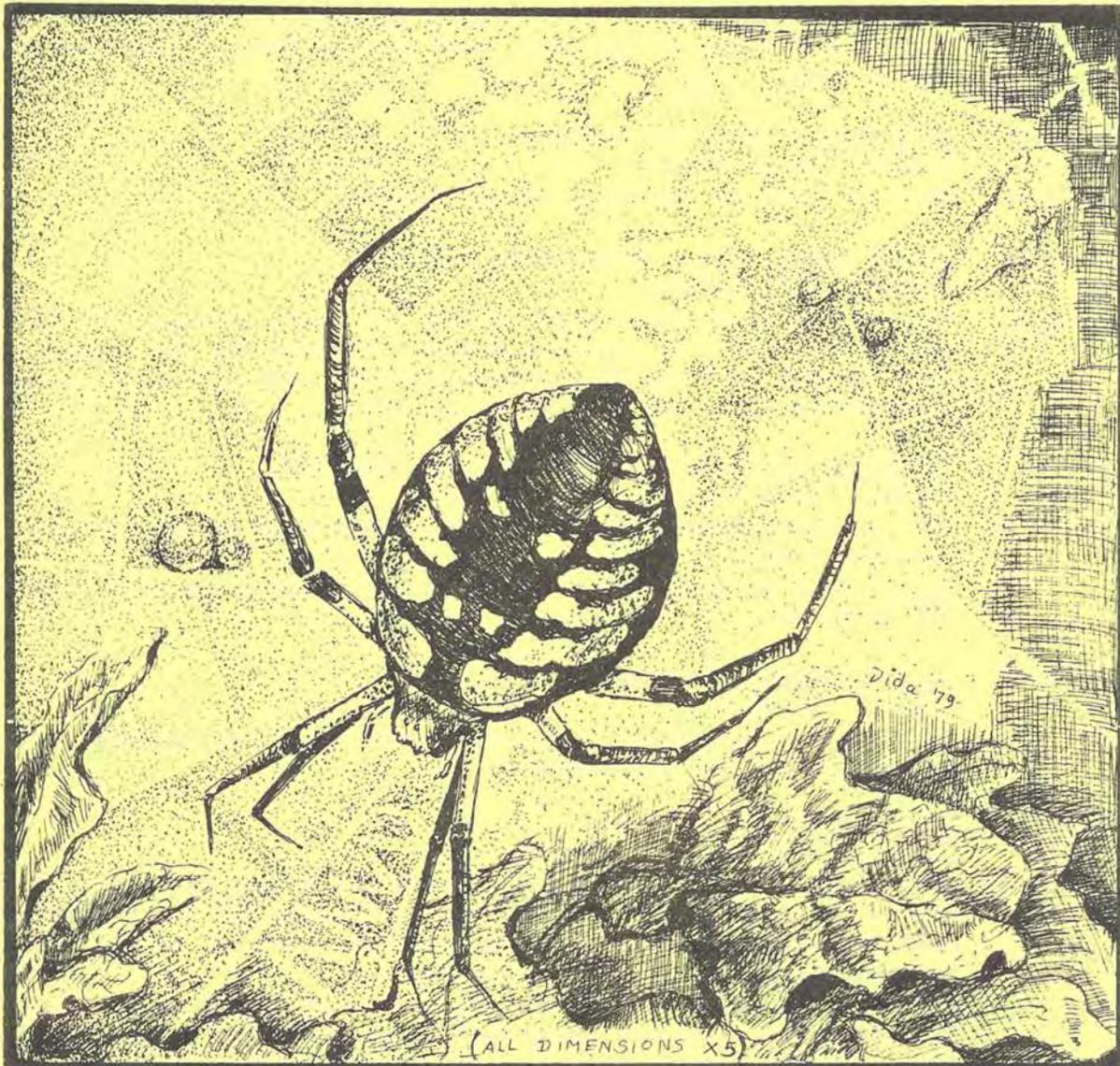




TORONTO FIELD NATURALISTS NEWSLETTER

Number 329

February, 1980



Golden orb spider (after photograph by Margaret Emminghaus) See pages 3-5.

MEMBERSHIP INFORMATION
&
PUBLICATION SALES
83 Joicey Blvd., Toronto, Ont., M5M 2T4
or call: 488-7304



Upcoming **TFN**
OUTINGS



RAIN

OR

SHINE

Everybody Welcome!

- Wednesday WINTER STUDIES - INSECTS
Feb. 6 Leader: Mrs. Scheffer
10.00 a.m. Meet at the Northern District Public Library, 40 Orchard View Blvd. (1st street north of Eglinton, west side of Yonge.) Meeting will end at noon.
- Saturday HIGH PARK - Birds and Ecology
Feb. 9 Leader: Roger Powley
9.00 a.m. Meet in front of the Keele subway station.
- Wednesday WILKET CREEK PARK - Skywatching Series #2
Feb. 13 Leader: Bill Andrews
8.00 p.m. Meet at the first parking lot inside the south entrance off Leslie Street just north of Eglinton Avenue. (Leslie #51 bus or Lawrence East #54 bus from Eglinton subway station. Get off at the stop immediately after the turn on to Leslie.)
- Saturday CEDARVALE RAVINE - Nature Walk (See page 25.)
Feb. 16 Leader: Paul Smith
10.00 a.m. Meet at Heath Street exit of the St. Clair WEST subway station (Spadina subway).
Cars. Park on Heath Street which is one block north of St. Clair, off Bathurst.
- Wednesday ALLAN GARDENS - Greenhouse
Feb. 20 Leader: Laura Greer
10.00 a.m. Meet at the greenhouse. (Carlton car to the Allan Gardens stop - between Jarvis and Sherbourne.)
- Saturday SERENA GUNDY PARK - Birds
Feb. 23 Leader: John ten Bruggenkate
10.00 a.m. Meet in the second parking lot. Enter via Wilket Creek Park from Leslie Street just north of Eglinton. (Leslie #51 bus or Lawrence East #54 bus from Eglinton subway station. Get off at the stop immediately after the turn on to Leslie.)
Cars. (and people) Follow the road in to the right to the sign directing you to Serena Gundy Park. Park and meet in the parking lot (at the far side near the suspension bridge).
- Sunday ETIENNE BRULE PARK - Birds
Mar. 2 Leader: Helen Smith
2.00 p.m. See further details in March Newsletter

All TFN Publications are for sale at monthly General Meetings.

Why daddy-long-legs isn't just another spider...

THE ARACHNIDS

Mistaking a daddy-long-legs for a spider is almost as bad as thinking that a spider is a kind of insect. Literally, insects are in a 'class' by themselves and the two look-alikes, though both belonging to a class known as arachnids, belong to separate orders.

Arachnids are fundamentally different from insects (as anyone who can count legs will know) and appear to have had a separate evolutionary history well back in geological time. The structure of their pinching jaws and their basic body divisions both attest to this fact.

Of the ten major types of arachnids living in the world now, six have representatives living in Canada. As well as about 1400 species of SPIDERS, we have several thousand kinds of MITES AND TICKS. We also have a native SCORPION and WINDSCORPION (Solifugid). Both these exotic creatures live in the dry semi-desert areas of southern Alberta and Saskatchewan, the most northerly extensions of populations centred in the southwestern United States. Canada also has PSEUDOSCORPIONS. These are small (2-4 mm long) arachnids with tiny scorpion claws but no stinging tail. And, of course, we have quite a few species of the timid, spindly-legged HARVESTMEN (daddy-long-legs).

In Canada, as in any temperate country, the most conspicuous arachnids by far are the spiders. In their numbers, their widespread distribution and their ecological importance, these master silk-spinners rival the insects for our attention. Even the casual naturalist can learn to keep track of a small number of distinctive types which correspond to several of the spider families recognized by the systematic biologist.

Our first experience with spiders is usually with one of the widespread and abundant orb-weavers (Family Araneidae), fat-bodied and perfectly adapted for life in their shimmering, circular webs suspended vertically between vegetation supports. Most are slow and awkward when trying to use their long, thin legs to crawl along the ground, but reign supreme in the delicate concentric spirals of their webs. Like all spiders they are carnivorous and produce a venom, administered through their fangs, or chelicerae, to subdue their insect-prey.

Although all spiders use silk produced from a gland at the end of the abdomen, not all of them display the elaborate behaviour which results in the creation of a web. Wolf spiders (Family Lycosidae) are a conspicuous example of spiders which do not spin webs. Frequently large and hairy, with long, strong legs, they spend almost all their time on the ground beneath stones, logs, leaves and other cover, feeding on other ground-dwelling invertebrates which they capture by stalking and pouncing. Some species are extremely agile and rapid runners.

Easily confused with the wolf spiders are the nursery-web spiders (Family Pisauridae). They are also agile, ground-dwelling species which do not spin webs, but they inhabit damper locations than wolf spiders such as margins of lakes and streams. Like wolf spiders they use silk as a drag-line wherever they go and fashion their tough, parchment-like egg-cases with it. They derive their common name from their habit of placing their mature egg-sacs inside tent-like nursery-webs which they make at the tip of a plant by drawing leaves together with silk. This nursery-web serves as home for the newly hatched spiderlings during their first few days of life.

Nor do the jumping spiders (Family Salticidae) spin a web to capture prey. They have much better vision than other spiders and are often found on vertical surfaces such as tree-trunks, rock-faces and walls. They can leap several times their own body-length to capture insect-prey.

Far less agile, but equally successful, are the crab spiders (Family Thomisidae) which are brightly coloured species that lie in ambush, camouflaged amidst flower petals, to capture the insect-visitors there.

Funnel-web spiders (Family Agelenidae) are seen less often than the characteristic web they build. These ground-dwelling spiders capture prey by constructing a flat, trampoline-like web, one corner of which leads into a silken tube where the spider hides. When an unwary insect walks over the horizontal surface of the web, vibrations are set up which alert the spider who then dashes out at a frightening speed and quickly subdues its next meal. A few species in this family frequent our homes in winter and many of us are familiar with the flat web and funnel-shaped tunnel-entrance in the neglected corners of our basements.

Other household spiders come from a variety of families. Among them are the comb-footed or cobweb spiders (Family Theridiidae). Included in this family are not only the familiar small, brown cobweb spider, but also the justly-feared black widow which is common in southern British Columbia and the prairie provinces. It is much rarer farther east. Only a few specimens are on record from remote locations in southern Ontario.

In both cities and towns the most common household spider of all belongs to the not-particularly-distinctive Family Clubionidae. It is only recognizable because of the distinctive appearance of its adults which are white with a creamy or slightly greenish tint. Tufts of black hairs - visible on each of their feet on close observation - lead to the common name of black-footed spider. They construct small, tent-like shelters in high corners of rooms. This species was introduced from Europe about 30 years ago and since that time has spread dramatically through North American homes across the continent.

In extreme southern Ontario we even have one native spider which is related to the slow-moving tarantulas, those large and relatively primitive spiders most characteristic of tropical and desert regions of the world. Our little representative is only about 15 mm long and is known as *Atypus* (Family Atypidae). The most remarkable thing about this spider is its method of capturing its prey. Rather than make a web, it uses silk to fabricate an above-ground tunnel or tube amidst blades of grass where it spends most of its time, with its claws holding it up against the wall. When a careless insect walks across the surface of the tunnel, the spider immediately thrusts its jaws through the silken tube and impales it. The venom injected into it immediately quietens the struggles of the prey. The victorious predator can then cut a slit in the wall of the tunnel, draw its meal inside, and proceed to feed in the safety and privacy of its tubular retreat.

Spiders are widely feared because of the supposed dangers of their bites. While all spiders produce venom to subdue their prey, few bite humans and in only a few species is the venom dangerous. Some of the larger wolf spiders and nursery-web spiders can inflict a bite with an effect rather like that of a wasp-sting. The bite of the dreaded tarantula of Hollywood notoriety is no worse, at least in North and Central America. In Ontario we have no venomous species. Even specialists have been unable to locate any populations

of black widows in recent years. The brown recluse (Family Loxoscelidae) which is now well established in the central United States is poisonous in a limited sense; severe destruction of tissues occurs in the immediate area of the bite. Seldom is life threatened by a bite from this species. By and large, then, the danger of spiders has been vastly exaggerated and there remains only the nuisance of walking into spider-webs during a tramp through the forest.

The informed naturalist will recognize spiders and their arachnid relatives as among the more fascinating elements of the natural world. Their beautiful colours and patterns and their marvellous habits can be as satisfying to the careful observer as the knowledge that spiders help control insect populations.

David Barr

(Dr. Barr is Associate Curator-in-Charge of the Department of Entomology, Royal Ontario Museum.)

ENVIRONMENTAL GROUP REPORT

At the November meeting of the Environmental Group, we were pleased to have as our guest, Ian Montagnes, General Editor of the University of Toronto Press. He presented a well-researched slide show on the history of Taddle Creek. The creek ran through Toronto in the later half of the 19th century from the Wychwood area through the University of Toronto campus, looping around to Shuter Street, then into the lake.

Ian has worked on this project for several years as a personal hobby and has uncovered maps drawn by Sanford Fleming, old paintings and drawings from the 19th century, and notes from students' letters. We were delighted by Ian's charming approach and his dedicated research. This talk provided the basis for discussion on other areas of the city currently in danger of being destroyed.

Melanie Melanich

Applications for seasonal employment in park interpretation within the Algonquin Region of the Ontario Ministry of Natural Resources should be sent by February 15, 1980 to:

Interpretive Services Supervisor, Ministry of Natural Resources,
Box 219, Whitney, Ont. K0J 2M0 (705-633-5592)

All resumes and applications for 1980 Summer Employment in Huronia District Parks Visitor Services Programmes should be forwarded by February 16, 1980 to:
Ministry of Natural Resources, Huronia District Office, Midhurst,
Ont. L0L 1X0 and must be marked to the attention of the Visitor Services Programmer.

Applications for summer positions with the Visitor Services Programme in the Provincial Parks within the Owen Sound District must be sent by February 29, 1980 to:
District Manager, Ministry of Natural Resources, 611 Ninth Ave. East,
Owen Sound, Ont. 4NK 3E4

A WHITE PINE STAND IN THE ROUGE RIVER VALLEY —
WHAT CAN WE MAKE OF IT?

Last winter we were approached by environmental consultants wanting information about areas just west of the Rouge River Valley in Toronto because of a major north-south expressway being planned there. A late winter visit to one of the Rouge's tributaries, Morningside Creek, revealed a small, deep ravine with hemlock forest on most of the slopes. On the north side of the creek a gentle rise supported cedar thickets and an impressive white pine stand grading into an immature maple and oak forest on the tableland. The white pine and the presence of a red-shouldered hawk, and a group of nine deer bounding out of the bush in perfect synchrony stimulated us to return the following summer.

We knew of only a few other remnants of white pine forest in Toronto. The desirability of pine wood to early settlers and the species' legendary sensitivity to urban and roadside air pollutants have helped to make white pine infrequent in the area. A stand of about one hectare (two acres) of mature trees was something we thought worth documenting — especially as planning was proceeding on an expressway within fifty yards of it, in a direct 'line of fire' from salt spray and exhaust fumes. The challenge was to describe the stand in a way that would be accurate and would put it into some sort of regional perspective.

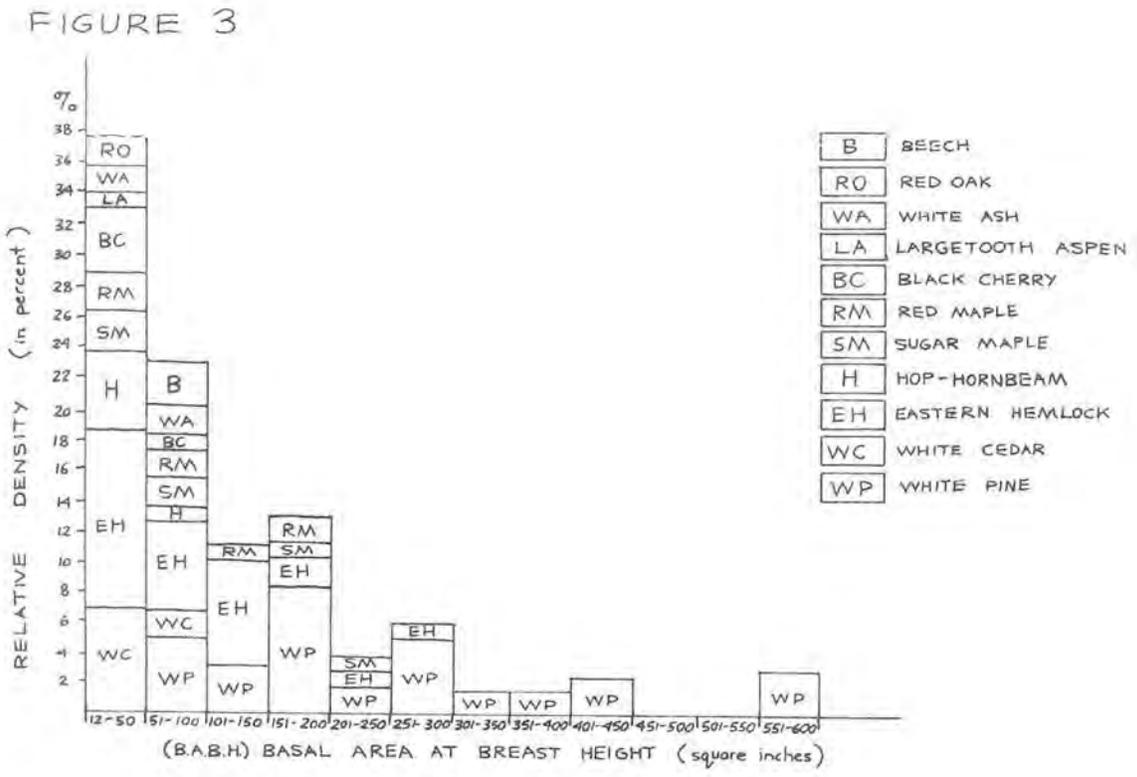
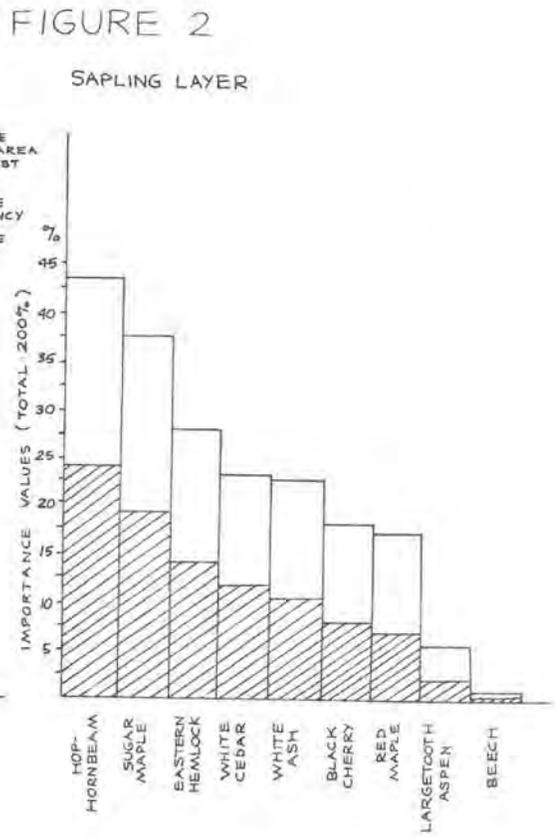
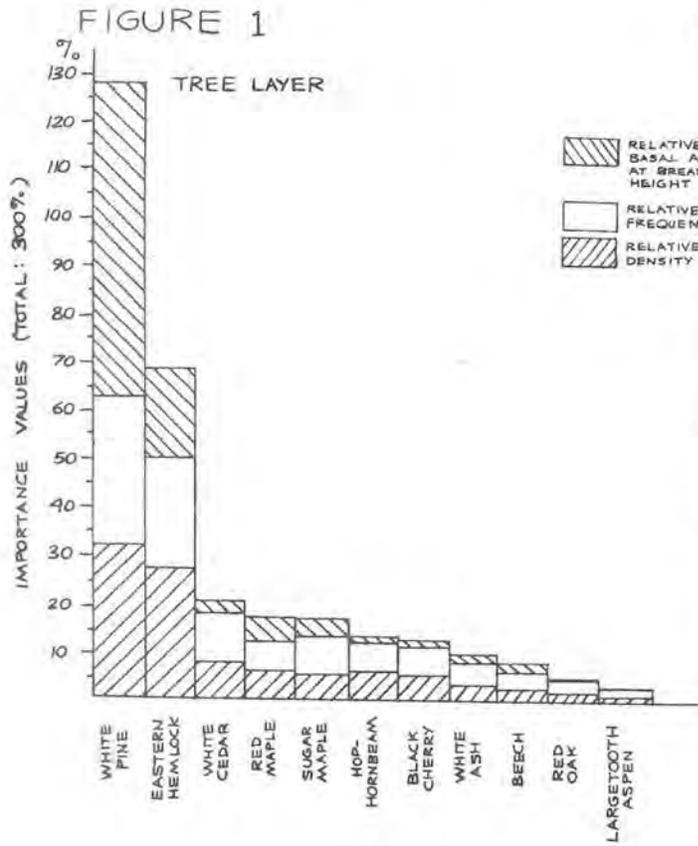
The Pine Stand

Most naturalists are unwilling to mess with numbers even if they have the critical knowledge of which plants are which. Somehow, the idea of quantifying nature tends to take the edge off the outdoor experience, but numbers can sometimes be very useful.

We collected information on the white pine site by walking compass lines through the area, randomly selecting points at which to record data (see Maycock 1963 for technique). We recorded the types and positions of trees and saplings, their diameters and heights. We also noted the presence and amount of ground covered by plants on the forest floor. Applying some simple calculations to these observations, we came up with figures on how often a species occurs relative to other species (relative frequency), how closely spaced the individuals of a species are in comparison with those of other species (relative density), and how large the individuals are in comparison with those of other species (relative basal area). These three figures are relative percentages, so we can total them to come up with an Importance Value (out of 300%) for each species in the stand.

To help us visualize the results, we can graph the values for each tree species (Fig. 1), sapling species (Fig. 2), and common ground cover species (Fig. 4, with only frequency and cover values recorded for these). We see from Fig. 1 that white pine is the dominant tree species, with hemlock of secondary importance, and sugar maple, white cedar, red maple, much less important. As well, we can see that in relative basal area (tree size), white pine is by far the most important species. Some of the trees are well over two feet in diameter at breast height.

We were able to take small cores out of several white pine with a hollow auger. From counting the rings, we found that all the trees, whether one or two feet in diameter, were between the ages of 110 and 120 years. Our understanding of white pine is that it is a relatively shade-tolerant species, usually colonizing open sites, often following natural disturbance. Probably this pine stand started as a fairly dense stand in a clearing or burned area, with the growth

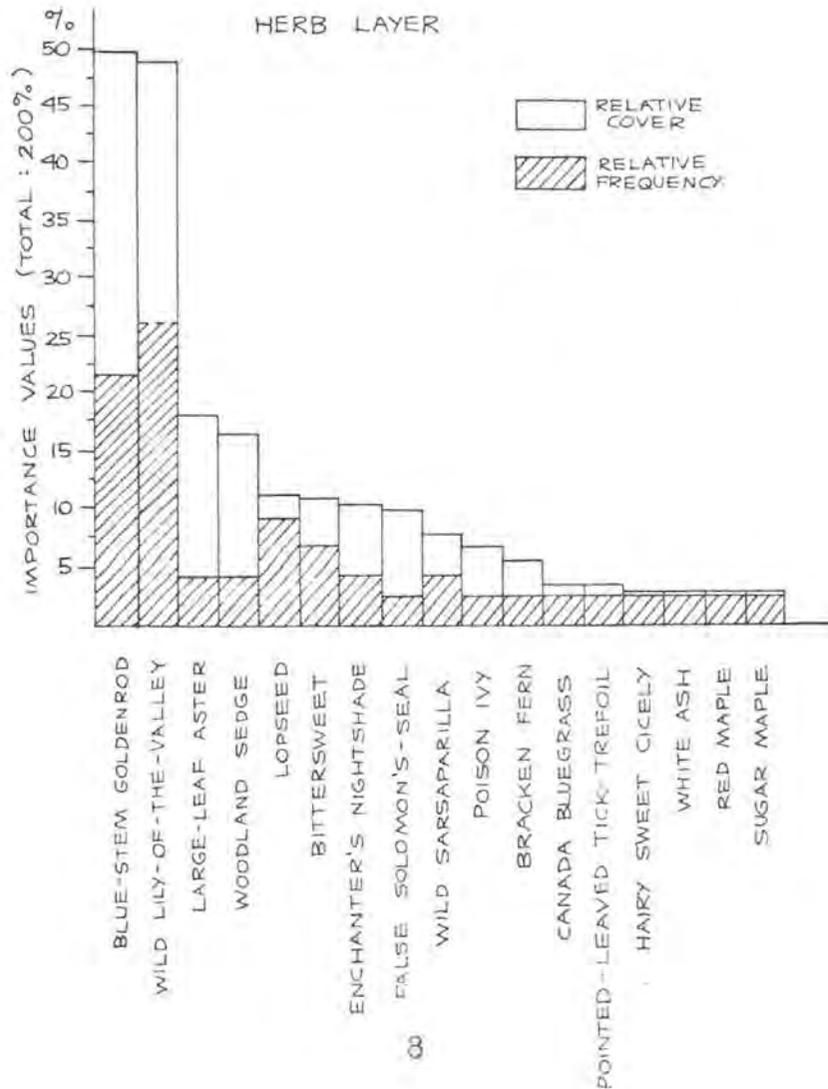


of some individuals stunted through competition, and with other species invading successfully only later as understorey and clearing growth.

We get some confirmation of this from the sapling data (Fig. 2) which shows no white pine while each of the other tree species is represented. Hop hornbeam, sugar maple, hemlock, and cedar are the most important saplings in the stand. We could find no signs of fire or of hardwood trees having been logged out during the history of the present stand. It appears that the stand is gradually developing towards a forest with more hemlock and more deciduous species, and with pine not regenerating within the stand itself. With this in mind, it was with considerable interest that we noted an adjacent field which had been abandoned about thirty years ago. The field is dominated by young white pine, holding out the possibility of history repeating itself.

We can shuffle the numbers a little to look more closely at this possible phenomenon of succession from pine to deciduous forest. We graphed the densities of different tree species of various size classes (Fig. 3). If we assume a general relationship between the size of a tree of a given species and its age (but remember the even-aged pines of different sizes), we can use such a graph to visualize a stand dominated by white pine, with hemlock, white cedar, beech, sugar maple and red maple gradually increasing in importance over the years, and with other species such as black cherry, white ash and red oak becoming established in the past 50 years. These interpretations were confirmed by looking at the ages of the trees in the stand.

FIGURE 4



The shrub and ground cover in this closed-canopy stand are relatively sparse. Choke cherry, beaked hazel, alternate-leaf dogwood, and maple-leaf viburnum are most abundant, with raspberry and prickly gooseberry especially frequent in low moist clearings. The autumn ground cover was predominantly blue-stem goldenrod and wild lily-of-the-valley. Large-leaf aster and nightshade were important but "patchy" species as indicated by the low frequency and high cover values (Fig. 4). Woodland sedge (*Carex pensylvanica*), lopseed, enchanter's nightshade and wild sarsaparilla occurred frequently but with low cover values. Infrequent in the stand, but of floristic note, were spikenard, fringed polygala, maidenhair fern, bitternut hickory saplings, witch hazel, Christmas fern, and numerous spring-flowering sedges.

Where to go from here -- a regional perspective

Describing a forest stand and knowing that it is unusual in the Toronto area is useful, but it is just as important to put the stand into some kind of perspective regionally, or even provincially. The documentation of such a perspective is the field of much ecological literature, and can be of considerable importance to planners weighing development and conservation alternatives.

Although Ontario forests were historically known as the Northern Pine Belt, Weaver and Clements (1929) and Nichols (1935) divided this forest region into the northern (boreal) conifer forest (north of Superior) and the forests to the south. They called this southern zone the Lake Forests or the Hemlock-White Pine-Northern Hardwood Forest. By the 1950's, increased knowledge of the forests of Canada made a more exacting approach to such regional classifications not only possible but necessary. Rowe (1959) termed the forests south of the Grand Bend - Toronto - Kingston axis the Deciduous Forest Region. He mentioned hemlock and white pine as locally scattered in their occurrence in small stands on coarse soils and in association with an oak understorey. He termed the area to the north of that same line from Grand Bend to Kingston the Great Lakes - St. Lawrence Forest Region. Its southernmost forests were characterized by the sugar maple and beech we know so well locally. Hemlock and white pine are more frequent, but still usually local in their occurrence. On the nearby areas of the Canadian Shield, pine and hemlock come into their own, with pine especially common on dry, rocky ridges and in sandy areas.

Dr. Maycock of the University of Toronto studied in detail the forests of the Great Lakes Forest Region north of us (1960). By looking quantitatively at the forest composition of the area, he concluded that trembling aspen, white birch, and jack pine were the most common species overall at that time, with white pine and hemlock forming a noticeable part of the landscape towards the south. Generally, it was the frequency of these two conifer species which was seen as one of the striking indicators of change in forests from north to south in the Great Lakes area of Ontario.

Applying the same methods to the forests of southernmost Ontario, Dr. Maycock (1963) remarked on the characteristic lack of conifers in these deciduous forests and the characteristic presence of such unusual southern tree species as black maple, black walnut, bitternut hickory, sycamore and eastern cottonwood (all of which occur infrequently in the Rouge River Valley), and of many other tree species which do not extend so far north. Again, the data showed white pine most important on dry to dry-mesic sites, usually with oak. The most common species of the region were found to be sugar maple, beech, and elm (since destroyed in large part), with red oak, red maple, and white ash also

very important. In fact, of the tree species most abundant on dry sites, white pine did not rank in the top ten in importance on the sites he looked at during his study.

More recently Dr. Maycock has been working towards tailoring the voluminous Ontario forest data he has collected to fit the provincial Site Region System proposed and refined by the late Angus Hills over the past 25 years (1959). Angus Hills proposed a series of 13 Site Regions for Ontario. In each site region exists a relative uniformity of climate, landform and biological productivity. They developed a matrix system which could be used to organize Maycock's quantitative data around each of Hills' Site Regions, segregating data within each region on the basis of the sites' microclimate (colder or warmer than normal), general soil type and general moisture availability (from arid to open water)(Fig. 5). Any given square of this matrix represents a particular kind of site which has the potential of becoming any one of a number of very different or very similar forest types, depending on the location of the site and its particular history.

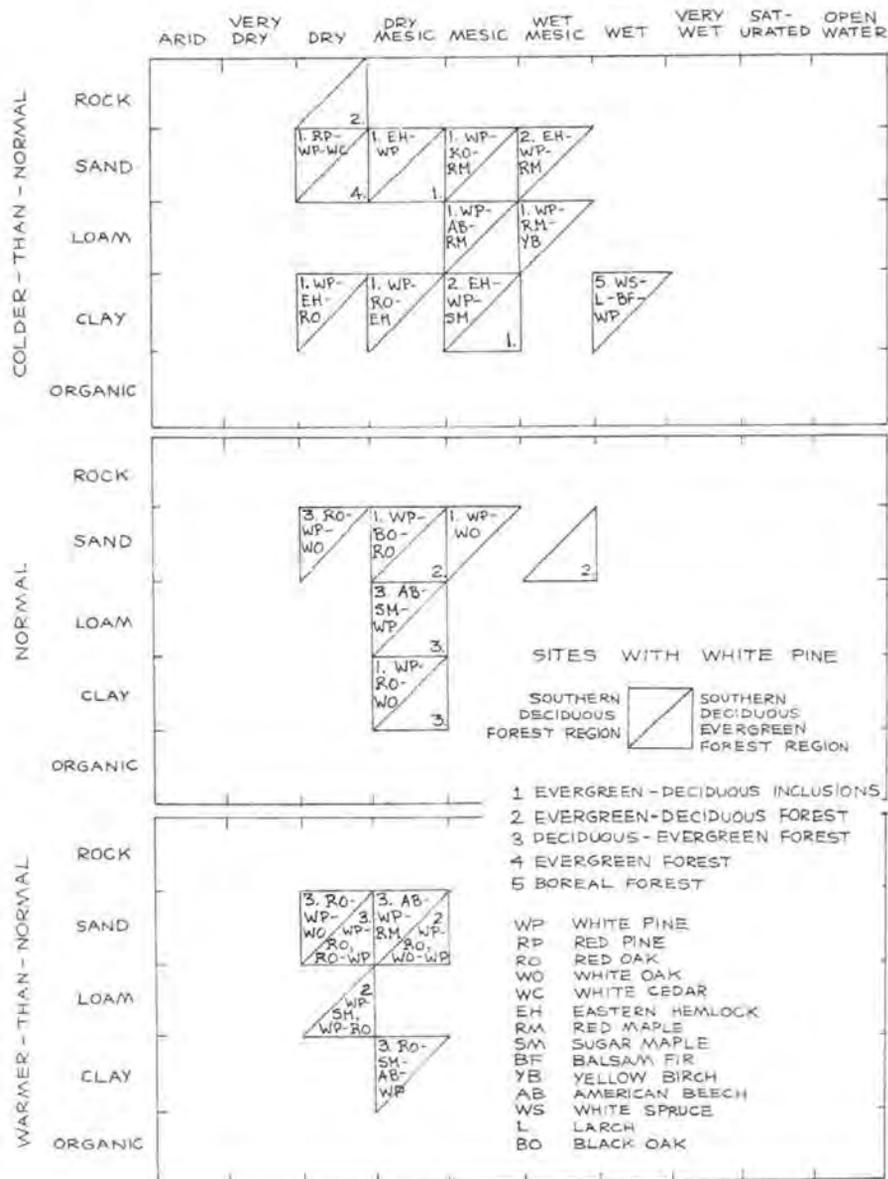
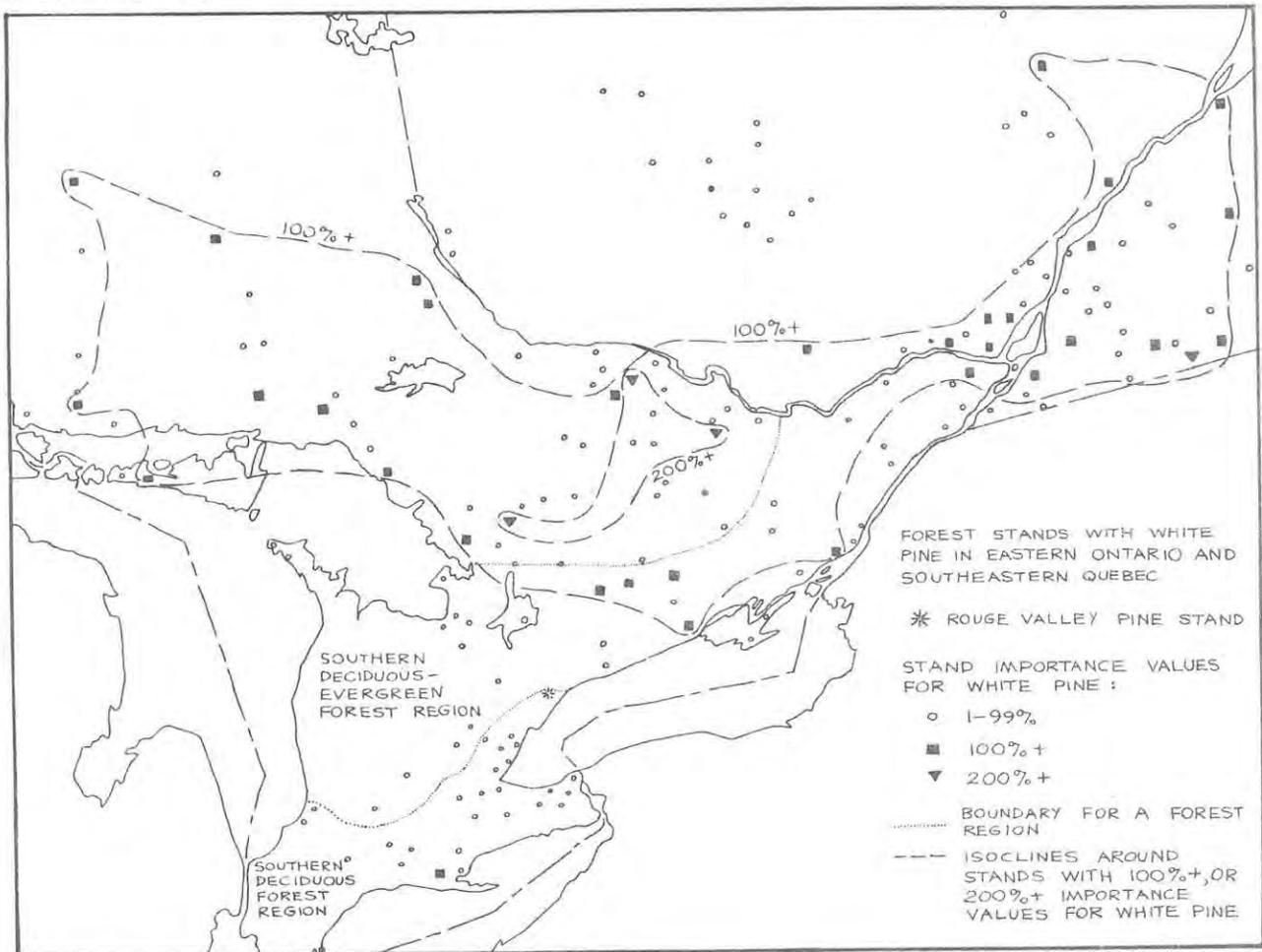


FIGURE 5

AFTER MAYCOCK (1979)

FIGURE 6



AFTER MAYCOCK (1979)

This may appear at first to be a very complicated system but, given the almost unapproachable variability of nature, this matrix approach is a useful step towards de-mystifying ecological description and for assessing particular sites within a regional perspective on a more accurate basis than previously possible. Most of Dr. Maycock's work on these matrices is awaiting publication, but he has been most generous in providing access to it.

Interpreting such a matrix (Fig. 5) is complicated in this case because the boundary between two of Hills' Site Regions runs close to the pine stand (Fig. 6). Hence, on the matrix (Fig. 5) the pine sites in the region to the north (the Deciduous-Evergreen Forest Region) and to the south (the Deciduous Forest Region) are both presented in an abbreviated way. The Rouge site has a sandy clay soil (27% sand, 22% silt, 51% clay), placing it in the clay substrate column. The soil has no mottling in the lower horizon, one characteristic among others helping to identify this gently southfacing site as well-drained and dry-mesic. The designation of site microclimate, whether the site is warmer or colder than the regional norm, depends on the Site Region in which we consider the site. However, as the tree composition outlined in the squares of the matrix indicate, normal and warmer-than-normal pine sites in both regions most often support pine strongly associated with oak. White pine-hemlock stands tend to occur on colder-than-normal sites in both Site Regions. The white pine-hemlock stand at the Rouge appears to be most accurately described as a local remnant or

inclusion of a more typically northern evergreen-deciduous forest, occurring southward on a colder-than-normal site.

The mapping of white pine stands which have been sampled by these methods in Ontario and Quebec (Fig. 6) confirms that the pine stand at the Rouge is much more characteristic of sites 60 miles or more north of Toronto on the Canadian Shield. White pine in the Rouge has an Importance Value of 128. A line connecting sites with white pine Importance Values over 100 describes the contact line with the Canadian Shield reasonably closely with the exception of a few sandy river valley sites in Northumberland County. South of that line, white pine dominates only a few small sites. One of them—an oak-dominated site in Norfolk County—has a white pine Importance Value at 100. A few other stands, one in Rondeau and a couple in river valley sites in the Burlington-Oakville area and in eastern Northumberland County area, have white pine Importance Values in the 70 to 95 range.

It is fair to suggest that the white pine stand in the Rouge River Valley is one of less than half a dozen comparable sites documented in Ontario southwest of the Canadian Shield. It has a greater proportion of white pine than any of the stands now known in that area. It is most certainly a forest of considerable distinction within the Toronto region. We should ensure the survival of the stand itself and the survival of the adjacent field of immature pine which may carry the site naturally into another forest generation.

John Riley and Steve Varga

.....
All references listed below may be obtained from the Metropolitan Toronto Library, 789 Yonge St. or from the University or Royal Ontario Museum libraries.

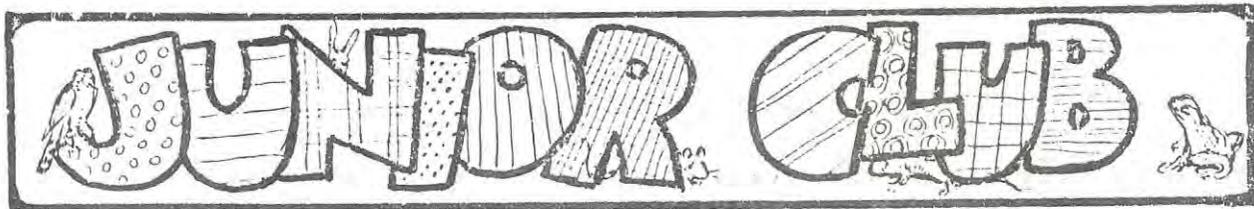
- Hills, G.A. (1959) A ready reference to the description of the land of Ontario and its productivity. Prelim. Report, Ontario Dept. of Lands and Forests, Maple, Ont.
- Maycock, P.F. (1963) "The phytosociology of the deciduous forests of extreme southern Ontario". Canadian Journal of Botany 41: 379-438.
- Maycock, P.F. and J.T. Curtis. (1960) "The phytosociology of boreal conifer-
hardwood forests of the Great Lakes region". Ecological Monographs 30: 3-35.
- Nichols, G.E. (1935) "The hemlock-white pine-northern hardwood region of eastern North America". Ecology 16: 403-422.
- Rowe, J.S. (1959) (1972) Forest regions of Canada. Canadian Forestry Service, Publ. 1300, Dept. of Environment, Ottawa.
- Weaver, J.E. and F.E. Clements. (1929) Plant ecology. New York. 520 pp.
-

A Naturalist's Code of Ethics

Items for our Code of Ethics Project are welcome. If you have any ideas, please send them to Miss Florence Preston, 368 Eglinton Ave. E., Apt. 203, Toronto M4P 1L9.

Here is a suggestion from a TFN member:
For the sake of fellow naturalists as well as for the environment, smokers are requested to refrain from indulging in their favourite habit when on a nature walk with other people. The smoke itself is unpleasant to the nostrils of the non-smoker, and the ashes and cigarette butts do more harm than good to the soil on which they are dropped.

JUNIOR CLUB



All of us at the Junior Club have been having a fun year. We now have 99 young members and 19 leaders. The parents of the vast majority of our young members are not members of the TFN, so we are introducing a large number of young and old people to our organization. About half of our leaders are not members of the TFN. It has always been a source of amazement to me that we do not get more enthusiastic support from within the TFN itself — either from the children of adults in the club or from members willing to help out.

This year our Mineralogy Group has been greatly helped by the members of the Walker Club. They do not have a junior group any more, and we are supplying that role as well. We have started a new group this year — Astronomy, with the assistance of Kathy Drake of the Planetarium Staff and the Royal Astronomical Society. Our Reptile Group is flourishing with the aid of three amateur herpetologists. Our Bird Group is fearlessly braving the weather led by Dave Kelly and Hugh Currie. Wally Platts and Melital Schefel have been putting together some excellent programs including one field trip to the Don Valley Brickyards with an expert from the Ministry of Natural Resources. Our 8, 9, and 10 year old groups are having a good time, but we could always use more help with the young ones. Space does not permit me to mention all of the leaders and the good job they are doing.

We have organized a speakers' program which has attracted adults and children alike. We have had or will have talks by past TFN presidents Bill Andrews, and Ron Thorpe, TFN member Chip Weseloh of the Canadian Wildlife Services, Ministry of Natural Resources Geologist Eric Blunden, and Ron Lyons of the FON and the David Dunlap Observatory.

Nevertheless, we still have weaknesses. Our Botany Group needs more members and an additional leader. For some reason, botany is not a subject which excites children. We could use help in this area — both in recruitment and leadership — from any of our members who are botanists. Many kids express an interest in mammals but we have had trouble finding a mammal group leader. This year we have had to discontinue our mammal group.

Our next meeting is on February 2, 1980, when we will have a talk from Ron Thorpe about Ontario vegetative zones. On March 1, we are going to have a Display Day when the children show off their activities during the year. This will probably be in the Dinosaur Den (the children's cafeteria) at the Museum. We are planning a bus field trip for May 10, 1980. TFN members are invited to these or any of our meetings.

No review of the Junior Club would be complete without a mention of our energetic secretary-treasurer, Sheila McCoy. Perhaps my greatest contribution to the Junior Club has been persuading her to help out.

There are very few children's nature clubs in Toronto, and there are none that we know of with our emphasis on outdoor field study. We are proud of our Junior Club, and we hope adult members will give us their whole-hearted support. We are always looking for suggestions for speakers, leaders, or programs. Please call me at the telephone number below or Sheila McCoy at 755-5671.

Brian W. Gray (481-3918)
Director TJFN

CHRISTMAS BIRD COUNT

The species counted and their numbers were as follows:

| | |
|----------------------------|-----------------------------|
| 1 Common Loon | 17 Great Horned Owl |
| 2 Great Blue Heron | 15 Long-eared Owl |
| 30 Mute Swan | 9 Belted Kingfisher |
| 3576 Canada Goose | 6 Common Flicker |
| 2 Snow Goose | 1 Pileated Woodpecker |
| 5597 Mallard | 1 Yellow-bellied Sapsucker |
| 676 Black Duck | 32 Hairy Woodpecker |
| 191 Gadwall | 162 Downy Woodpecker |
| 2 Pintail | 7 Horned Lark |
| 2 Green-winged Teal | 415 Blue Jay |
| 51 American Widgeon | 244 Common Crow |
| 3 Northern Shoveler | 1514 Black-capped Chickadee |
| 10 Wood Duck | 170 White-breasted Nuthatch |
| 45 Redhead | 21 Red-breasted Nuthatch |
| 2 Ring-necked Duck | 28 Brown Creeper |
| 83 Canvasback | 5 Winter Wren |
| 2440 Greater Scaup | 1 Mockingbird |
| 3 Lesser Scaup | 2 Brown Thrasher |
| 257 Common Goldeneye | 54 American Robin |
| 383 Bufflehead | 3 Hermit Thrush |
| 5379 Oldsquaw | 38 Golden-crowned Kinglet |
| 11 White-winged Scoter | 1 Ruby-crowned Kinglet |
| 1 Hooded Merganser | 299 Cedar Waxwing |
| 228 Common Merganser | 4 Northern Shrike |
| 7 Red-breasted Merganser | 4300 Starling |
| 2 Sharp-shinned Hawk | 1 Yellow-rumped Warbler |
| 1 Cooper's Hawk | 2680 House Sparrow |
| 89 Red-tailed Hawk | 56 Red-winged Blackbird |
| 5 Rough-legged Hawk | 15 Common Grackle |
| 1 Marsh Hawk | 29 Brown-headed Cowbird |
| 52 American Kestrel | 331 Cardinal |
| 16 Ruffed Grouse | 142 Evening Grosbeak |
| 97 Ring-necked Pheasant | 3 Purple Finch |
| 12 American Coot | 17 Pine Siskin |
| 1 Killdeer | 217 American Goldfinch |
| 7 Glaucous Gull | 697 Dark-eyed Junco |
| 41 Great Black-backed Gull | 380 Tree Sparrow |
| 3911 Herring Gull | 3 Field Sparrow |
| 1693 Ring-billed Gull | 1 White-crowned Sparrow |
| 1 Bonaparte's Gull | 52 White-throated Sparrow |
| 2539 Rock Dove | 8 Swamp Sparrow |
| 338 Mourning Dove | 93 Song Sparrow |
| 3 Screech Owl | |

Species: 85

Individuals: 39,865

Participants: 119

Compiler: Harry Kerr

TORONTO'S 55TH CHRISTMAS BIRD COUNT, 1979

This year's census was held on Sunday, December 23. The 30-mile count area bounded by Clarkson, Pottageville and Whitby was covered by 119 participants in 28 parties.

There were no new species added this year so the 55-year total remains at 159. Eighty-five species and 39,865 individuals were recorded - a very good count considering the fog, rain, mist and drizzle which covered all areas for almost the entire day. Last year 89 species and 45,828 individuals were recorded.

The group covering the Leslie Street Spit found visibility so poor that they were unable to go out until 11.00 a.m.; other members became separated from their parties and didn't regroup until late in the afternoon. Arne Dawe, who has looked for owls in a grove of trees on the Weston golf course for 33 consecutive counts, wasn't able to find the trees.

Somehow we did manage to find the following three species in record numbers:

White-winged Scoter 11, (previous high 9 in 1957); Coot 12 (previous highs 3 in 1963 and 1977); Cardinal 331 (previous high 212 in 1966).

Only 4,300 starlings were counted, compared to 8,969 last year. The fog surely hid many more.

Winter finches were few and far between; and our resident Harlequin Duck, which has been counted every census but one since 1970, could not be found.

Although our census did not break many records, it was a successful one, and on behalf of the Toronto Ornithological Club, I wish to express our sincere thanks to all the members of the Toronto Field Naturalists, and others, for a job well done.

- Harry Kerr

AUDUBON WILDLIFE FILMS

A wonderful opportunity exists to head this stimulating and important program next fall. Although there is no financial remuneration, there is the reward of meeting interesting and dynamic world-class nature photographers and also of assisting in raising funds for the TFN.

This is a challenging task wherein you can gain experience in promotion, organization and communication. The relatively small amount of time needed will not interfere with your job or personal pleasure.

If you are interested and would like to discuss the matter, please call the present chairman, Dave Langford, at home, 463-6302, or business, 226-5611. He will be happy to explain the position in detail.

TORONTO REGION BIRD RECORDS, Jan. 1980

This is the first in what is intended to be a regular feature of the Newsletter. As the record grows during the year it will consist of the first record for each species for the year in the Toronto region, as well as noteworthy records such as rare birds, unusual numbers, and migration dates. Everyone is invited to contribute their observations for use in this report. The format of the report closely follows that used by George North in "The Wood Duck" (Hamilton Naturalists' Club).

Number of species recorded to Jan. 6, 1980: 59

* indicates first record for the year

| | | | | |
|-------------------------|----|---------|---|-----------------------|
| Mute Swan | 14 | Jan. 3* | Mimico | John Kelly (JK) |
| Canada Goose | | Jan. 6* | Toronto Ornithological Club Waterfowl Count (TOC) | |
| Mallard | | Jan. 6* | TOC | |
| Black Duck | | Jan. 6* | TOC | |
| Gadwall | | Jan. 6* | TOC | |
| Pintail | | Jan. 6* | TOC | |
| Green-winged Teal | | Jan. 6* | TOC | |
| American Widgeon | | Jan. 6* | TOC | |
| Redhead | | Jan. 6* | TOC | |
| Canvasback | | Jan. 6* | TOC | |
| Greater Scaup | | Jan. 6* | TOC | |
| Common Golden-eye | | Jan. 6* | TOC | |
| Bufflehead | | Jan. 6* | TOC | |
| Oldsquaw | | Jan. 6* | TOC | |
| Hooded Merganser | | Jan. 6* | TOC | |
| Common Merganser | | Jan. 6* | TOC | |
| Red-breasted Merganser | | Jan. 6* | TOC | |
| Red-tailed Hawk | | Jan. 1* | Don Valley | Helen Juhola |
| Rough-legged Hawk | 4 | Jan. 5* | Clairville | JK |
| American Kestrel | | Jan. 4* | Don Valley | Bruce Parker (BP) |
| Glaucous Gull | | Jan. 5* | Frenchman's Bay | Harry Kerr (HK) |
| Iceland Gull | | Jan. 5* | Frenchman's Bay | HK |
| Great Black-backed Gull | | Jan. 5* | Frenchman's Bay | HK |
| Herring Gull | | Jan. 5* | Frenchman's Bay | HK |
| Ring-billed Gull | | Jan. 5* | Frenchman's Bay | HK |
| Rock Dove | | Jan. 1* | Scarborough | BP |
| Mourning Dove | | Jan. 1* | Hague Park Ravine | BP |
| Screech Owl | 1 | Jan. 1* | Sherwood Park | George Fairfield (GF) |
| Great Horned Owl | 1 | Jan. 6* | Clairville | JK |
| Snowy Owl | 1 | Jan. 6* | Malton | JK |
| Pileated Woodpecker | | Jan. 5* | Sherwood Park | GF |
| Hairy Woodpecker | | Jan. 1* | Hague Park Ravine | BP |
| Downy Woodpecker | | Jan. 1* | Hague Park Ravine | BP |
| Horned Lark | 3 | Jan. 6* | Eastern Headland | TOC |
| Blue Jay | | Jan. 1* | Hague Park Ravine | BP |
| Common Crow | | Jan. 1* | Hague Park Ravine | BP |
| Black-capped Chickadee | | Jan. 1* | Hague Park Ravine | BP |
| White-breasted Nuthatch | | Jan. 1* | Hague Park Ravine | BP |
| Brown Creeper | 1 | Jan. 5* | Sherwood Park | GF |
| Winter Wren | 1 | Jan. 5* | Lambton Woods | JK |
| Mockingbird | 1 | Jan. 5* | Aurora | JK |
| Brown Thrasher | 1 | Jan. 1* | Hague Park Woods | BP |
| American Robin | 3 | Jan. 1* | Hague Park Woods | BP |
| Hermit Thrush | 2 | Jan. 1* | Hague Park Woods | BP |

| | | | |
|------------------------|------------|-------------------------|------------------------|
| Ruby-crowned Kinglet | 1 Jan. 5* | Lynde Shores Cons. Area | J. Murray Speirs (JMS) |
| Cedar Waxwing | 1 Jan. 1* | Hague Park Ravine | BP |
| Starling | Jan. 1* | Don Mills | BP |
| Yellow-rumped Warbler | 1 Jan. 1* | Pickering | JMS |
| House Sparrow | Jan. 1* | Scarborough | BP |
| Common Grackle | 1 Jan. 1* | Hague Park Ravine | BP |
| Cardinal | Jan. 1* | Hague Park Ravine | BP |
| Rose-breasted Grosbeak | 1 Jan. 1* | Pickering | HK |
| American Goldfinch | Jan. 1* | Hague Park Ravine | BP |
| Rufous-sided Towhee | 1 Jan. 5* | Toronto Island | HK |
| Dark-eyed Junco | Jan. 1* | Hague Park Ravine | BP |
| Tree Sparrow | 20 Jan. 6* | Clairville | JK |
| White-throated Sparrow | 6 Jan. 1* | Hague Park Ravine | BP |
| Swamp Sparrow | 1 Jan. 1* | Sherwood Park | GF |
| Song Sparrow | 2 Jan. 5* | Lambton Woods | JK |

▷ Please send your bird records by the 20th of the month to Bruce D. Parker, TH66, 109 Valley Woods Rd., Don Mills, Ont. M3A 2R8 or telephone 449-0994.



To open the November meeting of the Bird Group, the chairman Red Mason requested the group's help in two winter bird counts. The members then discussed what birds they had seen - notable were Purple Sandpipers, Rough-Legged Hawks, Brant Geese and large numbers of Snowy Owls.

All present were then treated to a well-presented slide show and talk entitled "along the Sideroads" by Ted Maginn. Mr. Maginn's excellent slides depicted what flowers, mushrooms, birds and animals can be seen very easily if one travels slowly off the main highways, and takes the time to look and appreciate.

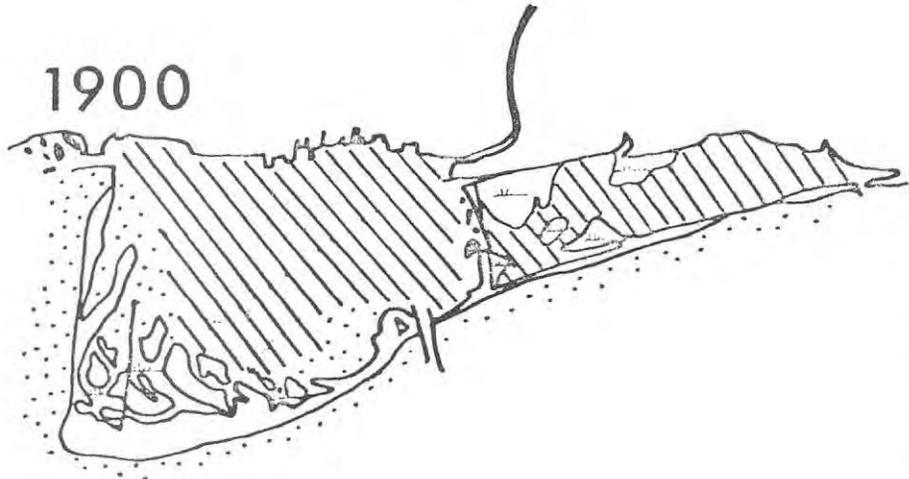
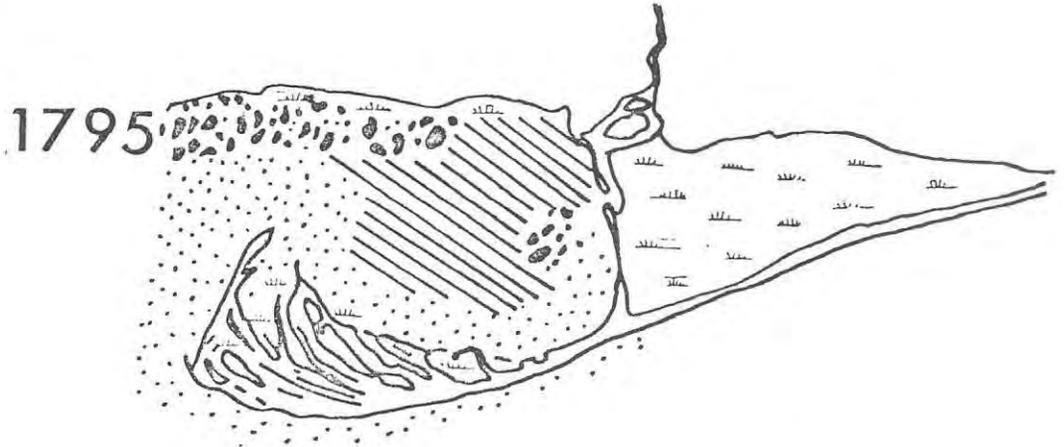
The members were then reminded to keep note of all birds seen from December 1 until the next meeting (January 23) for inclusion in the Bird Group's Winter Bird List. All birds must be seen within a 30-mile radius of the Royal Ontario Museum between December 1, 1979 and February 29, 1980. Last year's list was not impressive - let us see if we can top that number.

- Anne Macdonald

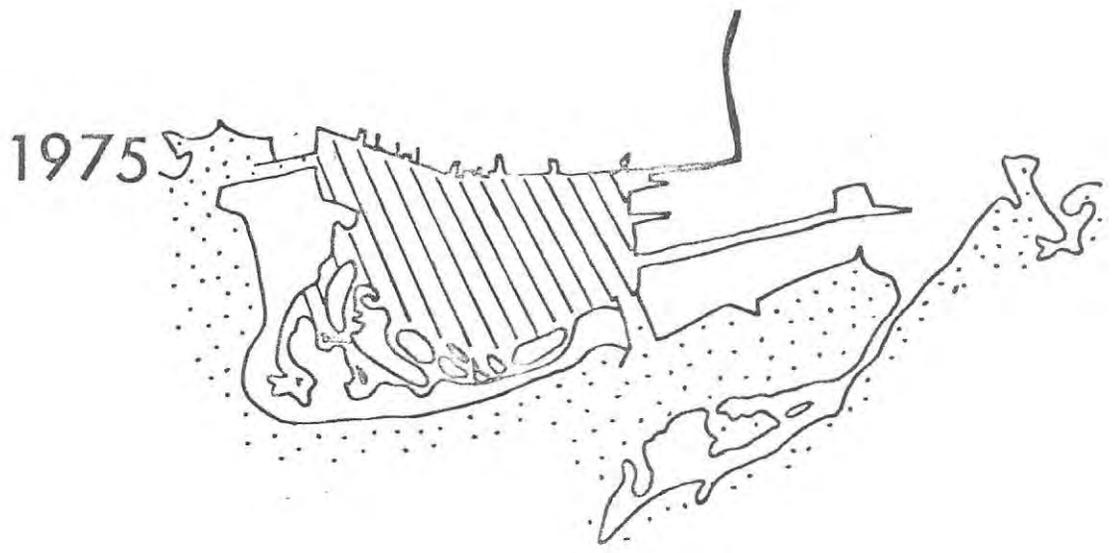
If you are planning a visit to the Jim Baillie Nature Reserve some time in the future, you will want to make a note of the combination of the new lock on the entrance gate to the Reserve:

24 - 30 - 4.

TORONTO BAY AQUATIC HABITATS IN THE PAST



-  ORGANIC, MARSH
-  STONE, ROCK, GRAVEL
-  SAND
-  MUD, SILT



TORONTO BAY — ONCE AND AGAIN

To many people, Toronto Bay is that stretch of second-hand water separating the City of Toronto proper from its pastoral islands and the fresher water beyond. Silt soup, often coated by a thin, oily film and periodically supporting noxious pontoons of bloated alewife, the bay serves also as a refuge for produce-laden freighters, a backdrop for restaurants, or a pleasant sailing ground — provided everything remains upright. In the autumn and spring, a naturalist pilgrimage to the island acknowledges the bay as a mildly interesting gull haven which is useful to fine-tune the focus of binoculars during the outward ferry ride. A new generation of cane-pole warriors skirts the bay on excursions after coho salmon in the open lake, panfish in Grenadier Pond, rainbow trout in Blockhouse Bay, or white bass in the Hearn Generating Station outfall.

They all unwittingly tread on the majestic ghosts of orange-fleshed Atlantic salmon. The beleaguered, complacent spirits of Blandings turtles scatter in the wakes of boats. And the stifled souls of great sturgeon lie silent under tons of dredged landfill. Toronto Bay bears a proud natural heritage, be it somewhat obscured. Even now wisps of that aquatic legacy persist.

Notes and diaries of early European visitors shed some light on the natural characteristics of Toronto Bay and environs:

M. Pouchet (1755-60) ... "a point of sand wooded and forming a peninsula (sic) and in the rear a large bay partly covered with rushes."

J. Collins (1788) ... "the whole length of the harbour, is a clay bank from twelve to twenty feet high" ... "The south shore is composed of a great number of sand hills and ridges, intersected with swamps and small creeks" ...

J. Bouchette (1793) ... "the bay and neighbouring marshes were hitherto uninvaded haunts of immense coveys of waterfowl" ...

What is now Toronto Island was in those times a peninsula which, according to Lady J.G. Simcoe, was a place well-regarded by the local Indians for its benefits to health. Attractive as it and other Toronto resources were to the Mississaugas and their predecessors, Europeans soon forced different values. Thousands of years of native subsistence around Toronto had all but ceased by the 1830's.

Perhaps the best known of native activities were nocturnal salmon hunts. Every autumn, landlocked Atlantic salmon migrated through Toronto Bay during spawning runs. Using "jack-light" torches in the bows of their canoes, Indians would hunt salmon with tri-pronged spears. In the rivers the fish were so abundant they could be caught by hand.

As they moved in from the lake, the salmon passed through a variety of habitats some of which are no longer present in the vicinity. These were described by H.A. Nicholson in 1872. On the outskirts of the harbour in the mid-1800's, the water was remarkably clear, revealing clean, somewhat sterile sands. A considerable amount of rock and gravel lay naturally amid the sands. Deposited by glaciers and sorted through years of littoral drift, they would eventually succumb to Toronto construction needs.

As they swam into the harbour, the salmon would have crossed a clay-mud bottom littered with shells from mollusc colonies and infiltrated by chironomid (midge) larvae as well as oligochaete worms. If a fish made a wrong turn, it might

find itself alongside the islands where Chara and waterweed grew thick on a sandy mud or peat bottom. Farther in amongst the lagoons, a black detritus layer would have been conspicuous. Aquatic plants flourished, including wild celery, pickerel weed, Chara, waterweed, yellow and white water lilies. This environment was rich in clams, leeches, snails, Gammarus, other crustacea and many aquatic insects. Painted turtles and mud puppies cohabited the area.

On the other hand, the salmon may have skirted the north shore where sandy mud also supported Chara. Both the island and north shore aquatic environments contained a variety of clams, snails, leeches, and mayflies. Apparently Gammarus only occurred along the north shore.

Eventually, persistent fish would wend their way through the marshy lower reaches of the Don River — perhaps after a brief stay in some of the hundreds of acres of Ashbridge's Bay marshes — but finally reaching the clear, cool, upstream waters where clean gravel beds awaited their eggs.

Atlantic salmon, being seasonally migrating fish, were unlike the near-shore residents which frequented Toronto Bay in the early 1800's. Other migrating fishes included lake sturgeon, yellow walleye, lake herring, sea lamprey, shorthead redhorse, and lake whitefish. Sturgeon were doubtless the most magnificent of these, some attaining weights of over 200 pounds and lengths of seven feet. They would gather each spring in the mouth of the Don River before moving into the deltaic channels to spawn as many as 3,000,000 eggs per individual.

Herring and whitefish sustained the municipal commercial fishery for a long time. An 1833 map bearing the signature of Gust. Nicholls shows the location for these species to be along the south shore of the island. Spawning in the autumn and feeding in spring, whitefish and herring were the mainstay of about 100 men in 1850; for example, Patrick Gray, a fisherman at Toronto Island from 1865 to 1881, gill-netted and seined some 93,000 pounds of whitefish and 131,885 pounds of herring over that period.

The near-shore residents were distributed among some of the habitats already described. The north shore of the bay was renowned for its muskellunge and smallmouth bass. Largemouth bass, pumpkinseed, gar pike, bowfin, perch and rock bass preferred the weedy shallows of the lagoons and Ashbridge's Bay. The central bay was probably traversed regularly by frolicking schools of white bass and quillback. Of course, northern pike could be found anywhere in the bay.

By the late 1800's Atlantic salmon had been completely exterminated from Lake Ontario through exploitation and habitat destruction. Their once-familiar route through Toronto Bay would be unrecognizable as the main portion of the bay has, in effect, been reduced to a fairly homogeneous silt-clay bottom. The navigational corridor is maintained at a depth of about 27'. This renders the open bay suitable for only a few species of organisms. Three species of tubificid worms comprise the major benthic, (i.e. bottom dwelling) inhabitants while fishes such as white bass, alewife, gizzard shad, and white sucker tend to dominate in the open bay.

The island lagoons are highly enriched and support a dense growth of aquatic plants, particularly northern water-milfoil, waterweed, and sago pondweed. Associated with the lagoons is a different fish community, represented, for example, by carp, goldfish, brown bullhead, largemouth bass, black crappie, freshwater drum, rockbass, pumpkinseed, bluegill, northern pike and various minnows.

The 1400 acres of marsh known as Ashbridge's Bay was totally filled in by 1920 to accommodate the eastern harbour terminals. Most of the marsh around the islands has been filled. The Don River, which is the main source of pollution in the bay, has been channelized and dammed.

Perhaps the most exciting development in recent years has been the creation of the Leslie Street spit. It was constructed for harbour facilities which did not materialize. Stretching over two miles out into the lake, its inlets and lagoons offer potential habitats for fishes which are either barely holding their own or have disappeared. The spit is distant enough from the main sources of organic pollution to be a refuge for organisms which are less able to tolerate those conditions. The shoreline will resemble a natural one and off-shore reefs or islands, if added, could provide greater habitat diversity.

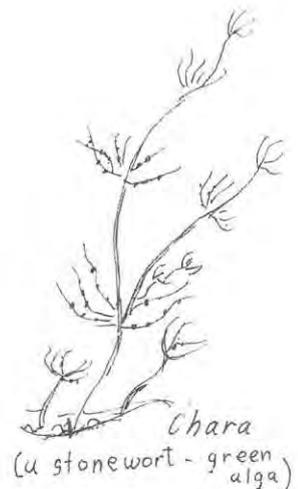
The Toronto waterfront and Ashbridge's Bay were originally sacrificed for development purposes. Some might quibble about the extent to which destruction of ecological features was necessary to create a harbour of Toronto's quality. Nevertheless, few would dispute that cities and ports are essential and only possible with substantial ecological degradation. It is ironic, therefore, that Toronto's development aspirations inadvertently produced the basis for a fresh near-shore aquatic community with the Leslie Street spit.

Tom Whillans

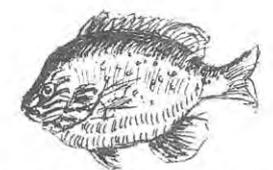
.....
 The preceding article is based on information gathered in writing "Fish community transformation in three bays within the lower Great Lakes", 1977, M.Sc. thesis, University of Toronto, 328 pp.

For further reading:

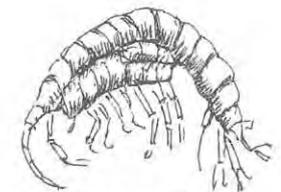
- Toronto Angler's Guide by Ian D. Macnab and Robert A. Hester, 1976, Ministry of Natural Resources, (available for 50¢ from the Ont. Govt. Bookstore on Bay Street). Check-list incl.
- Fishes of Ontario by H. H. MacKay, 1969, Ont. Ministry of Nat. Resrcs., 26 colour plates, 360 pp.
- Operation Doorstep Angling by I.D. Macnab and R.A. Hester, Ont. Ministry of Natural Resources & MTRCA 1976, 226 pp (2 vols.)
- Fishing Along the Lake Ontario Waterfront in the Toronto-centred Region by Al Wainio & J. Rowsel 1971, Ont. Dept. Lands and Forests, 141 pp (available from public libraries)
- A Fish Survey of the Toronto Islands by Al Wainio et al. 1973 General Foods Limited, 105 pp. (available from public lib.)
- Animals, Man and Change, H. G. MacCrimmon, 1977 (available from public libraries.)



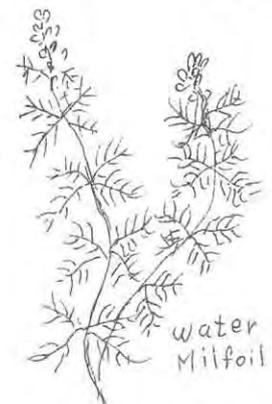
Chara
(a stonewort - green alga)



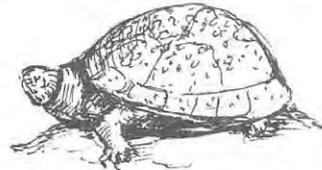
Pumpkinseed Sunfish
Lepomis gibbosus



Gammarus
a crustacean (amphipod)
9 mm



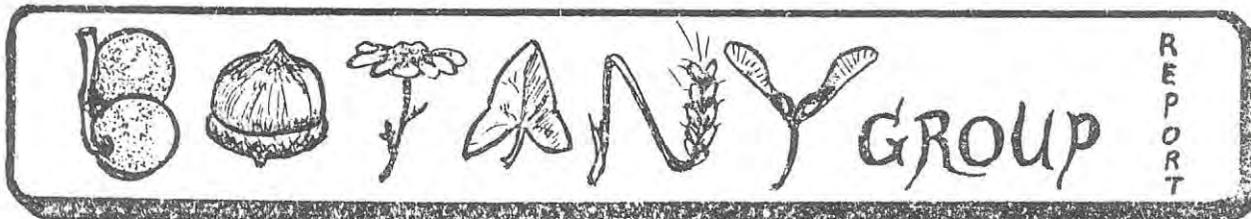
Myriophyllum
(flowering plant)



Blanding's Turtle



Mayfly larva



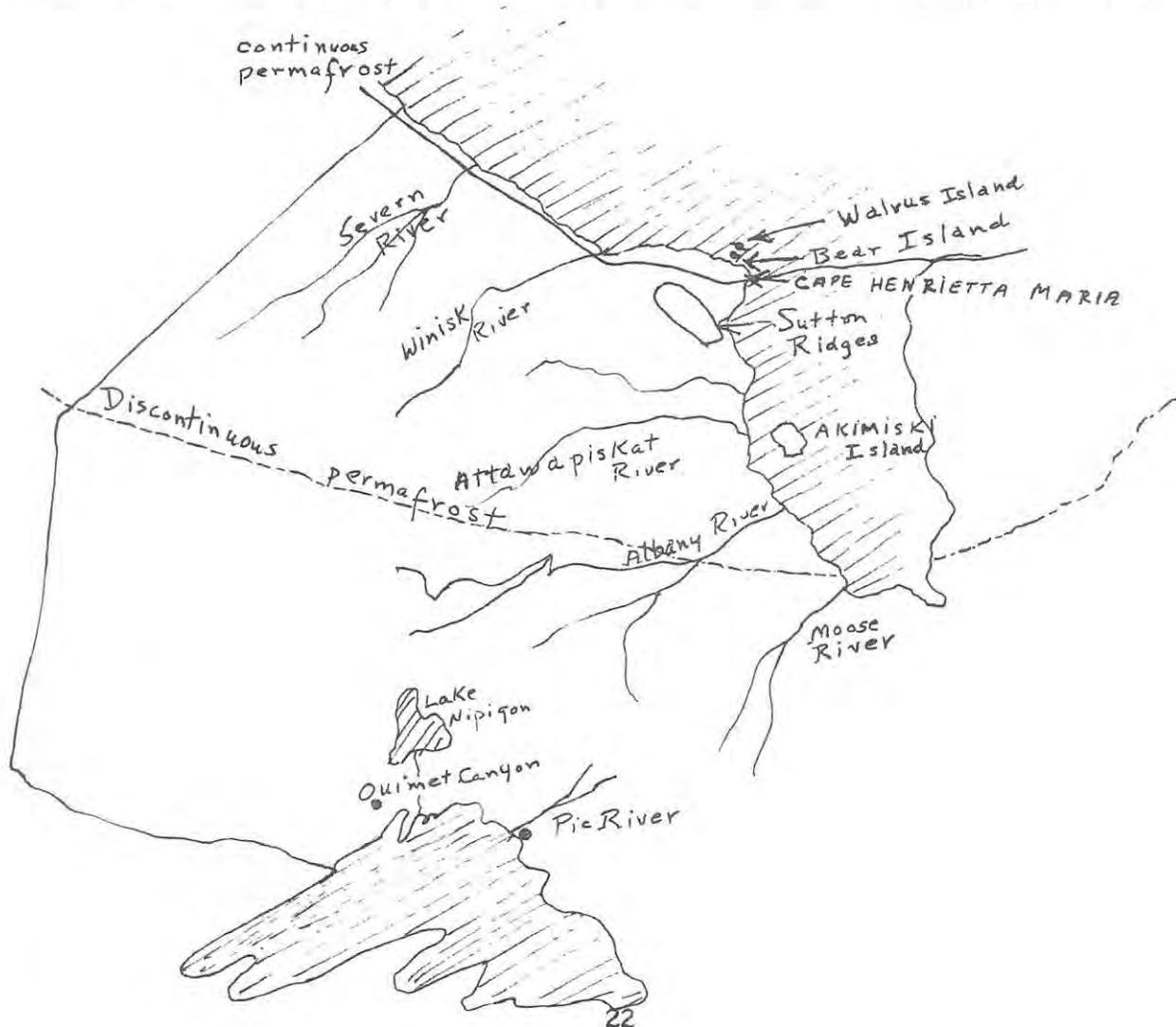
ONTARIO'S ARCTIC FLORA

On the evening of October 16, 1979, Mr. John Riley of the Royal Ontario Museum transformed Room 6 of Hodgson Senior Public School into Arctic tundra. We saw colourful floral sights and could almost hear howling winds, taste the flavour of northern Labrador tea (Ledum decumbens) and feel the bite of cold water and ice in chilling open spaces.

Displayed on herbarium sheets were: red fescue (Festuca rubra), pearlwort (Sagina nodosa), beach or Greenland sandwort (Honckenya peploides) — earlier known as Arenaria, prickly saxifrage (Saxifraga tricuspidata), and large-flowered wintergreen (Pyrola grandiflora) — our rarest wintergreen.

It was suggested that we view the photographs watching for adaptations to low winter temperatures, short summers, strong winds, long photoperiods, low light intensities, low nitrogen supplies, low precipitation, simple population structure and low density. The strategies used by arctic plants to survive these conditions were illustrated by various plants.

My map below shows the locations of some of the places the photographs were taken.



Mr. Riley told us that plants cover less than 10% of the land in the high arctic, but much more in the subarctic and maritime arctic of Ontario. Those growing in the Cape Henrietta Maria region have been there for less than 2000 years, having followed the Laurentide ice sheet north.

About 40% of arctic species are thought to be circumpolar in distribution and most are adapted for quick reproduction. Also illustrated were two disjunct locations of arctic plants: the natural talus cliffs of Ouimet Canyon and the shoreline and sand dunes near the mouth of the Pic River on the north shore of Lake Superior.

Among the plants illustrated and frequently accompanied by distribution maps were: four species of fernweeds or louseworts (Pedicularis sudetica, P. labradorica, P. lapponica, P. flammaea); Iedum decumbens; Lapland rosebay (Rhododendron lapponicum); white spruce (Picea glauca); Dryas integrifolia; Saxifraga aizoon; Bartsia alpina; large-flowered wintergreen (Fyrola grandiflora); rock cranberry (Vaccinium vitis-idaea); sea-lungwort (Pertensia maritima), black crowberry (Empetrum nigrum); three-toothed or prickly saxifrage (Saxifraga tricuspidata); goosegrass (Puccinellia phryganodes); alpine bistort or knotweed (Polygonum viviparum); Saxifraga cernua; and lichens.

He also showed us photographs of the various patterns caused by permafrost and discussed the role of fire in maintaining palsas or peat-covered mounds.

Nor did he omit showing us the animals of the region: a polar den facing into the wind, bears on Bear Island, the nest site of bald and golden eagles in the Sutton Narrows, and caribou.

When Mr. Riley showed the photograph of the northern dandelion (Taraxacum ceratophorum) which is found in disturbed arctic areas, he said that he would come back and talk to us about plant names. In my opinion, the crowd will overflow Room 6.

Thank you Mr. Riley and Isabel Smaller, Chairperson of the Botany Group.



drawn by P. Laird

*Pedicularis
groenlandica
Retz.*

Doreen Laird

.....
For further reading:

"Plant life of the Churchill district" by Eva Peckett in the Canadian Geographical Journal, August 1945

Lake Superior: its physical character, vegetation, and animals by Louis Agassiz 1850 (reprinted and available from the libraries)

Arctic adaptations in plants, Monograph No. 6, 1972 (available from Information Division, Canada Dept. of Agriculture, Ottawa, K1A 0G7)

"Fire!" by Dr. Roy Strang in North/Nord, Summer/été 1979

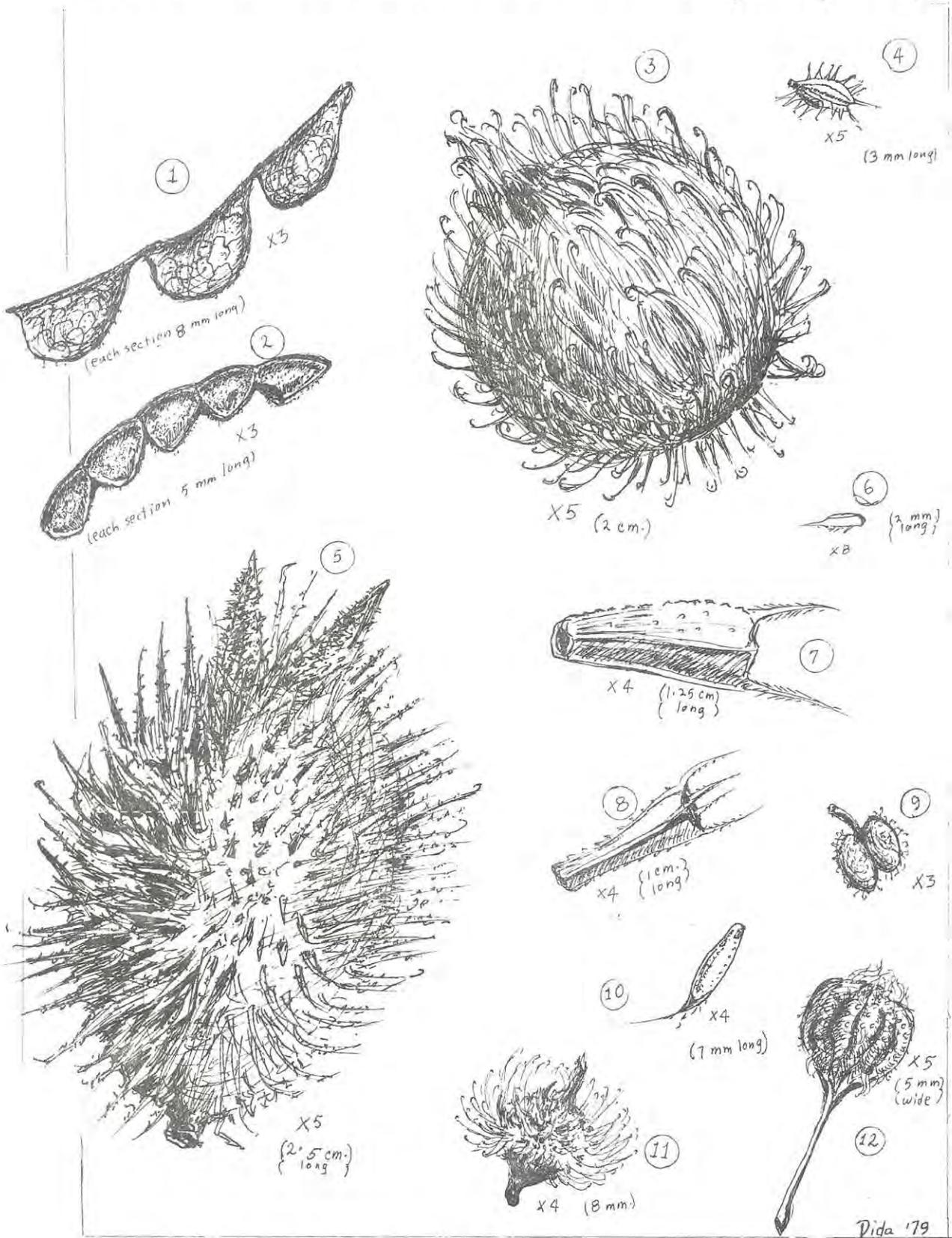
ADVENTURE CRUISE TO SAN IGNACIO LAGOON, BAJA, CALIFORNIA

Patson Travel Canada is arranging a tour of the wilderness of Baja California, February 20 to March 2. This is not a luxury tour, but is geared towards persons interested in the flora and fauna of North America. Details of the trip may be obtained from Mrs. Jill Richardson Smith, Patson Travel Canada Ltd., 7 Hayden Street, Suite 301, Toronto M4Y 2P2. Telephone 961-4591. (TFN Member R.W. Eakin will be participating).

▷ ARE YOU STUCK ON PLANTS?

...ARE PLANTS STUCK ON YOU?

As you pick them off, identify them from this page... ▽ ▽ ▽



...IF YOU'RE STILL STUCK, TURN TO PAGE 31.

issues---

CEDARVALE RAVINE NEEDS YOUR HELP

During and prior to the week of October 15, 1979, approximately 15 mature trees were cut down and all shrubs removed from the sloping part of a property on Strathearn Road in the Borough of York. The property forms part of the north slope of Cedarvale Ravine just east of the Glen Cedar footbridge. In order to denude the slope, the property owner had heavy equipment brought along the floor of the ravine destroying about $\frac{1}{2}$ km of the ravine footpath and leaving scars about 2 feet deep and 10 feet long. As well, debris in the form of mud, brush, and logs was left on public property.

How could this happen? There are two reasons:

1. As the law stands now the owner is within his rights to alter the slopes of the ravine any way he wants. (Although both the Metro Valley Land Study and Metroplan recommend that all boroughs adopt ravine by-laws to prohibit this kind of abuse to ravine lands, a great amount of public support and encouragement is needed before the politicians will act.)
2. The owner did not ask permission for anything. Although he says he plans to build a swimming pool and a tennis court on his property, no building permit has been requested or issued. He has used — without permission — the public footpath as an access route in making 'improvements' to his property. No one has objected because the property in the ravine is owned by the Borough of York, Metropolitan Toronto, and the Ontario Government Ministry of Transportation and Communications and none of them seem to know what to do. Unless a great many complaints are received from the public, the cleanup and repairs to the footpath will be done using taxpayers' money.

If you live in the area, or care about the future of ravines like Cedarvale, write a letter of complaint about the situation to the Borough of York Planning Board, c/o Mr. John Crawford, 2700 Eglinton Ave. West, Toronto, Ont., M6M 1V1. (Many letters are needed before effective action will be taken to protect the ravine.) Also, don't forget to attend the TFN outing to Cedarvale on Saturday February 16 at 10 a.m. (See page 2 for directions.)

Donna Knauber

▷ NEWS FROM CONE (COALITION ON THE NIAGARA ESCARPMENT)

In the September 1979 issue of the TFN Newsletter (page 23), reference was made to concerns about the development of the Niagara Escarpment. The Niagara Escarpment Plan is now completed and copies may be obtained free from the Niagara Escarpment Commission office at 232 Guelph Street, Georgetown, Ontario. L7G 4B1. Telephone (416) 877-5191.

CONe is currently looking for \$30,000 to cover the expenses for the public hearings to be held during the next few months. Contributions will be tax-deductible if cheques are made payable to the FON's Niagara Escarpment Fund and sent to CONe, c/o Federation of Ontario Naturalists, 355 Lesmill Road, Don Mills, Ontario. M3B 2W8. Telephone (416) 444-8419.

A study on Conservation Easements and the Niagara Escarpment was sponsored by the Sierra Club of Ontario Foundation. Copies of the report of the study are available for \$3.00 from the Sierra Club of Ontario, 47 Colborne Street, Toronto, Ontario. M5E 1E3. Telephone (416) 366-6692.

In order to assess proposals for Highways 7 and 407, FENCO Consultants Ltd. want information about birds and plants in the area between Steeles Avenue and Highway 7 (north of Metro). Please send plant or bird lists to FENCO, c/o Michael J. McCartney, Environmental Planner, 1 Yonge Street, Toronto, Ontario. M5E 1E7. Telephone (416) 361-4703.

THREATS TO PROVINCIAL PARKS

A Road Through Killarney?

In the February 1979 issue of the TFN Newsletter (page 16), reference was made to the possibility of a new road being built between Killarney and Whitefish Falls. Since that time the benefits, impacts and costs of alternative solutions have been considered and a set of recommendations is being prepared for submission to the Ontario Government.

Anyone interested in having more information about the Study and the recommendations is invited to contact:

Mr. James Stansbury
Hough, Stansbury & Michalski Limited
63 Galaxy Blvd., Unit 1
Rexdale, Ontario. M9W 5R7 Telephone (416) 675-6353

Or
Mr. Stewart McCombie
Ontario Ministry of Transportation and Communications
Box 3030
North Bay, Ontario. P1B 8L2 Telephone (705) 472-7900

"TORONTO THE GREEN" SLIDE SHOW

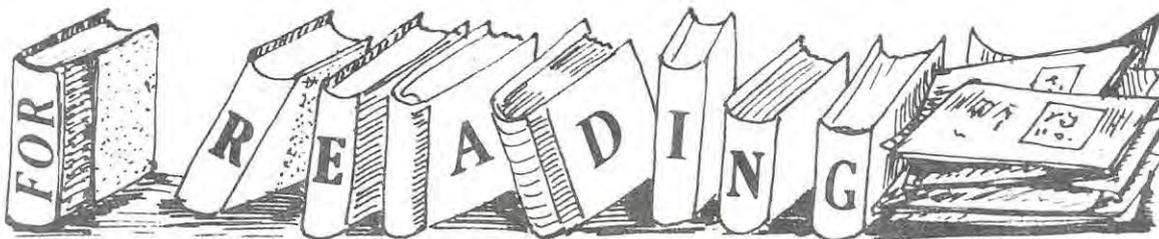
During the fall, our "Toronto the Green" slide show was presented to the following groups:

- a City of Toronto Committee on ravine by-laws, by Peter Beacham
- the Save the Rouge River Valley Annual Meeting, by Robin Powell and Wes Hancock
- the 98 Toronto Wolf Cub Pack, by Sheila McCoy
- the Highland Creek, Rouge, Petticoat Conservation Authority, by Wes Hancock and Lois James.

The show takes 15-20 minutes and a script is provided. If you would like to present the show to a group, or know of a group that could benefit from a presentation, please call Roger Chittenden, 757-4363, our Photo Librarian.

Plans are under way for making a unit about the Rouge River, but more photographs are needed. If you have any, or are interested in taking some or in assisting in writing the script, please let Roger Chittenden know. This is a good opportunity to combine one's interests in the environment and conservation with one's other talents and interests.

Our thanks are extended to Mike Somers for a donation of 50 slides of fungi, flowering plants and arthropods of the Toronto region.



Canadian Geographic, December, 1979, issue - two good articles are recommended by Jack Cranmer-Byng: (1) Larry McKeever's account of how he and his wife, Kay, work to save and heal injured owls - colour-illustrated; (2) article by Richard Rounds, Department of Geography, Brandon U., on Riding Mountain Park - a large wilderness park in southwestern Manitoba, between Lake Manitoba and the Saskatchewan Border - Manitoba, too, it seems, has its "wilderness wonderlands".

Bird-Banding, Summer, 1979, Vol. 50(3): "Origins of Ring-Billed Gulls at a New Colony", by Hans Blokpoel and Gerard T. Haymes. This is a report on the origins of a small sample of the 20,000 pairs of Ring-billed Gulls nesting at the Eastern Headland (Leslie Spit) in 1977. The paper shows that gulls banded at 17 colonies on the Great Lakes/St. Lawrence System are nesting at the spit. 4 pp., including map, diagrams, statistics. (If you would like to borrow this paper, contact Editorial Committee.)

Exotic House Plants by A. B. Graf, Roehrs Company, Publisher, East Rutherford, N.J. 1976; 178 pp, 1200 photos. Though it is intended for house-plant enthusiasts, this book not only shows the scientific names of the plants but includes a cross-reference of the plant families to which they belong. Because of its slim size, it also serves rather well as "A Field Guide to Greenhouses". (which so often do not give family names on their specimen labels). Did you know that philodendrons are related to jack-in-the-pulpit? That there is a milkweed that looks like a cactus? Hundreds of such interesting associations can be made with the help of such a book as this. There are, of course, bigger and more beautiful publications on house-plants, but if they do not give family names, they are not so valuable as this particular book to the student of botany. (Available from Toronto Public Libraries). ...D.B.

Urban Tree and Forest Legislation in Ontario by J. W. Andresen and J. Swaigen, published by the Canadian Forestry Service, Dept. of the Environment, August, 1978. Copies may be obtained from: Information Office, Great Lakes Forest Research Centre, Canadian Forestry Service, Dept. of the Environment, Box 490, Sault Ste. Marie, Ont. P6A 5M7.

Use of Plants for the Past 500 Years by Charlotte Erichsen-Brown. Breezy Creeks Press. Box 104, Aurora, Ont. I4G 3H1 (\$14.95) This book describes primarily the health uses of plants published in Canadian sources. The authors being originally European much of the information is about European plants. This book fills a need, but its value could be augmented by including references from the works of some of the natural healers such as Dr. Christopher's School of Natural Healing, George Vitoulkas' Medicine of the New Man (Arco Publishing Co. 219 Park Ave. S., N.Y., N.Y. 10003), Bianchini and Corbetta's Health Plants of the World (Newsweek Books, N.Y.), and Health Secrets of Plants and Herbs by Maurice Mességué. Perhaps it would be more useful if the information on woods was of the kind published in Harrowsmith Magazine and in some of the good Canadiana furniture literature. In any case, it is an interesting tome, well worth perusing if your eyes are sharp enough to read the small print and follow the long lines. Quotes are from the original Canadian sources, some in agreement, some in conflict with each other. Fun!

Mary Smith

OUTINGS REPORT

Oct. 14. Downsvew Dells Park - Joan O'Donnell - 18 people. Cloudy and cool. Several golden-crowned kinglets and a few warblers were sighted. There were excellent views of a redtail and a rough-legged hawk soaring overhead. We followed the winding course of Black Creek through willows and Manitoba maples. I have never seen so many hawthorns as in this park. Most of the berries had been eaten or had fallen. On the hill south of the creek is a large stand of mature forest including some oaks. There was some colour remaining in the sugar maples. At the western edge of the forest are some tamaracks, and ponds with duckweed, and of course, mallards, and an extensive marshy area.

Nov. 3. Morningside Park - Paul Cannon - 20 people. Clear, 7-9°C, Wind 0-5 mph NW. The fine day probably contributed to the lack of bird movement with only dark-eyed juncos being in prominent numbers. Highlights of the birds were an adult red-tailed hawk soaring high up and a white-breasted nuthatch seen well by everyone. Tree sparrows were observed feeding in the goldenrod along with the white-throated sparrows. We were much impressed with the ecology of the park. Though a ravine complex, it had many mini eco-systems including a red-osier dogwood swamp, a cattail marsh completely surrounded by mixed woodland, old orchard and pure deciduous slopes containing oak-maple-beech complex where the only green was a carpet of wild ginger.

Nov. 7. Chatsworth Ravine to Sherwood Park - Emily Hamilton - 15½ (?) people. Overcast, cold wind, 6°C. We walked through Chatsworth Ravine on the path on the south side of Burke Brook, observing the trees on the slopes, returning by the path on the north side of the stream, visiting the marshy area and observing the black willows and cattails. We crossed Duplex Avenue and walked through the small "parked and grassed" area to Yonge Street. Crossing the street we entered the Alexander Muir Gardens and observed the hedge of Field Maple, then through the gardens where the spindle bushes were covered with pink-and-orange berries. Stopped to look at a redbud tree and some small tamarisk shrubs. We saw some heritage trees, a very large basswood on the north-facing slope. On the other side a very large sugar maple and large black cherry. In the park east of Mt. Pleasant Road we measured a very large red oak and observed remedial work done on the slopes.

Nov. 11. Leslie Street Spit - Mark Sawyer - 37 people. Cloudy, windy, 4°C. A pleasant walk which produced only 25 species of birds. Among the usual winter water birds were also seen 3 great blue herons, 5 brant geese, 3 green-winged teal, 2 mute swans with 5 immature, American coot, dunlin and 6 great black-backed gulls. A horned lark and a fox sparrow were also seen.

Nov. 14. Wilket Creek Park - Bill Andrews. No report received but we understand 8 people enjoyed an evening of skywatching.

Nov. 18. Lambton Woods - Elmar Talvila - 35 people. Beautiful! Sunny, 12°C. A horned owl was seen by one person before the walk began. Among the 25 species of birds noted were a red-tailed hawk, flicker, white-breasted and red-breasted nuthatches, brown creeper, pine siskin and goldfinch. Plants were mostly finished but some fruits were seen: white baneberry, wild grape, maple leaf viburnum, wild cucumber and others. Garlic mustard, watercress, tick trefoil, willowherb (sp.) and other plants were identified by dead stalks or some green leaves.

OUTINGS REPORT - Continued

Nov. 21. Sherwood Park - Diana Banville - 17 people. Cloudy, 10°C. Trees in this forest are among the largest in Metro - a choice area for trees warranting vigilant protection. At one area where works people cut up logs and dump chips, etc. a large cherry, resembling black cherry but which bears single pink blooms in spring, has been damaged by having a large pile of chips piled around it and possibly grazed by machinery. Beneath it had been an interesting stand of sickle-pod which is now wiped out. The Parks personnel do not recognize the species, so a plan should be worked out whereby valuable plant life can be protected. An American Beech was measured - 115.0" - the second largest in Ontario. Others measured: Black Cherry, 67.5"; White Ash: 82.0" and 94.5". Witch hazel in bloom and fruit. Hazelnut had male catkins formed. Thirteen bird species were noted, none unusual. Also, grey squirrels and a chipmunk.

Nov. 25. Rosedale Ravine - Helen Juhola - 28 people. Cloudy, 7°C, calm in valley. I wonder if anyone reported seeing a colourful creature with 28 segments wending its way along the Rosedale Ravine Nature Trail? There were many birds in the ravine, no unusual species. The group visited the white oak (Mrs. Simcoe's) on our heritage tree list, read a historic plaque about the Simcoes, looked across the valley at the old Scadding property, admired the original site of Bloor's Brewery and ended the walk at the Studio Building near Yonge (where artists of the Group of Seven worked). Garlic mustard, goutweed and celandine were still green; there were several flowering witch hazels, and salt-loving plants under each bridge were noted. Some members collected seeds from a female ginkgo tree.

Dec. 1. Rouge Station to Petticoat Creek - Wally Platts - 12 people. Freezing-point with snow flurries. The walk was from the Rouge Hill GO station to Petticoat Creek and back. Points of interest were at the mouth of the Rouge, and the cliffs of the large park grounds at Petticoat Creek provided good bird viewing over Lake Ontario. The 18 species included great blue heron, gadwall, green-winged teal, common goldeneye, mergansers, bufflehead, great black-backed gulls and a cardinal. Snow flurries thickened into the season's first good storm - after the hike was over.

Dec. 9. Central Waterfront - Herb Elliott - 14 people. Cloudy with some snow. -2°C. Very few ducks along the waterfront between Bathurst Street and the ferry docks. A flock of about 20 Common Mergansers were seen as well as some Oldsquaw.

Dec. 12. High Park - Isabel Smith - 12 people. Dull, mild, quite pleasant. We strolled through the southern end of the park, noting trees, shrubs and plants in winter dress. Birds were hiding, mostly due to a very noisy road machine which we couldn't escape. At the end of the walk we separated into two groups, one going into Colborne Lodge and the other to Grenadier Pond where we saw two buffleheads, one coot and the usual weird hybrids of geese, mallards and blacks.

Dec. 30. Riverdale Farm and Necropolis - Muriel Miville - 25 people. 5°C and sunny! The clouds rolled back about 1.30 p.m. to permit our walk to commence under blue skies and bright sunlight. At the farm we particularly enjoyed the sight of chicks, two hatched on the day of our walk. Outside the building housing the chicks was a Kentucky coffee tree. Our walk into the Necropolis

OUTINGS REPORT - Continued

cemetery yielded several Silver Maples, Black Locust, Camperdown (or Wych) Elm, a large Yew, Chinese Catalpa, Zelkova Serrata, Green Ash, European Ash, Norway Maple and a small Magnolia tree complete with furry buds. Very few birds.

In the cemetery we located the graves of William Lyon Mackenzie and James Henry Fleming, the first person who banded birds in the Toronto area.

.....

Projects

ONTARIO RARE WOODY PLANT PROGRAM

An invitation is extended to tree enthusiasts and naturalists to participate in this program of the University of Guelph Arboretum. Many woody species, especially of the "Carolinian forest" of southern Ontario, are rare due to both a history of extreme deforestation since settlement and current forest management practices which result in removal of non-commercial species. While these species occur farther south, Ontario's depleted populations represent adaptations to more northerly conditions. Beyond the recognized need to preserve certain habitats, this program's objectives are to survey, collect seeds of, and gene-bank rare woody plants of Ontario.

Survey. In conjunction with the National Museums of Canada, documentation of rare woody plants, especially those thought to be extirpated or of questionable presence in natural populations and distributions beyond known natural ranges, is sought.

Seed Collection. Collection of seeds of rare woody plants is sought for the Arboretum's international seed exchange program and for inclusion of select collections in the gene bank.

Gene Bank. Surveyed rare woody plants will be evaluated for possible inclusion in the Arboretum's Gene Bank (through collection of seeds or vegetative propagules). This will provide a long-term reservoir of rare plant material for selection, breeding and propagation purposes. For example, it could serve as a source of material for re-introduction into natural areas of conservation authorities and parks as well as for forestry and ornamental selection.

Participants in this program will receive announcements of Arboretum events and programs as well as a copy of the annual Index Seminum, from which selections of seeds can be made. Prospective participants are encouraged to contact the Arboretum at the address below:

Dr. John D. Ambrose, Curator, University of Guelph Arboretum,
Guelph, Ont. N1G 2W1 (519) 824-4120 ext. 3093

HERITAGE TREES

If you have a favourite woody plant or area, remember to call Mary Smith, 231-5302, and have it nominated. Metro Parks and City Parks have each given us a list of their nominations, but we want to hear more about your favourite street and backyard trees.

1. Desmodium glutinosum - Pointed-leaved Tick Trefoil - pod called a "loment" with hooked hairs; 2 or 3 sections which easily break off called "articles", each containing a seed. HP, WC (upland woods), HV. Pea Family.
2. Desmodium canadense - Showy Tick Trefoil - also a loment with up to 5 articles densely covered with minute, hooked hairs. LW, G, R. Pea family.
3. Arctium minus - Common Burdock - bur, containing many achenes each with one seed, is the involucre. Note sharp, hooked bracts. 2 or 3 similar species. W, everywhere. Composite family. (Note: Also called "Beggar's Buttons". A Toronto inventor tells us his father as a poor boy at the turn of the century used these burs to fasten his coat. Inspiration for "Velcro".)
4. Lappula echinata - Bluebur or Stickseed - nutlet with fringe of barbed prickles - resembling minute spider. FB, BC, HV, LW. Borage Family (same as "Forget-me-not"). Hackelia virginiana, Beggar's Lice, similar. WC.
5. Xanthium chinensis - Clotbur - pistillate head. Note strong prickles are not all hooked but have bristles on them. Inside are two cavities, each with one achene bearing a seed. Near water, R. Composite Family.
6. Phleum pratense - Timothy - outer scale called "glume" with awn and fringed keel. F, W.
7. Bidens frondosa - Beggar-ticks - achene containing 1 seed; note 2 awns with reversed barbs. R. Composite Family, as is the following...
8. Bidens cernua - Nodding Bur-marigold - achene containing 1 seed; note 4 awns with reversed barbs. Toronto form very showy. JG. Wet places.
9. Galium aparine - Cleavers or Goosegrass - bristly fruits can be 1.5 to 4 mm dia. If one turns up on your clothes, let us know. A bedstraw - Madder Family. (Most bedstraws do not stick.)
10. Geum aleppicum var. strictum - Yellow Avens - achene containing 1 seed with persisting style. wooded R. Rose Family, as is G. canadense - White Avens - similar but smaller, hairier. G, S, WC, HV, LW.
11. Agrimonia gryposepala Wallr. - Agrimony - fruit with hooked sepals - 1 or 2 achenes inside containing 1 seed each. WC, LW, HV, HP. Rose Family
12. Circaea quadrisulcata - Enchanter's Nightshade - fruit with hooked hairs. Shaded slopes G, LW, R. Evening Primrose Family. C. alpina much smaller.

Where to find them (on you):

Diana Barville

F = Fields; W = Wayside and waste ground

R = Ravines; LW = Lambton Woods

HP = High Park; HV = Humber Valley

WC = Wilket Creek; G = Glendon

FB = Frenchman's Bay; S = Sherwood

JG = James Gardens (to name a few)

(with thanks to
Emily Hamilton
for her help with this
project.)

Ref.: A Field Guide to Wildflowers, Peterson/McKenney (shows all but No. 4)

Gray's Manual of Botany - Fernald (describes all 12)

An Illustrated Flora of the Northern United States and Canada -

Britton & Brown (describes most).

The Hiker's Sock - Trail & Landscape Vol. 5 No. 4 Sept./Oct./71 issue

by Anne Hanes pp 108-9 - Ottawa Field Naturalists

Nature Photography Seminar Workshop, February 2, 1980, Sheridan College, Oakville. Cost \$12.00. Conducted by Barry Ranford. If interested, contact Lorelie Mitchell, 221 Maple Grove Drive, Oakville, Ontario L6J 4V4. Telephone (416) 845-1194.

People

HAROLD TAYLOR - Writer of Radio Nature Notes

Harold Taylor is the writer behind the Nature Notes heard several times each month on John Bradshaw's programs over CFRB. These Notes are designed to publicize the TPN and to increase the audience's awareness of wild life. Harold started writing these Nature Notes when he was working with the Junior Club a few years ago in helping to arrange programs the Juniors were presenting in Metro libraries.

Mr. Taylor has long been an enthusiastic birder and served on the TPN Board of Directors for four years.

COURSES AVAILABLE

The following courses are available through the School of Continuing Studies, University of Toronto, during the winter and spring, 1980. Details may be obtained from the School of Continuing Studies, University of Toronto, 150 St. George Street, Toronto M5S 2V8. Telephone 978-2400.

Botanical Drawing and Painting - February 7-May 1. \$100 plus materials
Toronto: Its History and Growth - January 28-March 24. \$65.00
The Bog, the Marsh, the Swamp - January 29-April 1. \$80.00
Woodlot Management for Pleasure and Profit - February 11-March 31. \$70.00
Introducing Astronomy - January 23-April 2. \$85.00.

A course for the amateur astronomer, entitled "Introduction to the Sky", will be offered from March 24 to May 26 at the McLaughlin Planetarium. Information may be obtained from the McLaughlin Planetarium, Continuing Education Programme, 100 Queen's Park, Toronto M5S 2C6. Telephone 978-8550.

MINERAL EXPLORATION COURSE

A Mineral Exploration course will be offered by the Ontario Ministry of Natural Resources and the Prospectors and Developers Association, from Monday, February 25 to Saturday, March 1, 1980, 7.00 to 10.00 p.m. each day. Admission is free and there is no pre-registration. Free literature and free samples will be available. The classes will be held in the Ontario Room, Second Floor, Macdonald Block, 900 Bay Street, Toronto.

The topics to be covered include: Importance of Mining, Physical Properties of Minerals, Processes Involved in the Formation of Rocks, Prospecting, Claim-staking, Ore Minerals, Glacial Geology, Synopsis of Geology in Ontario.

Further information be be obtained by telephoning 965-0190 during the day.

COMING EVENTS

Royal Canadian Institute

Lectures will be given at Convocation Hall, University of Toronto, at 8.15 p.m., on the dates indicated. Admission free.

- Saturday Feb. 2 Toronto and National Policy in the 1980's
- Mayor John Sewell
- Saturday Feb. 9 Science vs. Malthus (illus.)
- Mr. J. H. Hulse, Program Director, Agriculture, Food and Nutrition Sciences, International Development Research Centre, Ottawa
- Saturday Feb. 16 Methane from Waste: A Gas Well in Your Backyard (illus.)
- Mr. Bert Van Den Verg, M.Sc., Senior Research Officer, Division of Biological Sciences, National Research Council of Canada, Ottawa
- Saturday Feb. 23 Canadian Cooperation with Hungry Nations: An African Case (illus.)
- Dr. J. C. M. Shute, Associate Professor (Extension Education) Director, Ghana-Guelph Project, University of Guelph

Garden Club Flower Show

The Garden Club Flower Show will be presented February 27 to March 2 at the Automotive Building, Exhibition Grounds. The theme is "Capture the Sun".

Mark these dates on your calendar so you will be sure to enjoy this splendid treat for your winter-weary eyes.

"Autumn Apple Tree"
E. T. Seton Park, Sept. 8, 1979.
by Jane Withers
TFN Nature Art Group



TFN MEETINGS



GENERAL MEETINGS

252 Bloor Street West (O.I.S.E. Bldg.)
 (Between Bedford Road and St. George Street)

Monday, February 4, 1980, at 8.15 p.m.

THE LIFE CYCLE OF THE HARP SEAL - Professor K. Ronald,
 Dean, College of Biological Science, Univ. of Guelph
 Professor Ronald will present an illustrated talk on the life
 cycle of the harp seal, including the first-ever recorded
 birth of a seal, the "ethics" of the seal hunt, and Canada's
 position in the world controversy. The seal as man's oceanic
 indicator will also be discussed.

March meeting -- Monday, March 3, 1980, at 8.15 p.m.

GROUP MEETINGS

Bird Group

Wed. Feb. 27 Birds of the Baja Peninsula, Texas
 8.00 p.m. - Barry Ranford, well-known nature photographer
 Location: St. James Bond United Church
 Avenue Road, just north of Eglinton
 : : : : : : : : : : :

Botany Group

Tues. Feb. 19 The Plant Ecology of Toronto Island
 8.00 p.m. - Steve Varga, Graduate Student, Botany Dept.,
 University of Toronto
 Location: Hodgson Public School
 Davisville Avenue, just east of Mt. Pleasant Road
 : : : : : : : : : : :

Environmental Group

Thur. Feb. 21 Environmentally Sensitive Areas
 8.00 p.m. - Janice Doane, Metro Toronto Region Cons. Authority
 - Frank Kershaw, Metro Parks Department
 Location: Huron Street Public School
 541 Huron St., 1 block west of St. George subway station
 : : : : : : : : : : :

Junior Club

Sat. Feb. 2 Vegetation Zones - Tundra - Boreal Forests, etc.
 10.00 a.m. - Ron Thorpe, Past President, TPN
 Location: Planetarium Auditorium (immediately south of Royal
 Ontario Museum)
 : : : : : : : : : : :

NEWSLETTER EDITORIAL COMMITTEE

Ms. Diana Banville - 690-1963 (#710, 7 Crescent Place, Toronto, M4C 5L7)
 Miss Mildred Easto - 488-0962 (#416, 28 Broadway Ave., Toronto, M4P 1T5)
 Mrs. Helen Juhola - 924-5806 (#112, 51 Alexander St., Toronto, M4Y 1B3)
 Miss Jean Macdonald - 425-6596 (88 Parklea Drive, Toronto, M4G 2J8)
 Miss Florence Preston - 483-9530 (#203, 368 Eglinton Ave. East, Toronto, M4P 1L9)

Articles and/or drawings for the NEWSLETTER will be welcome and must reach a
 member of the Editorial Committee by the first day of the month. Articles may
 be anywhere from one or two sentences to 1500 words in length.