

BLOMIDON NATURALISTS SOCIETY NEWSLETTER

Volume 3 No. 2

June 1976

Programme Schedule

- August 3,
Tuesday A Summer Star Party. Gather at 10 p.m. in the Grand Pre' Parking lot near the back. There will be several small telescopes available to look at stars and nebulae. If it is cloudy on Tuesday the session will be held on Wednesday the 4th (if clear).
- August 8
Sunday Naturalists walk and picnic. Meet at the Wolfville Centennial Park at 9 a.m. We will walk along the dikes and look for flowers, birds, and grasses. Bring a picnic lunch and enjoy it with other amateur naturalists in the park after the walk.
- August 22
Sunday Let's look at a Spruce Bog. Meet at the Acadia University parking lot for transportation at 8:30 a.m. Don't forget your rubber boots.
- September
26
Sunday Explore the tidal pools, fossils, old tree stumps along Horton Bluffs. Bring rubber boots. Meet at the Acadia University parking lot for transportation at 8 a.m.

Next Evening Meeting

- September
20
Monday Starting our third year. Evening formal presentation and membership get together. Topic to be announced. Meet at the Wolfville High School at 8 p.m.

ACKNOWLEDGEMENTS

We would like to take this opportunity to thank Dr. Peter Smith for speaking to us at our regular April meeting on his work in Iceland and showing his beautiful slides of the area; to Larry Bogan for leading the Spring star party on May 8th, and to all those who contributed articles to this latest edition of the Newsletter, typed, illustrated, mimeoed, addressed and stamped it!

THE BLOMIDON NATURALISTS SOCIETY NEWSLETTER

is published quarterly by the Newsletter Committee of the Society.

Co-editors: Jean Timpa
Roy Bishop

Art: Larry Bogan

Membership in the Blomidon Naturalists Society can be obtained by writing to the B.N.S. c/o Larry Bogan Secretary of B.N.S., Box 753, Wolfville, N.S. B0P 1X0 Yearly Membership fees are \$2.00 per year and begin in September of each year.

"...the primary objective of the Society shall be to encourage and develop in its members an understanding and appreciation of nature. For the purposes of the Society, the word 'nature' will be interpreted broadly and shall include the rocks, plants, animals, waters, air, and stars." from the BNS Constitution.

BNS NEWSLETTER DEADLINE

September 21, 1976

Please send contributions to Roy Bishop, Avonport, or Mrs. John W. Timpa, Box 1382, Wolfville, Nova Scotia. Please put on your thinking caps. This issue is awfully thin! Surely you've seen some interesting sights this summer worth sharing with us-even tho it is but five lines worth!

A Library for BNS - A Start

Larry D. Bogan

The Society is in possession of the handbook, Stop It: A Guide for Citizen Action to Protect the Environment of Nova Scotia. It is published by the Community Planning Association of Canada and distributed by the Ecology Action Centre in Halifax.

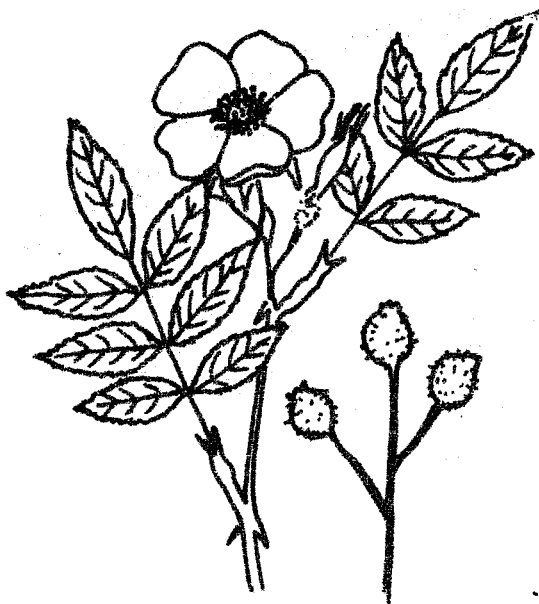
The book is a much needed collection of information for anyone concerned about the environment and wishing to do something to protect it. Specific strategies are outlined for ensuring that existing legislation is enforced and for taking action through the courts.

Part I of this 178 page volume discusses legislation, how it can be used, its limitations and several pertinent case studies. I found these studies of particular interest since they were a review of the problems and solutions concerning the environment of Nova Scotia in the past few years.

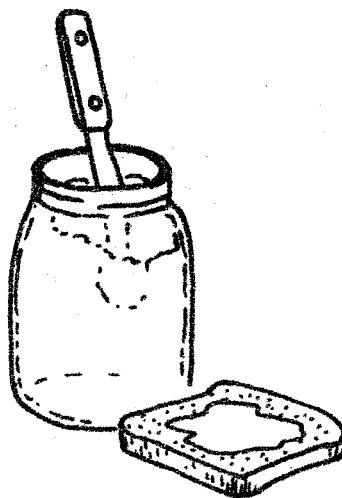
Part II introduces Common Law and how to use it when Legislative Law fails. In this section information is given as how to organize a group for environmental action.

The appendices list pertinent government officials and environmental organizations with addresses. The book is up to date as of the spring of 1975. It was compiled by four law students and two members of Ecology Action, then edited by D. Paul Emond, a faculty member of the Law School at Dalhousie University.

This book was obtained by the Secretary of BNS for use by the Environmental Committee, but is also available to any BNS member to borrow. If you wish to purchase your own copy, it can be obtained for \$5.50 from Ecology Action Centre, Forrest Building, Dalhousie University, Halifax, N.S.



Rosa palustris
Swamp Rose



Old Herb Recipes

From the Family Weekend Book by Beryl Irving, contributed by Mrs. G. F. Bayne

for the Chincough (this was whooping cough):

Take equal parts of hogs lard and garlick, pounded. Put it fresh to the soles of the feet night and morning. Make it every day.

to make conserve of Hips (rose):

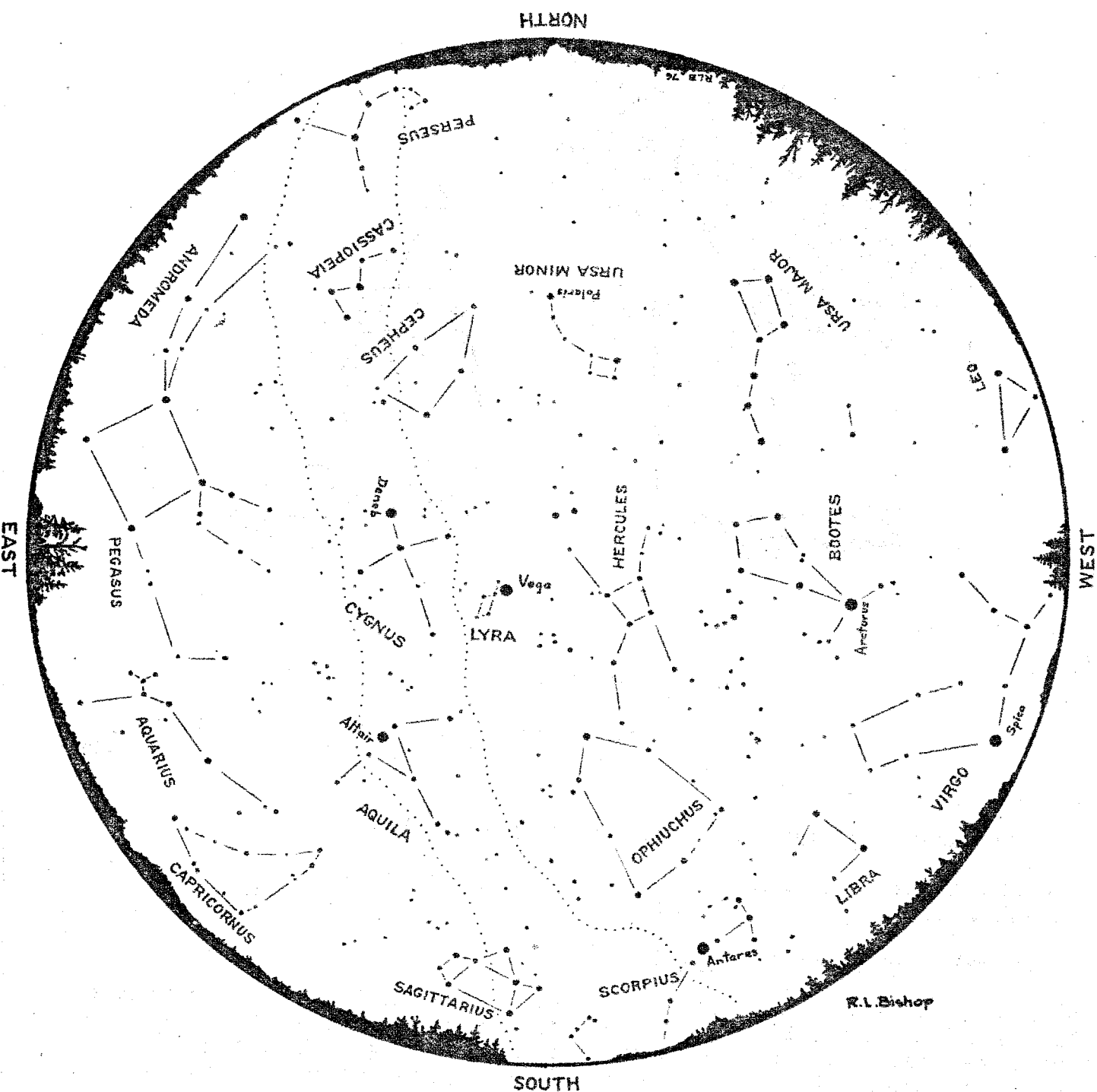
Take the hips when they are full ripe, slit them in two and scrape out all the seeds and hair and lay them in a pot. Cover it for three or four days till they grow so soft as to pulp through a sieve with the back of a spoon. Then weigh them and to a pound of hips allow a pound and a quarter of sugar, pounded and sifted, then with a spoon you must work in all the sugar. When you have worked it very smooth put it in a pot and cover it. It is an excellent thing for a lax.

for a Decays: (this may be an early use of liver for anaemia.)

Take a calves liver. Put it down in four quarts of water with a handful of chervil, boil it till it is consumed to two quarts. Take a coffee-cupful morning and evening or begin with a smaller quantity lest it might disagree with a weak stomach.

Editor's Note:

Cowslips in Wolfville! In our last Newsletter a recipe from this same source was quoted for Cowslip Tea which will supposedly keep away rheumatism. Joy Cooper has informed me that a quantity of these plants are on the property now belonging to Dr. R. D. Stuart, at the corner of Main and Orchard Avenues. Fifty or more years ago this property belonged to the Rev. Dickenson, Rector of the Anglican Church, and it is thought that the original plants or seeds quite probably came from England. We fully expect that Dr. Stuart will have a booming business in the prevention of rheumatoid arthritis!



This map indicates the brighter stars visible to the unaided eye in the summer sky. It is drawn for the latitude of Nova Scotia and corresponds approximately to the orientation of the sky as it appears after twilight ends on any clear summer evening. To use hold the chart vertically and turn it so the direction you are facing shows at the bottom. The edge of the chart represents the horizon, and stars in the center of the chart will be overhead. Lines are used to emphasize several of the brighter constellations (star patterns) such as Scorpius, Aquila, etc. The dotted, hazy area represents the Milky Way.

Aside from the one under your feet, none of the brighter planets are conveniently located in the evening sky during the summer of 1976. However, Mars is visible as a reddish, star-like object low in the west near Leo in June and July, while in August and September, Venus will appear as a bright object low in the west just after sunset. Full moon will occur on June 12, July 11, August 9, and September 8. Although it obscures all but the brighter stars, on clear evenings a few days on either side of these dates the pale starlight scattered by the Moon will add a touch of magic to the summer night.

Roy Bishop

A LOOK AT THE UNIVERSE

Roy L. Bishop

The stars have been referred to as the holes in the blanket of night. However, during the present century research in astronomy and physics has revealed a Universe far more beautiful and profound than that pictured by poets or surmised by science fiction writers.

The central actors on the stage of the Universe are the stars. A star forms somewhere in space when a large, diffuse, dark cloud of hydrogen gas and dust collapses under its own gravity. As the material falls in, it warms. When the temperature is high enough hydrogen nuclei begin to fuse to form helium and in so doing release an immense amount of heat and light. Thus a star is born. Occasionally some nearby parts of the collapsing material are too small to become hot enough to form stars themselves. These small, cool lumps which drift in orbits about the central star are the planets.

It is the stars which fill the Universe with light. Our existence is due to and is sustained by the light of the nearest star, the Sun. Although it is an average star and does not look very large in the sky, we now know that the Sun is large enough to hold a million earths. We usually speak of sunrises and sunsets, but as Copernicus emphasized long ago, it is Earth which moves about the Sun. When you next see a "sunset", remember that it is the rolling of the little Earth on its axis which is carrying you with it, back away from that immense, blazing star.

As darkness deepens over the forests of Nova Scotia many other stars come into view. Although the Sun is nearly one hundred million miles from Earth, the other stars are far more distant. Sunlight requires about eight minutes to reach us; however, the light of the other naked eye stars requires from ten to ten thousand years to traverse the distances to Earth. Thus most of the starlight which tumbles into our eyes began its journey long before we were born.

On a clear, moonless, summer night away from the light pollution of towns and cities, a hazy band of light can be seen stretching across the heavens. This is the Milky Way. The irregular glow is from the billions of stars which are too distant and hence too faint to be seen individually. Our Sun is one of the stars of this Milky Way Galaxy, a vast disc-shaped array of stars across which a beam of light would travel for a thousand centuries. As you gaze at that hazy band in the summer sky, you are looking through our Galaxy edge-on. The stars in other portions of our sky are relatively nearby the Sun, in our own corner of the Galaxy.

If you could take a journey in a fast space ship out of the Solar System, past the nearest stars, through other star clouds of the Milky Way, and then outward, beyond our Galaxy, you would enter a vast region virtually empty of stars. As the Milky Way system faded to a small, dim glow in the darkness behind, you would notice other similar, hazy patches of light, like snowflakes frozen in an eternal night. This is the realm of the galaxies. Individually separated by millions of light-years, countless billions of galaxies extend to the observable limits of the Universe.

A Spring Star Party

Larry D. Bogan

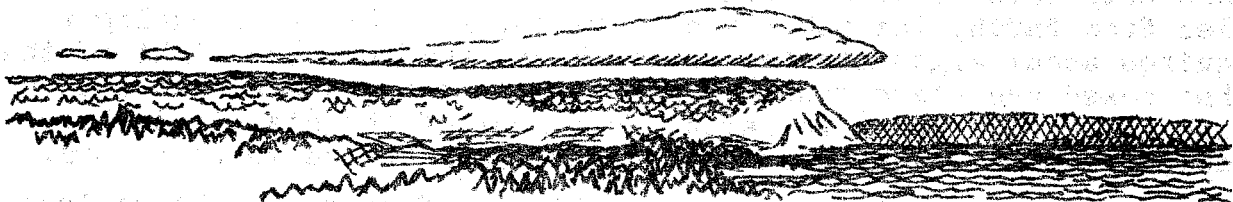
Friday, May 7, was clouded out but on the next evening we were able to view the stars. Roy Bishop and I provided a couple of small telescopes for close-up views of planets and the moon plus some instruction on the stars themselves. We met at the parking lot of the Grand Pre Historic Park with seven or so other interested persons and children. Saturn and Mars were nearing conjunction near Pollux and Castor and made a pretty sight. The Quarter Moon was there for the viewing of craters and mountains and "seas", and we observed Uranus and some nebulae also.

The whole panorama of the stars in the wide sky was just as interesting. Once one gets to know the Constellations the sky becomes as much part of ones environment as ones own backyard. The difference is that where ever you go the sky remains the one unchanging environment that you can be familiar with.

On that May evening, Gemini was setting in the West, Leo the Lion was high in the sky and Cygnus the swan was just above the Eastern horizon. Those present enjoyed reviewing the names and shapes of the constellations and discussing the mythology and facts that go with them. It was agreed that perhaps other star parties could be held throughout the year to be able to see the whole cycle of the starry heavens.

A HAT FOR BLOMIDON

It was April and I was enjoying a bicycle ride on the Ridge Road although battling a head wind while heading East for Wolfville. The day was overcast with heavy stratus clouds and I naturally turned my gaze to the North over the Valley, the Cornwallis River, the Minas Basin to Cape Blomidon. There I saw something that I had never noticed before but which I have seen since; Blomidon sported a peculiar, low, white hat of cloud on its flat head. The cloud was thickest just above the sandstone bluffs and then tapered gradually to a thin wisp westward along the North Mountain. Little puffs of cloud following this tail and gave the appearance of movement to the larger body of cloud. The whole formation had an extremely flat bottom and hovered just above the mountain like a huge Zeppelin.



These clouds appear only when a humid wind is blowing from the East off the Minas Basin onto the bluffs where the air has to rise, expand, and cool. Upon cooling below the dew point the clouds are formed. The interesting thinning of the cloud over the mountain occurs as the air flows over the warmer ground and is heated above the dew point.

Cloud formation such as this is common in the higher levels of the Appalachian and Rocky Mountains. Seeing the same phenomenon here under the right conditions of temperature and humidity and with its interesting geometrical form made my observation valuable to me. So the next time there is a dull damp day with Easterlies, look toward Blomidon.

Larry Bogan

On the History of Nova Scotia Plants

John S. Erskine

Nova Scotia Journal of Education, Fall, 1972

Part I. Plants from the Distant Past

Most people enjoy our plants for their beauty, though one result of this approval is the disappearance of Lady's Slippers and Mayflowers from the roadsides. The botanically interested may be satisfied with the names of plants, and there remains a less usual interest, that of wishing to know from where and when these plants have come, and why they have chosen this place to survive. Usually we can only generalize about this, but even so little gives us hints on the unrecorded past.

We all know that Nova Scotia was covered by ice for many centuries, which would seem to have wiped the flora. Probably this is largely true, but there are other problems. A century ago, botanists and geologists were puzzled by the fact that the fossils of animals and plants of the

coal-measures were of the same species in both Europe and North America. Since that time it has become possible to date those coal-measures to three hundred million years ago, and recently the theory that the continents had shifted throughout time has been accepted, and Nova Scotia seems to have been attached to Europe or Northern Africa before the coming of the great rift which has since widened into the Atlantic Ocean. Fifty million years after the coal-period, the fossil plants and animals of Europe and America were mainly different.

It may seem that this fact has little importance for our plants, but ninety per cent of our mosses and liverworts and some of our horsetails and clubmosses are of the same species as those of Europe. None of these are equipped with spores likely to cross the ocean, but the alternative demands that these simple plants have survived three ice-ages. However, on the northern tundras the plants spend half the year under ice and come up contented. Recently the National Museum planted some lupin seeds which had been frozen for ten thousand years in a glacier, and they grew well.

It is considered that the coldest part of the last ice-age was in 20,000 B. C. In Cape Breton remains of spruce were found and dated to 18,000 B. C., and near Shubenacadie a spruce was dated to 16,000 B. C. This suggests that there were occasional warmer spells which thawed enough snow or ice to open the rivers in the valleys, though probably only for a short period. By 14,000 B.C. the great ice-sheet had been broken into local glaciers sliding in different directions from the ice-caps of the highest hills. For the first time land was available to seeds accustomed to barren lands.

COASTAL PLAIN PLANTS; 14,000 - 10,000 B.C.

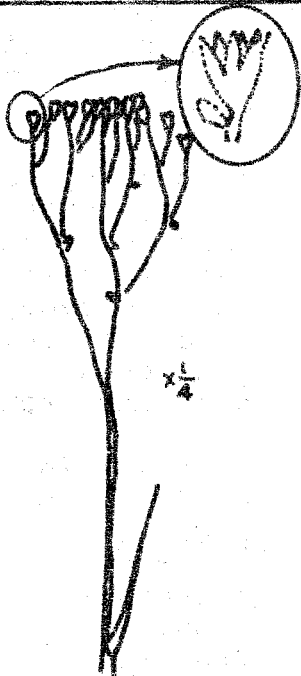
Half a century ago, a botanist collected a tall golden flowered plant from a marsh on Digby Neck. No one could identify it, so it was sent to Harvard where it was recognized as *Lophiola* or Golden Crest, a species not known north of New Jersey. This resulted in expeditions of Dr. Fernald and other keen botanists in 1920-21, which raised our knowledge of provincial botany to a new level and encouraged its study.

Long before this, geologists had noticed the fact that the Massachusetts coast had not been eroded during the ice-age. This suggested that at that time there had been a barrier of islands along the continental shelf. (It is now agreed that the great sheets of ice on polar and temperate zones had lowered the seas by about 550 feet.)

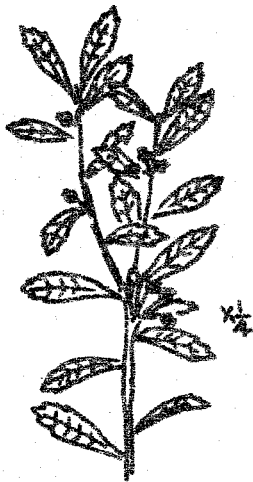
The sandy fishing banks of today were the islands of that time, and our scanty knowledge about them comes from scallop-draggers which have brought up many things from gigantic shark-teeth of the age of dinosaurs, and teeth of tapirs and elephants from the ice-age. From these we can learn something about the islands. The teeth of mastodons tell us that coniferous trees were present; the teeth of mammoths tell that there must have been herbs and marram grass. Both would have needed fresh water. Sable Island gives the picture: a low dome of sand sodden to sea-level, rain water floating in the sand above the heavier salt-water. Wherever the wind blows away the sand to the level of wetness, a shallow pool of brackish water rises and falls with the tides.

The Nova Scotian Flora lists 33 species of certainly Coastal Plain plants, all of which are found in water or its banks or marshes, though one shrub, *Ilex glabra*, may also be found on dry land. Such must have been their habitat on the islands. Probably at the time that they crossed to the mainland, ice still covered everything except river-valleys and pools of water on the confused landscape. How they travelled is uncertain. Inkberry and Cat-brier had berries which might have tempted birds, but the other plants have no obvious method of carriage. Most of these species are found on the South Shore from Yarmouth to the La Have River, but a few of these species are found also in Digby County - which may suggest a sunken island on that shore. Fourteen of the 33 species have spread to similar habitats, even to the Cape Breton plateau. These may have spread from the South Shore, but the Coastal Plain series of islands seems to have reached to the Newfoundland Bank, and distribution from these islands is not impossible.

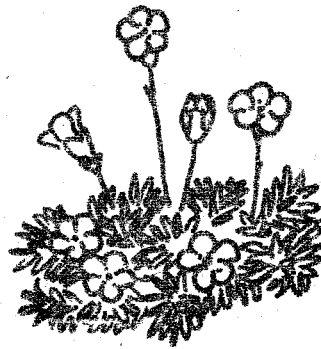
A few Coastal Plain plants have pleasant flowers and so are in danger. *Sabatia* in Yarmouth County may be tall and with pink petals or short and with white. *Rhexia*, Meadow-beauty, has spread more widely. Smaller beauties are the tiny bladderworts on sandy shores, purple or golden but too small to attract general attention.



*Lophiola
Americana.*
GOLDEN CREST



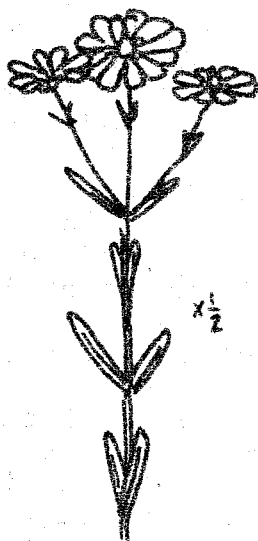
*Ilex
Glabra.*
INKBERRY



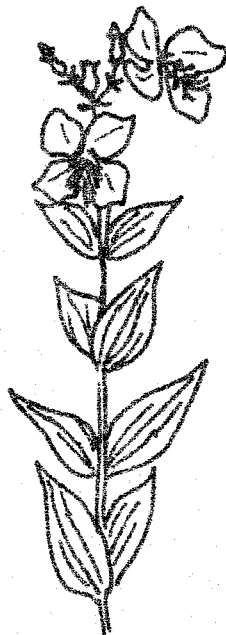
*Diapensia
Laponica.*
DIAPENSIA



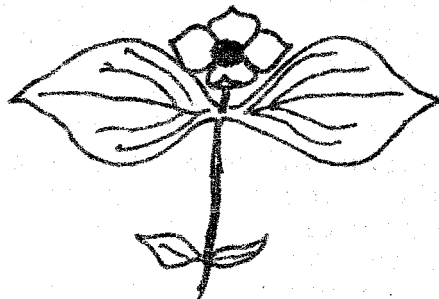
*Phyllodoce
Caerulea.*
MOUNTAIN-HEATH



*Sabatia
Kennedyana.*
PLYMOUTH GENTIAN



*Rhexia
Virginica.*
MEADOW-BEAUTY



*Cornus
Suecica.*
BUNCHBERRY

L.O.S.

NORTHERN PLANTS

We cannot be sure whether these northern species are gifts of the north wind or sprang from seed or spores which had lain for centuries under the ice-sheet, but certainly they could not develop until summer had given them a few weeks of free access to the sun. This is true of plants of the tundra which survive the ice of winter but die in the summer if they are shaded from the sun. Here we seem to have three groups of plants with different demands.

Plants of the Shade:

When first I was collecting ferns, I noticed that some species were content with bare rocks but preferred those facing north. Here they lacked sun, but the rocks condensed water enough for their scanty needs. I had a chance of testing this observation when I was working with Dr. Smith's group of students in the gorge of Salmon River in Victoria County. The party divided south and north, and I followed those to the south. Stone like cannonballs come bounding down, so I moved out of range toward a steep slope of rock. A network of creeping black spruce helped me across it. On a shoulder of rock was a matted cluster of leaves, and at the upper edge of the slope were creeping plants like enlarged Mountain Azalea but with larger and fading blue flowers. These were Diapensia lapponica and Phyllodoce caerulea, new genera for the province.

Years later, my son Tony, although at that time he had no interest in plants, knew my interest in northward-facing cliffs, and he led me to one he had seen in Ainslie Glen. The cliff was small, about 30 x 10 feet. Only three species grew on the rock and all were new to me, two ferns, Asplenium viride and Cryptogramma Stelleri, the other a lichen. Tony's reward was on a tree a few feet away, a young Saw-whet Owl watching us with villainous black-circled eyes while his little mother tried to lead him away from danger.

Plants of the Sun:

Another group of northern plants, chiefly Draba and Arabis, seem to have opposite ideas. They are found chiefly on the shifting screes that face southward, as on Big Intervale, Blomidon, and Isle Haute. It seems unreasonable for these plants to choose barren slopes which, after June, will be hot and dry, and later will be covered with snow and ice which will plough the slope down toward the beach. But these are plants with abundant seeds which are shed early. The plants shrivel in the hot sun, but the seeds remain. In the spring, ice and boulders plough their way down the slope, sweeping away persistent plants and leaving the early seeds without competition.

True Tundra Plants:

Our third group are true tundra plants, preferring the barren spots where no shadow threatens their short season of sun. Our richest garden of these plants is on the north-east of St. Paul Island. The cliff rises sheer some fifty feet from the sea, and when storm rages, salt spray sweeps over the lighthouse. No trees can resist this except arctic willows creeping flat on the ground. On the ground are clumps of Oxytropis johannensis, a cloverlike plant with purplish flowers. They must have been scattered over much of the province, since only chance could have carried them to such secluded homes. On the cliff above Cape d'Or in Cumberland County, the wind has for centuries kept trees back for a few yards from the cliff, and on this limited shelf, clumps of Oxytropis and Astragalus Robbinsii like erect vetches live happily. Their home is already threatened by European weeds which can also withstand the winds. On Scatarie Islands and several other shores, Cornus suecica, a creeping bunch-berry, flourishes on treeless ground.

Parts II and III of this series will appear in future Newsletters.