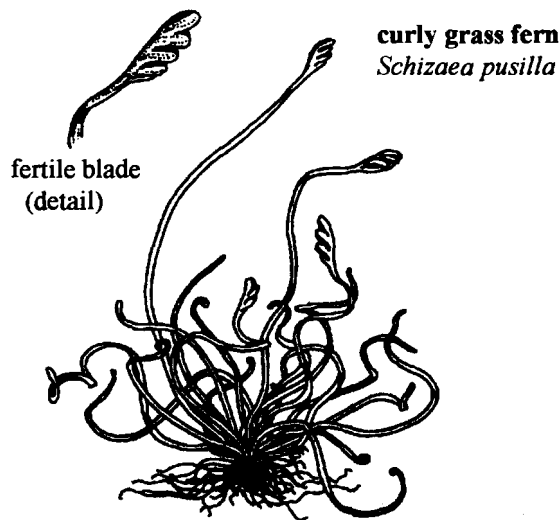
Next day, Monday 21st, we drove the 100 km or so down to the Codroy Valley and our second base at Gillis Cabins, although not quite directly. First we made a brief stop just across the bridge at Stephenville Crossing to see a clump of **common arrowhead** (*Sagittaria latifolia*) named for its narrow arrowhead shaped leaves which grows in tidal, brackish water up to a metre deep on the estuary side of the road. This rare native has been considerably depleted at this spot. One of its other common names is **duck potato** a reference to the small tubers that form along the roots, and as well as ducks, musk rats and beavers are said to be partial to it. A local hunting and trapping group has taken plants from this location to try to spread it to other ponds in the area.

Our next stop was at the Mollichignick Lodge, not for refreshments, but because it has good access to Mollichignick Brook. The trail winds through lush woodlands than are usually found on the Avalon, and here we found some less familiar plants like the

**nodding trillium** (*Trillium cernuum*), **dwarf enchanter's nightshade** (*Circaea alpina*), **large-leaved avens** (*Geum macrophyllum*), and two species of **false Solomon's seal** (*Smilacina stellata*, and the very rare *S. racemosa* known only from one other site on the Island), along with more familiar woodland plants like **corn lily** (*Clintonia borealis*) and **Canada Mayflower** (*Maianthemum canadense*). One of our target plants, **Carolina spring beauty** (*Claytonia caroliniana*), could not be refound. We hope that this is just because it was more difficult to find when not in flower and not a consequence of some rather vigorous chain-saw activity that has removed many of the old birches (*Betula papyrifera*) from the site. One birch that had been spared though, was the one that Todd had shown us a slide of last winter, the one with a spruce tree piggy-backed half way up its angled trunk, sending its roots down to the ground around the birch trunk in the manner of a strangler fig tree in the tropical rainforests.

Alongside the trail grew the small shrub the **alternate-leaved dogwood** or **green osier** (*Cornus alternifolia*), which has a more western distribution than the more common **red osier** (*C. serica* syn. *C. stolonifera*). On the riverbank we found the **Canada hawkweed** (*Hieraceum kalmii*) just coming into flower; this is the only common member of this group that is native and it flowers later than the introduced species. It is fairly easily distinguished because it has its leaves all the way up the stem and not primarily as a basal rosette. There were also the large pink flowers of **river beauty** (*Epilobium latifolium*), the most attractive member of the fireweed family.

A little further along the TCH we made a couple of stops looking for the site of the **two-eyed berry** (*Mitchella repens*) which John Maunder eventually found when he sat down beside it. It was just coming into flower; the beautiful little trumpet-shaped, pinkish-white scented flowers are in pairs sharing a common ovary giving rise to the two "eyes" of the berry. Instead of the woodland habitat this plant favours on the mainland it was growing in the drier part of an open fen which also contained some splendid clumps of **pitcher plants** (*Sarracenia purpurea*) and several interesting orchids also much photographed, but about which I am forbidden to write!



Also the tiny curly grass fern (*Schizaea pusilla*) was a delight to (barely) see, and a challenge to photograph.

On Tuesday morning we began with a visit to the woods around the cabins to admire the large coralroot (*Corallorhiza maculata*) a saprophytic orchid and a fine flowering patch of one-flowered wintergreen (*Moneses uniflora*) and a short detour to see a roadside bank covered with the tall purple-blue spikes of viper's bugloss (*Echium vulgare*) which probably originated as a garden escape. We also found a couple of specimens of the wild carrot (*Daucus carota*, also known to American botanists as Queen Anne's lace), which has not yet found its way across to the Avalon.

Then we set out along the coast towards Cape Anguille. The cape itself was a typical exposed headland, interesting enough, but without anything worthy of special mention. It was the sinkhole area behind Woodville that provided most of the excitement in the form of a meadow full of *Platanthera* orchids of a confusing variety of species and hybrids. The sinkholes or Karsts are formed when the underlying limestone is slowly dissolved away by underground streams causing the surface to sink in fairly large more or less circular areas forming small deep ponds.

During lunch at the picnic park at the mouth of the Codroy River we stared at the Long Range Mountains that dominated the eastern skyline and

slowly hatched a plan to visit the top of Table Mountain via the service road to the NewTel Tower. Those of us with ordinary cars abandoned them near the bottom and joined the others in the 4wd Suburban, which managed to get ten of us up to the top without too much difficulty. It was a perfect day for the visit, sunny and clear enough that we could make out St Paul's Island in the distance, and beyond that on the horizon the dark shape of Cape Breton. In the other direction we could see all the way up the coast as far as Cape Anguille - truly an invigorating view as it should be from nearly 500 m above sea level. However the plants told a story of far different conditions; mountain alders (*Alnus crispa* - the common sea level one!) and white birches (*Betula papyrifera* or perhaps *B. minor*?) grew spread out along the ground, no more than 15 cm high but up to 2 m long and with "trunks" 3-5 cm thick. Henry Mann noticed that counter to expectations they spread towards the cliff edge indicating that the predominant winds came from inland and not off the sea. Out in the open we found many plants typical of shady woodland sites at lower altitudes: twinflower (*Linnaea borealis*), bunchberry (*Cornus canadensis*), starflower (*Trientalis borealis*), Canada Mayflower (*Maianthemum canadense*), corn lily (*Clintonia borealis*), and creeping snowberry (*Gaultheria hispidula*), (only Goldthread seemed to be missing). There were also plants more typical of open sites anywhere such as rattlesnake root (*Prenanthes trifoliolata*), Newfoundland dwarf birch (*Betula michauxii*), and bakeapples (*Rubus chamaemorus*). Many of these were still in flower a month or more after their more lowly relatives. The only true alpine we noticed was *Diapensia lapponica*. Luise and family covered more ground than the rest of us in another unsuccessful search for *Silene acaulis* but they did come across some marsh marigolds (*Caltha palustris*) growing beside a small stream. A little further back from the edge was an area of typical tuckamore, once again going the "wrong" way and it was under this that we found the missing goldthread (*Coptis groenlandica*). On the way back we stopped at a spot we had been looking down upon just before, the section of the old railway known as Wreckhouse running between the highway and the sea. The most spectacular plant along the old tracks was yellow goatsbeard or wild salsify



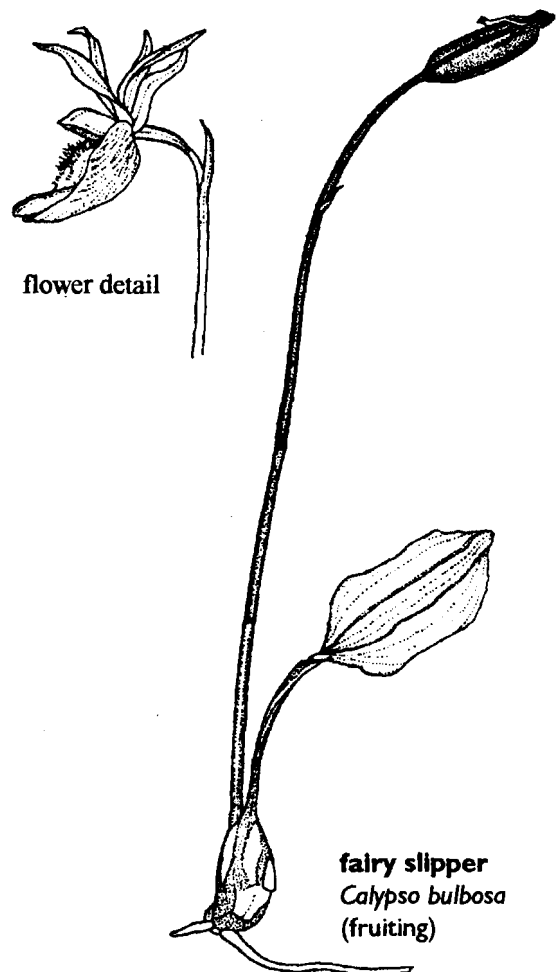
(*Tragopogon pratensis*). Standing over 1 m tall it was mostly in fruit with huge "clocks", which when shaken released an invading army of tiny soldiers on parachutes. There were still one or two of the large yellow flowers, which are distinguished by their long pointed bracts extending between and beyond the outer rays or petals. The narrow grass-like leaves are also rather unusual for this family (Asteraceae). Although it has only recently been noted in the Province by botanists this alien from Europe must have arrived via Nova Scotia by way of the railway and been overlooked for some time. It will be interesting to find out just how far it had spread before the tracks were torn up. Another alien noticed here by Marion (Bailey) after the rest of us had walked by it was a single plant of a tallish (5-6 dm), pale yellow *Linaria*. Similar to **butter and eggs** (*L. vulgaris*) but paler, we first took it to be *L. x sepium*, the natural hybrid between *L. vulgare* and *L. repens*, but now I have my doubts. Neither parent was seen in the area (*L. repens* is scarce off the Avalon) and the "true" *L. x sepium*, which is flowering around St. John's as I write this in late September is nothing like as vigorous as the Wreckhouse plant.

After a stop in Port-aux-Basques for necessities we set out along highway 470 towards Rose Blanche. At the roadside a few km beyond the port we found some rather surprising plants for near sea level: *Diapensia lapponica* and the **mountain azalea** (*Loiseleuria procumbens*) are considered to be alpinines, an indication that the site often experiences much worse weather than that on our visit. This was also the only place that I remember our seeing the **pink crowberry** (*Empetrum eamsii*).

The abandoned Provincial Park at Otter Bay produced a couple of mystery plants, both only in leaf: a very large basal rosette of "dandelion-type" leaves was probably the first year of a biennial, maybe *Lactuca biennis* or *Crepis biennis* and there was a member of the Apiaceae (formerly Umbelliferae), leaves only, rather like, but a bit different from the **cow parsley** or **wild chervil** (*Anthriscus sylvestris*) that is so common around St. John's in early summer. (It seems that there is a niche in the society for an expert on this family - there are only about 20 species in Newfoundland, but we often seem to have a problem identifying them!) Here there was

a beautiful patch of the **perennial evening primrose** (*Oenothera perennis*) (why is this not a garden plant I wonder - perhaps it's too invasive in good soil?) and another lovely plant, which has found its way into gardens, the **trailing arbutus** (*Epigaea repens*). Sadly it was no longer in flower.

While half the group were exploring the heights on the previous day the other half had been at Grand Bay looking for, and finding, **piping plovers** (*Charadrius melodus*), and they also came across a patch of **marsh lousewort** (*Pedicularis palustris*), which previously had only been reported from the Avalon and Northern Peninsulas. The rest of us stopped to find these and explore the dunes for an hour or two on our way back to the salmon feast and the end of another wonderful week of botanizing.



**fairy slipper**  
*Calypso bulbosa*  
(fruiting)

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 Wildflower Trip '97.....the Orchid Highlights
 

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by Todd Boland

It was a sunny, breezy, yet surprisingly warm July day at Cape St. George. The hauntingly beautiful landscape was a combination of lofty limestone cliffs and seemingly barren, rocky hillsides. Among the eroded limestone, the violet-red blooms of alpine hedsarum contrasted with the blue bells of harebell, the silky seedheads of white mountain avens and the yellow buttons of dwarf tansy. Meanwhile, offshore, strings of northern gannet and black-legged kittiwakes soared past the promontories while black guillemots shrilly whistled to one another. This was just one of the memories from this past summer's wildflower trip to southwestern Newfoundland.

Extended field trips of the Newfoundland Chapter of the Canadian Wildflower Society are definitely the highlight of our year. For some of the participants, it's just a chance to get away and enjoy the Newfoundland countryside. For others, it's more serious, with an active search for 'target' plants. On each of our past wildflower field trips we have often had certain plants we hoped to encounter. Our trip to Cape St. George was a search for the rare **northern hedsarum**, *Hedysarum boreale* ssp. *mackenzii*. This species is widely distributed in the Rocky Mountains, but in eastern North America, it is only known from the Cape St. George area of the Port-au-Port Peninsula and Anticosti Island. Plants with such a distributional pattern are referred to as disjuncts. I'm happy to say we found plenty of them, at the peak of bloom.

As many of you know, my wildflower passion is orchids. Over the years, we have seen plenty of orchids on our field trips, many of them new to me as well as the rest of us. On these field excursions I usually have certain "target" orchids, and this year was no exception. My goal was the **large purple-fringed orchid**, *Platanthera grandiflora*. This species looks like a large version of the more widespread **small purple-fringed orchid**, *P. psycodes*. However, *P. grandiflora* is mostly concentrated in the southwestern corner of the island.

On the first day of our field trip (July 19) we headed to Cape St. George on the Port-au-Port Peninsula. Along the way, we stopped at Romaines River, near

Kippens (for those who participated, recall the eroded gypsum cliffs along the riverside). Here we encountered the first orchids of the trip. Not surprisingly, they were the island-wide **scent bottle orchid**, *Platanthera dilatata*, and the **northern green orchid**, *P. hyperborea*, which is very common throughout western Newfoundland.

At Cape St. George, we encountered many of the limestone arctic-alpines so common along the Great Northern Peninsula. The **yellow lady's-slipper**, *Cypripedium calceolus*, which is regularly distributed among the limestone barrens of the Northern Peninsula, was also at home in the Cape St. George area. Unfortunately, the plants were mostly past blooming.

The recently constructed road from Cape St. George to the community of Mainland gave us the opportunity to botanize this poorly explored region of limestone barrens. Again, we encountered many arctic-alpines typical of northern Newfoundland. We also found the **bluntleaf orchid**, *Platanthera obtusata*, the **roundleaf orchid**, *P. orbiculata*, and the **frog orchid**, *Coeloglossum viride*. But by far the best discovery was when Sue stumbled across a small patch of **fairy slipper orchid**, *Calypso bulbosa*! This rare Newfoundland orchid was previously only confirmed at Cooks Harbour and Burnt Island, both at the northern tip of the Great Northern Peninsula. This discovery has greatly expanded the distributional range of this orchid on the island and hopefully means that small populations of *Calypso* may yet remain undiscovered along the entire west coast and Northern Peninsula.

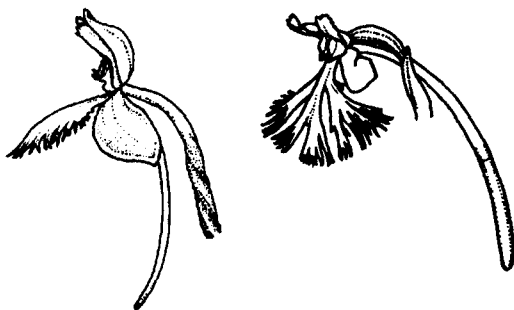
Early the next day, while bird-watching around the Dhoon Lodge, I found a clump of **white-fringed orchid**, *Platanthera blephariglottis* and **small purple-fringed orchid**, *P. psycodes*, right along the drive leading to the cabins. With the discovery of small purple-fringed orchid, I searched the area for its larger cousin, but for now, it would remain elusive.

Later that morning, we headed to a nearby bog where Bill and June Titford had photographed Loesel's

twayblade, *Liparis loeselii*. Until this photo was published in their Wildflowers of Newfoundland, this orchid was not known to occur in Newfoundland! I don't even think they realized the discovery they had made! Unfortunately, our directions to the site were vague and the orchid was not rediscovered. However, we did see plenty of **dragon's mouth orchid**, *Arethusa bulbosa*; **grass pink**, *Calopogon tuberosus* and **white-fringed orchid**, *P. blephariglottis*.

On July 21, we left the Dhoon Lodge in Black Duck Siding and headed to the Gillis' Cabins in Grand Codroy. Along the way, we stopped at a bog where many years ago, Henry (Mann) and Lois (Bateman) had found one of the few island sites for **two-eyed berry**, *Mitchella repens*. After a few stops at various bogs we did find the plants... and a few orchid surprises! The *Mitchella* bog was peppered with *Arethusa*. While most participants were admiring the intricate beauty of *Mitchella* blossoms, I spied a nearby clump of white *Arethusa*. Speeding across the bog, I was thrilled to find a clump of pure white *Arethusa* as well as a colour form I had never seen before. One patch of the white *Arethusa* were pure white except for the lip which was delicately lined in pink. Upon further research into this colour form, I discovered that the form has never been described!

As if this wasn't good enough, as we left the bog, we found a tall orchid with very ragged flowers just off the Trans Canada Highway. I knew the orchid had to be a **ragged-fringed orchid**, *Platanthera lacera* but it was unlike any I had previously seen on the island. The ragged-fringed orchid is widespread across Newfoundland, but our plants are quite different



Flowers of *Platanthera blephariglottis* (left) and *Platanthera lacera* (right).

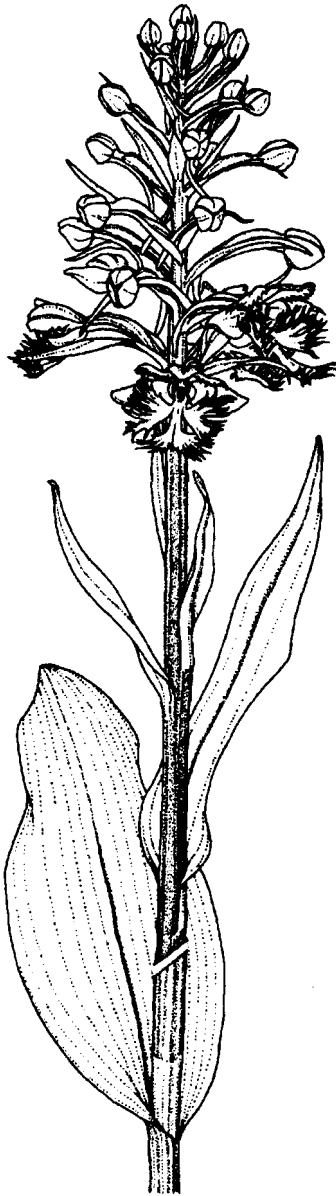
from the typical mainland form. Essentially, ours have shorter stems (generally between 20-40 cm); fewer, smaller leaves; small flowers and less fringed blossoms. Because of these differences, our plants have the variety name of *terrae-novae*. The plant seen at the *Mitchella* site was about 60 cm with larger, very fringed flowers. This fits the description of the typical mainland form, NOT the variety *terrae-novae*! Essentially we made another orchid discovery for the island!

On the morning of the 22nd, Henry brought us to a site just off the driveway to the Gillis' Cabin where he had previously seen **spotted coralroot**, *Corallorhiza maculata*. Sure enough, we found the plants, and in great abundance. In the relatively small area, there must have been well over a hundred plants, all at the peak of bloom perfection! Luise (Hermanutz) and Dave (Innes) had all they could do to keep their twins Stefan and Peter from accidentally stepping on plants.

Later that morning, we headed to Cape Anguille. It was another beautiful sunny day, but this time it was virtually windless. The ocean was like glass, a rare site at any time in Newfoundland. Offshore, Double-crested Cormorants were busy bypassing each other as they flew to and from a nesting colony further up the shore. Orchidwise, there were plenty of **hooded lady's-tresses**, *Spiranthes romanzoffiana*, but they were barely in bud. In the wetter areas, we found many small purple-fringed orchids but their buds were just beginning to colour-up.

After a leisurely lunch at the Cape Anguille lighthouse, Henry led us to a series of sink-holes near Millville. This area is characterised by karst topography. Underwater streams have eroded subterranean hollows in the underlying limestone. Over time, these hollows collapse, leading to the sink-holes, which generally fill with water. These sink holes are a great haven for Henry's research plants, the stone-worts. At the end of the side-road we were travelling on, we came upon one of the larger sink-holes. Crossing a meadow to this sink-hole we came across a large number of small purple-fringed and ragged-fringed orchids.....and there among them was the object of my search, the large purple-fringed orchid!

At this stage it might be prudent to describe how you can distinguish the small purple-fringed from the large. *Gray's Manual of Botany* (the "Bible" for eastern North America botanists), is quick to note that the two are very similar. The differences it notes are that the lip, raceme diameter and lower leaves are wider in the large purple-fringed compared to the small. Also, the large purple-fringed blooms about two weeks earlier. Finally, *Gray's* notes that the



**large purple-fringed orchid**  
*Platanthera grandiflora*

flowers of the small purple-fringed are fragrant, while no fragrance is noted for the large purple-fringed (this was verified in the field by several of us, however, the large purple-fringed did have a fragrance, but it left something to be desired). Sounds like there should be no problems telling them apart. However, this was not necessarily the case.

Within this site, there were plants that clearly fit into their proper pigeon-hole, but others seemed to sit on the fence. Add to this the problem that the small purple-fringed were in full bloom while the large were just beginning...the opposite to how it is suppose to be! Not to be discouraged, I looked to the Newcomb's and Peterson's Guides to Wildflowers to see their comments. Both noted the same differences as *Gray's Manual*, but both also note that the two species intergrade, thus you can get individuals that do not fit exactly into either species' description. Newcomb even suggested that the large purple-fringed orchid may just be an earlier flowering, large version of the small purple-fringed.

I personally noted two other features that differed between the two extreme forms of these orchids. The opening to the nectary spur of the large purple-fringed is distinctly tunnel-shaped while those of the small purple-fringed are narrow and more rectangular. Also, the floral bracts of the large purple-fringed are longer than the ovary, causing them to stick beyond the diameter of the raceme. The bracts of the small purple-fringed are about the same length as the ovary and are generally hidden by the flowers. Again, some individuals fell in between. It wasn't until I looked in the *Guide to Orchids of North America* that I found a reference to the shape of the nectary opening, confirming that my observation. However, I never did find any references to the bract lengths. This latter guide goes as far as to say that the differences between the small and large purple-fringed orchids are not reliable guides to their identification. So are we dealing with two distinct species or are they just extreme variations of a single species? Apparently, it depends on whether you are a "splitter" or a "lumper". Suffice it to say, they are both very attractive orchids!

As if this taxonomic problem was not bad enough, this site also contained the ragged-fringed orchid which is known to hybridize with the small purple-

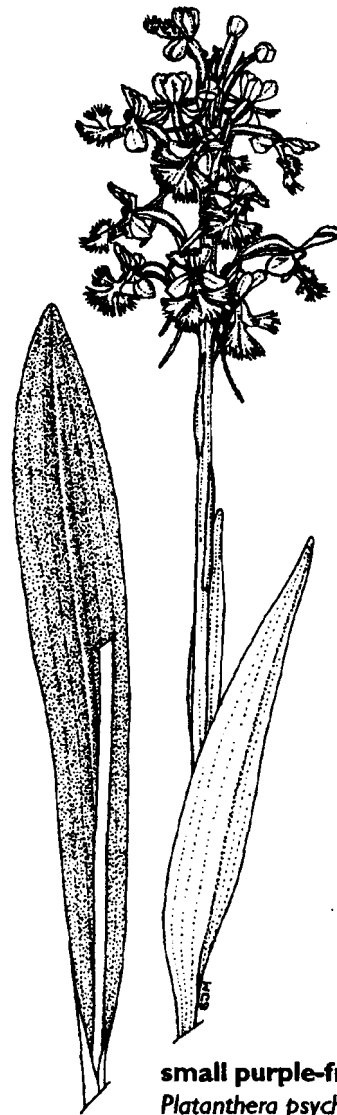
fringed to form *P. x andrewsii*. This hybrid often has pale pink flowers and other characteristics that fall between the two parents. Sure enough, the hybrid did occur here. Problem is, some of the hybrids had the tunnel-shaped nectary opening of the large purple-fringed, suggesting hybrids between it and the ragged-fringed. The offspring of either cross are fertile and can back-cross with the ragged, small OR large purple-fringed orchid, further adding to the chaos of identification (NOW you must be confused....I certainly am!). Anyone for a Ph.D. thesis?!

Early the next morning, a few of us headed to a side-road off the Trans Canada Highway near St. Andrews, to do a little bird watching. This road is perhaps the most reliable spot in Newfoundland for Chipping Sparrow. Sure enough, we did see the sparrows, but we also found another mixed patch of large and small purple-fringed orchids, thankfully without the ragged-fringed this time. The most exciting thing about this site was a pure white *P. psychodes*, only the second one I have ever seen on the island.

Later that same morning, the whole group headed to Wreckhouse to see the **goatsbeard**, *Tragopogon pratensis*, which was growing along the old railway bed. What should be growing near them but more large purple-fringed orchids. These were the best yet, since they were intensely rose-purple in colour and in full bloom. Now these were large purple-fringed orchids I could fully appreciate.

Once more, our wildflower society has had a very successful field trip, fully enjoyed by all. I had found my target orchid, even if it did leave me in a state of confusion. We found a new colour form for

*Arethusa*, the mainland variety of *P. lacera* and a new site for *Calypso*. Not bad for a group of wildflower enthusiasts! How many other orchid species, varieties or forms still remain to be discovered in Newfoundland? I guess we will have to wait until next year to find out!



**small purple-fringed orchid**  
*Platanthera psychodes*



*Editor's Note:* Left: the flower on the left is the **large purple-fringed**, *Platanthera grandiflora*, - note the circular nectar opening. Also note that the fringes of the 3 portions of the lip overlap. The flower on the right is the **small purple-fringed**, *Platanthera psychodes*, - the nectar opening is rectangular to bone-shaped. The flower is smaller and the shorter fringes of the 3 lip segments clearly do not overlap.

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**PLANTWATCH '97**

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by Elisabeth Beaubien

*Introduction*

Plantwatch is a program which asks students and the general public to observe flowering times for "key indicator" plant species and to report these dates electronically (over the Internet) or by mail. These indicator plants flower largely in response to heat accumulation (degree-days), so after warm winters and springs they flower earlier than average. These phenology (study of the seasonal timing of life cycle events) data, collected over many years, provide information on average spring development time for different areas, and also show how much earlier or later each succeeding season is. They help seeing how the biota is responding to climate change. By participating, observers have fun and learn about the natural environment and biodiversity.

*Why observe flowering of plants?*

Tracking flowering times will help determine what trends can be seen in the biotic effects of climate change and weather variability. Analysis has shown that early flowering years are linked to El Nino events, and a trend has been observed towards earlier plant development over the last 40 years in the Edmonton, Alberta area. This matches trends to warmer January to June temperatures in Western Canada.

Spring development of plants and insects is linked such that the best predictor of one organism's development timing is an earlier event for another organism. Knowing valuable seasonality information such as timing of spring flowering helps decision-making for farmers and foresters i.e.: to correctly time operations such as planting, fertilizing, crop protection (integrated pest management) and to predict harvest timing. It also is useful in wildlife management (eg.: the survival of deer fawns is greater in years with early spring arrival); human health (pollen-warnings for allergy-sufferers), and tourism (best times to photograph flowers or animals, or to go fly-fishing).

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*Elisabeth Beaubien* is a Research Associate at the Devonian Botanic Garden, Univ. of Alberta.

*Where to observe?*

It is important, where possible, to observe plants growing in a relatively flat area.

*Why?*

Plants on hills will get more or less sun depending on which way their slope faces. Plants on south-facing slopes receive more warmth from the sun and flower earlier than the same species in a cooler location. Plants on colder north-facing slopes flower later than the rest of the population.

For the native plants, select a relatively flat, natural setting away from buildings and other heat sources. The lilac(s) you report on should be no closer than 3 meters from a south-facing wall of a building and away from buried steam pipes. Please note the details of your plants' habitats on the data form to help Plantwatch see possible effects of location on your flowering dates.

*History of the project*

Plantwatch is a natural progression of an existing project, the Alberta Wildflower Survey, which began in 1987. About 200 Alberta volunteers annually report flowering dates for up to 15 native plant species, and this data is useful to illustrate how earliness of spring varies between areas and between years. The plant species were selected using phenology criteria including lack of subspecies, ease of recognition, brief flowering period, and wide distribution. The garden cultivar: common purple lilac was added because of ease of availability to city dwellers, and long history as an indicator plant. In 1996 Plantwatch gathered flowering observations from schools, nature centres, and individuals across Western Canada, using as indicators two native plants: prairie crocus and saskatoon berry, as well as lilac. The resulting data (observer name, location, plant flowering dates) can be found here .

If you'd like more information on PlantWatch try our home page:

[http://  
www.biology.ualberta.ca/devonian.hp/pwatch.htm](http://www.biology.ualberta.ca/devonian.hp/pwatch.htm)