ON THE FRINGE

NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO

Founding Chapter of
THE OHIO NATIVE PLANT SOCIETY

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MESSAGE FROM THE PRESIDENT

While warm summer weather is still with us, fall is not far off. Fall brings our annual dinner. Once again we will enjoy the hospitality of the Garden Center, now Cleveland Botanical Gardens. The evening is Saturday, November 12th, featuring Dr. Tom Cooperrider who will deliver a talk entitled "Dicots 2", discussing the Ohio Flora Project in general and in particular, a preview of his forthcoming book which covers a part of the flora. Tom predicts publication will occur in December. So how timely can we get?

Details as to costs of the evening are now available and are set forth on the last page of this issue. Incidentally, the reviews from last year were universally enthusiastic among attendees; comments like "the best annual

dinner yet" were common. I'll try to duplicate that evening, so mark your calendars now!

It is now mandatory for you to call and make a reservation in advance for each event, be it field trip, workshop, class, etc. The only exception will be for slide shows be they by members or guest lecturer. This has been the practice for many other groups.

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THE HERBARIUM: WHAT IT'S ALL ABOUT

By Dolores T. Lad

The herbarium is a storage place for a collection of dried plant specimens. These may be used by researchers, educators, students, or historians. They are used for reference, study, teaching aids, or floral records of a given place and time. The plants if properly collected, pressed, and handled, can be preserved indefinitely. It is not uncommon for an established herbarium to retain specimens for more than a hundred years.

Plants collected in the field are placed in a press and allowed to dry thoroughly. The identification of each plant must be determined and verified according to International Congress of Botanical Nomenclature (ICBN) rules. The geographic location and habitat are carefully recorded. This information together with the date and name of the collector is printed on a label and mounted with the plant on a large sheet of acid-free paper. The completed specimen is placed in a folder to be stored in a hermetically sealed cabinet in a storage room. A herbarium can have as few as a dozen or as many as thousands of plants so prepared.

For the large collection it is necessary to organize the storage according to a well defined filing system. One such system is to arrange the folders alphabetically by plant family, e.g. Asteraceae before Graminae before Rosaceae and then within each family again alphabetically by genus and species. A more commonly used system arranges the families in a phylogenetic sequence beginning with the more primitive and proceeding to the more complex placing the ferns, for example, before the grasses and other monocots and continuing through the dicots ending with the composites. Genera and species are filed alphabetically within these categories. If the collection is heavily represented by the flora of particular geographic areas the folders can be color-coded for quick retrieval.

The use of the herbarium might be compared to the use of a reference library (or perhaps a library of rare editions). The researcher has access to actual plants together with all the pertinent information needed for his study. Because of the fragile nature of the specimens the collection is open only to qualified persons, who must be accompanied by the curator or an assistant. There is a handling procedure that must be carefully followed. However, recent advances in photocopying technology have made it possible to have accurate reproductions of some herbarium specimens for handling by students and other non-professional visitors to the herbarium.

The question might be asked, "What is the rationale for amassing and maintaining the collection that we have just described?" Does it serve any useful purpose? Plants have been collected and studied since before the time of Linnaeus (1707-1778). During the early exploration of the Americas plants were brought back to the herbaria of Europe as a means of studying the flora unknown to the continent. Indeed plant presses were an important part of the gear carried along the difficult journey of the Lewis and Clark Expedition (1802-1804). Out of these studies came many uses in the fields of nutrition, textiles, medicines, etc. The medical community developed a particular interest in

botanical studies because plants have been a primary source of many pharmaceuticals. A large percentage of the plant specimens from the early nineteenth century are preserved in herbaria today were collected by doctors or other medical professionals.

With the tremendous land development that has taken place in the twentieth century we are losing habitat and therefore plant species at a very rapid rate. It now becomes imperative that we make heroic efforts to preserve and conserve natural areas of rich resources. Old records of plant populations as documented by herbarium specimens are of prime importance in steering field studies to locate areas worth saving. The work of the Nature Conservancy, the state department of natural resources, and the national parks and forests draws heavily from the information available in herbarium records.

The Cleveland Museum of Natural History houses a herbarium of about 60,000 plant specimens dating from the early 1900's to the present. While the collection contains representative species from around the United States it focuses on Northeast Ohio and Western Pennsylvania. Ongoing field work in this region aims at accomplishing a current plant census. Early records have given clues to guide this effort. Some examples of areas being saved as a result of this work are the North Kingsville Sand Barrens, Koelliker Fen, Pymatuning Creek Wetlands, Morgan Swamp, Arcola Creek Marsh and the Cuyahoga Wetlands.

In summary, a herbarium is a collector's paradise. But it is more than collection for its own sake. It is a collection that contains a history of plant populations and plant migrations. It is a collection of importance in the work of conservation.

Dolores Lad is a volunteer at the Museum of Natural History and has worked for Jim Bissell in the herbarium for the past ten years.

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NEWFOUNDLAND: IN THE STEPS OF FERNALD

By Tom Sampliner

For those who enjoy wildflowers, especially orchids, Newfoundland in July is a destination for you. In two weeks, I saw 37 different species, varieties and forms of northern terrestrial orchids. Not only were there such variety among the orchids, but many were there in uncountable numbers.

In comparison, I must say the well known Brure Peninsula in Ontario looks like a depauperate cousin when it comes to orchids. This should come as a shock to native plant enthusiasts in our area.

Newfoundland is not well known in botanical circles as a target destination. This article may change that.

My trip included exploration of the south western portion of the island from Port aux Basques where the ferry from Nova Scotia services to the north western portion of the Island including L'Anse aux Meadows where a Viking settlement from the 1100's offers archeological remnants and exhibits to explore as well as orchids.

Weather during my stay was mostly wet, very windy at all times, and temperatures mostly in the 60's or 70's. In many respects this was a relief from the 90's and high humidity of home during this period. However, if you are seeking to photograph your wildflower subjects, you are well advised to bring along flash equipment. I assure you the wind rarely ceases. Furthermore, if you think you've experienced rapid weather changes before, just see what awaits you there. Expect the sky to open up and pour with little notice. Typically, you have equipment spread out all over at the moment.

Let's talk orchids. Some of the Platanthera species

are as common there as are our local weeds. In particular it was astounding to see every roadside ditch and wetland covered with *Platanthera dilitata*, *Platanthera hyperborea* varieties *huronensis* and *hyperborea*. Only slightly less common was *Platanthera obtusata* var. *collectanea*. The two hyperboreas are most easily distinguished by the shape of the lower lip. Variety hyperborea has the thin non-tapering lower lip whereas huronensis widens especially at the base to form a more rhomboid shape. Color and growth pattern were not helpful on the island, though they are helpful in the Great Lakes region.

Even among those orchids less common than those above, good quantities of most species commingling was frequently observed. For example some roadside low wet spots between road and forest was a habitat to search for *Platanthera psycodes* and *grandiflora*. Once a patch was found, you could count on a reasonable quantity of each and their various hybrids, varieties, backcrosses, etc. Mingled in would be the usual complement of other Platanthera. I recall some roadside stops along the Transcanada Highway, Route 1, between Codroy Pond and St. David where great numbers were found including color variation from purple to light pink. Also, the largest grandiflora had a great white spot surrounding the round opening to the spur as opposed to the "dumbbell" shape of this opening in psycodes. One favorite was a pink color from right next to a dark purple with both the same height and roughly the same plane. A different stop on Route 1 some 10 kilometers north of Cheesman Provincial Park was the site for a bicolor form; I mean pale pink lower lip and purple above on each floret.

The latter site abutting Route 1 was excellent as an example of a raised bog on the east side of the road while the west side was krummholz (defined as a wind shaped scrub community mostly balsam fir and white spruce) as it sloped down to the St. Lawrence River.

Here we located a recently named cross between *Platanthera grandiflora* and *Platanthera lacera* called

Platanthera X Keananii in honor of Phil Keanan who first called it to the attention of our botanical expert Paul Martin Brown. The cross exhibits a very large floret with a white eye around the spur opening and very lacerated or fringed cuttings on the lower lip. This western most side down near the water was where we also observed some magnificent specimens of the so called dwarf pad-leaved orchid, *Platanthera orbiculata* var. *Lehorsii*. This plant was supposed to be limited to Labrador. Paul's sharp eyes and constant exploring while we photographers tried to do our thing added another orchid to ours as well as the official lists.

These krummholz areas contained many other noteworthy plants. One that caught my eye, and shortly thereafter, my camera's lens, was the metallic pink of *Rosa nitida*. An excellent contrast was provided by *Iris hookeri* and *versicolor*.

Walking across the highway to the raised bog of primarily ground cover such as *Empetrum nigrum* (Crowberry) you could spend hours amidst uncountable *Sarracenia purpurea*, *Arethusa bulbosa*, *Amerorchis rotundifolia*, *Calopogon tuberosus* and *forma patifolius* (depends on whether the leaves exceed the flower for the form), *Triglochin maritima* and *palustre*. Lesser quantities of *Andromeda glaucophylla*, *Arctostaphylos alpina*, *Kalmia polifolia*, *Vaccinium macrocarpon* and *oxycoccos* and several *Drosera* species were always close at hand. These raised bogs are difficult walking. You might sink down knee boot depth or higher while terrain appearing identical might not yield at all. The krummholz areas are not any easier. In the dwarf conifer thickets of Juniperus or in between areas with wet patches heavily populated with plants like Canadian burnet, *Sanguisorba canadensis* you'll have the same poor footing experience. The hidden danger there is the rockiness can be hidden by greenery so you don't see the next step you are about to make.

Every open area no matter how wet or dry, we saw

uncountable numbers of the carnivorous bitterwort, *Pinguicula vulgaris*. I've never seen so much anywhere else. This was indeed a local weed. So much was seen, the sickly yellow green color began to pop out like a beacon everywhere we went.

Another very common and pleasant surprise was the generous sprinkling of pink pyrolas, *Pyrola asarifolia* and *purpurea*, the latter being a brighter color. In deeper woods or thickets as well as wooded slopes going up the mountains it was great to see nice healthy patches of one-sided pyrola, *Pyrola secunda* as well as the larger nodding flowers of one distinctive one-flowered wintergreen, *Moneses uniflora*, listed in Ohio as "X" for extirpated and "E" for endangered, respectively.

Some of the more interesting attractive stops made were as follows.

Some 57 kilometers from Bridgewater motel in Corner Brook. The distinctive forms and colors from Ladyslipper orchids caught our eye. While I will not simply list wildflowers seen at each of the sites discussed, I will list some of the more noteworthy as well as a feel for the habitat. This was a wetland adjacent to the road varying from wet underfoot to the knee boot high scenario. Two Cypripediums were seen and in good quantity: *Cypripedium reginae* and *parviflorum* var. *pubescens*. The latter was our very first view of the dwarfism that has plants growing so low to the ground you first consider what you are seeing. Amidst several equisetums was *Geum rivale*, listed "P" in Ohio but weed up here.

In the Corner Brook area, Berry Hill Pond had a trail from the camping area parking lot where we began to see what could shortly in the next few days become old friends (all of interest to Ohioans). Orchids first, we saw *Listera cordata*, *Platanthera obtusata* var. *collectanea* and *Platanthera orbiculata*. Wildflowers in this woods going right down to the large pond included *Vaccinium vitis-idaea*,

Clintonia borealis, *Gaultheria hispidula* ("X" in Ohio), *Ledum groenlandicum*, *Euphrasia americana*, *Viburnum edule*, and *Drosera rotundifolia* in bloom. Some flowers were so common that in recall I just take them for granted. Flowers noteworthy here yet common place everywhere there were twin flower, *Linnaea borealis*; bunchberry, *Cornus canadensis* as well as the more northern *Cornus suecica*, distinguished by the black corolla parts and stem leaves rather than whorls, and a hybrid that often manifest purple in the corolla and sepals.

Table Point Reserve is on the Transcanada (Route 1) some 243 kilometers from Port aux Basques. This windswept area adjacent to the St. Lawrence River is bog east of the highway and sort of a mixture of bog/krummholz sloping down to the water on the east. In the driest areas including what may have been an abandoned airfield runway and service road gave us good quantities of harebells, *Campanula rotundifolia*, *Dryas integrifolia*, mountain avens, which have such character in their dried flower conditions, *Ledum roseus*, *Erigeron hyssopifolius*, *Saxifraga aizoides* and *oppositifolia*, just to name a few of the most prominent. This was also one of our first of many locations for moonwort, *Botrychium lunaria*. Moonwort became another old friend. This sight also became our first for observing the differences between the dwarf *Cypripedium parviflorum* var. *pubescens* (large yellow Ladyslipper) and *forma planipetalum* (the flat-petalled Ladyslipper). Personally, after observing the intergradation at the various sites, I question the validity of the form unless there is something more substantial than petal flatness and more yellowness to all petals and sepals.

Another area well worth visiting is Port au Choix. A visitor center provides interpretation of the southernmost Dorset Eskimo settlement as well as a nature trail and other amenities. There is a trail we walked of a couple miles duration all the way to a lighthouse mostly along the coast. Aside from adding orchid *Pseudorchis affida*, you'll see many more of all the prior plants mentioned in this article in

goodly quantities and with scenic photographic locations.

A calcareous flatland along the extreme northern coast, called Watts Point Ecological Reserve shows off dolomite barrens. We added an Arctic only species called Greenland primrose, *Primula egaliksensis* and a dwarf yellow *pedicularis*. Typical of these rocky tablelands we also saw many kinds of dwarf willows, junipers, and alders; with the frequency of driving rains and constant winds I understood the need for dwarfism. Some of the most photogenic of the pea groups were here in quantity, such as *Hedysarum alpinum*, *Lathyrus japonicus*, and *Oxytropis campestris* as well as Sea mertensia, *Mertensia maritima*.

Next I describe one of the highlights for orchids and discoveries on the trip. Still on the northernmost coast, take Route 430 to Route 437 north to Raleigh. A road along the bay takes you to a barren heights directly across this inlet from the town; it is called Burnt Cape.

Forming rings around the patches of limestone pavement are *Amerorchis rotundifolia* too numerous to count. We again revisited *Coeleoglissum*, *Pseudorchis*, most of the *Platantheras*, 3 of the yellow *Cypripedium* including var. *makasin* and our surprise of the location was *Calypso bulbosa* in a colony adorning the rocky slope halfway down from the barren tops to the bay. A color variation with more pink in the lower lip added to our interest.

When we needed a break from botanical observation, the bay inlet provided whale watching opportunities with flukes briefly appearing and slapping down into the water.

A few of the other wildflower highlights were *Geocaulon lividum*, *Potentilla nivea*, and *Sagina nodosa*.

Further east along Route 430 takes you to the northward cutting Route 437. This route gets one to the world heritage site of L'Anse aux Meadows where in the 11th century a Viking settlement was established; the area is now

provincial park. Along the way, several small towns along the water provide opportunity to see and photograph icebergs along with scenic backgrounds of these small fishing villages.

At the park, a visitor center provides the expected short films, displays of artifacts and other interpretative background material. An excellent nature trail awaited us, combining boardwalk, gravel trail and some stairs on a couple mile walk with spectacular scenery and wildflowers.

Commenting only on new flowers and highlights, I mention an outstanding colony of *Streptopus roseus* and *amplexifolius* which did produce the hybrid *X oreopolus*. Here as every wetland, you'll encounter gorgeous specimens of the provincial flower, the northern pitcher plant, *Sarracenia purpurea* as well as crowberries as a ground cover *Empetrum nigrum* and here, the best yet examples of bake apple in flower, *Rubus chamaemorus*. They jelly, pie and do all kinds of things with this member of the *Rosaceae* with the blackberry-like fruit. For you trail nibblers, the raw fruit is not as good as our local berries, too seedy, meaty and less tasty.

Back south down the west coast and along the Transcanada, you should visit Port au Choix (which means port of choice). The old port is site of archeologic investigation into the southernmost Dorset Eskimo settlement. A visitor center provides views of artifacts and interpretative displays and expected gift shop.

The rocky cliffs above the houses and harbor were well worth the exploration. We found beautiful specimens of White Indian Paintbrush, *Castilleja septentrionalis*. As long as you watch your footing for crevices in the rocks, you should find excellent dwarf hooker's orchids, *Platanthera hookeri* var. *abbreviata*.

A road follows the bay back toward town from which a service road diagonals back toward these rocky heights just

described. This road can be taken into the park toward the Port Riche lighthouse. Yellow Ladyslippers abound. Here, I saw the best case examples for *Cypripedium parviflorum* var. *planepetalum* as well as all kinds of intergrades and hybrids among var. *pubescens* and *makasin*. I saw madder through to yellow colorations on sepals and petals. These were examples of petals and sepals connivant as if to form a hood. A few examples even manifest the "C" like shape of a Hookers orchid. I still can't get over seeing large clumps of yellow orchids on stalks so close to the ground almost as if they were ground cover.

Though a couple of miles long, do take the nature trail from the rocky heights in old Port aux Choix all the way to the lighthouse. You'll see a display of the island's finest wildflowers in picturesque land. You may wish to leave a vehicle at the other end to make your walk one way.

Now it is time to talk of the Gros Morne area. This world heritage site offers all kinds of areas, habitats, and trails to explore from rocky slopes, to serpentine barrens, to forest and wetlands of all kinds.

A super area is the trail through a forested wetland called Lomond Trail from the Wigwam parking area off Route 431. A boardwalk alternating with mud trail meanders through bog and forest. The following orchid list alone should motivate anyone to seek this out. I assure you the specimens were prime; unfortunately, I wish I could say the same about the weather. I may be footing some lens and camera repairs as a result of being caught out in the open. The Morton salt theme "When it rains it pours" must have been penned on this island.

Site orchid list: *Cypripedium reginae* (lots and in clumps or singles), *Corallorhiza maculata* var. *maculata* and *occidentalis*, *Listera cordata*, *Listera convallarioides*, *Platanthera orbiculata* var. *orbiculata* and *macrophylla*, *Platanthera dilitata*, *Platanthera hyperborea* var. *hyperborea* and *huronensis*, *Platanthera obtusata forma collectanea*,

Platanthera psycodes and *Platanthera grandiflora.*

In addition the wooded areas had beautiful colors of equisetum with *Geum rivale* adding a touch of color. The open bogs showed off the usual pitchers, forget-me-nots, kalmia, and sundews. On other hummocks with a little sun peaking through, or on nurse logs, colonies of *Linnaea borealis* and/or *Moneses uniflora*, *Pyrola secunda* and colorful mosses and lichens called you to burn up your film.

The James Callaghan Trail is the one that climbs Gros Morne mountain. The top 1/3 is slope so think about your pack weight and knee condition first, not during the hike. Besides many of our now old orchid friends, you can add a few to your life "listera" - Okay, some thought it funny. *Listera X veltmanii* in addition to the two parent listeras. Some in our widely separated group saw *Goodvera repens* var. *repens*. The primary purpose of this hike in my view is the spectacular views looking back down at each open area as well as those of alpine ponds and meadows.

The lookout trail starts behind the ranger headquarters ascending rapidly to a spectacular overlook of almost 360° view of the park. Forest, wetlands, mountains including snow capped examples like Gros Morne greet you. In wet meadows on this mountain's slopes you can spot wildlife such as the magnificent bull moose I saw.

Trail highlights included witches brown and dwarf mistletoe on mostly black spruce. Some different common ground covers were trailing arbitus, *Epigaea repens* and slightly less common *Cypripedium acaule* still in bloom in late July. In some very wet meadow bogs not far from the summit we had some fine specimens of *Malaxis unifolia*; spotted by Paul Martin Brown. How he looks down and finds such a small flower in much higher sedges continually amazed our group. It became other worldly by this point in the trip; someone would wish to see a plant and Paul would produce/find one within a short time.

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