

# TORONTO FIELD NATURALIST

Number 383, November 1986



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## President's Report

Last month I wrote that the TFN, not wanting to spread itself too thin, restricts its involvement in environmental and conservation issues almost exclusively to the local scene. Dr. Verna Higgins has written taking exception to this stand (see page 7). It's great that someone is concerned enough to write. I agree, if this policy is no longer acceptable to the majority of members, it should be re-examined. There are, however, many aspects of her letter with which I disagree.

Paragraph two gives the impression that the TFN is now deaf and blind to outside issues. This could not be further from the truth. Anyone who reads the monthly newsletter or attends general meetings on a regular basis knows this. We have been involved with the Niagara Escarpment, Backus Woods, the Alfred Bog near Ottawa and South Moresby in the Queen Charlottes. To be sure we have not addressed every environmental issue outside Metro boundaries, but neither have we been asleep.

If we had an overabundance of volunteers for local issues, it might make sense to use the surplus in fighting provincial and national issues. Sadly this is not the case. In paragraph three, Dr. Higgins leaves one with the feeling that raising volunteers would just be a matter of asking. Experience teaches otherwise. Requests for help in the newsletter and at general meetings have always been met with a dismal response. Time and energy are precious commodities these days. Many people cannot afford the commitment it takes to see an issue through to its conclusion. I think it's a wise idea to focus the efforts of our few volunteers onto local issues and do a good job. We then do what we can for outside issues. Quality not quantity is the aim.

The last sentence in paragraph three does not sit well with me either. I find it hard to believe that there are people who do not belong to the TFN because they perceive us as not playing an active part in provincial problems. Are our local problems not important enough? Hmmm.

Dr. Higgins states in paragraph four, "Our Club has the ability to rapidly communicate with the membership either through the newsletter or the monthly meeting -- an ability sadly lacking in the umbrella groups. Let us at least put that asset to better use." My response to this is that we always have made good use of this asset and we are constantly striving to make better use of it.

In conclusion, I'd just like to say, if you have any views on TFN policy involving issues beyond Metro's borders, please let me know. Remember, if you opt for Dr. Higgins' view I think it only fair that you be prepared to act. To announce a new policy and then have no one to carry it out would seem ridiculous.

Phil Joiner

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Leaves on the sidewalk  
blown down by November winds.  
I forget the rain.

haiku by Helen Juhola

 (NO DOGS)	Upcoming <b>OUTINGS</b>	TFN 
<b>RAIN</b> <small>16°</small>	or  <b>SHINE</b>	<b>Everybody Welcome!</b>

NOVEMBER

- Sunday      LESLIE STREET SPIT - birds      lakeshore, Toronto  
 Nov. 2      Leader: Ross Harris  
 10 am      Meet at the foot of Leslie Street. Lunch optional.
- Wednesday      PROSPECT CEMETERY - trees      Toronto/York  
 Nov. 5      Leader: Cathy Heynes  
 1:30 pm      Meet at the south entrance to the cemetery on St. Clair Avenue West  
                  at Lansdowne Ave. Walk will end at the north end of the cemetery  
                  on Eglinton Avenue West just east of Caledonia Road.
- Saturday      YORKVILLE - nature arts      Toronto  
 Nov. 8      Leader: Mary Cumming  
 11 am      Meet at the Bellair exit of the Bay subway station. Bring your  
                  own sketches. Lunch at the Terrace Gourmet. We will be "gallery  
                  hopping".
- Sunday      HIGHLAND CREEK - nature walk      Highland Creek/Scarborough  
 Nov. 9      Leader: Robin Powell  
 11 am      Meet at the corner of Markham Road and Progress Court. Bring lunch.  
                  Warning: This will be a rugged walk.
- Wednesday      CHINE DRIVE RAVINE - nature walk      lakeshore, Scarborough  
 Nov. 12      Leader: George Comper  
 1:30 pm      Meet at the corner of Midland Avenue and Kingston Road (at the  
                  church on the south side of Kingston Road).
- Saturday      BLACK CREEK/YORK UNIVERSITY - nature walk      Black Creek/North York  
 Nov. 15      Leader: Allan Greenbaum  
 11 am      Meet at the corner of Sentinel Road and Murray Ross Parkway. Bring  
                  lunch.
- +
- Saturday      TORONTO ISLANDS - birds      lakeshore, Toronto  
 Nov. 15      Leader: Ross Harris  
 9 am      Meet at the ferry docks at the foot of Bay Street in time to take  
                  the 9 am ferry. Bring membership card.
- Sunday      MORNINGSIDE PARK - winter weeds      Highland Creek/Scarborough  
 Nov. 16      Leader: Phil Joiner  
 1 pm      Meet at the park entrance on Morningside Avenue (west side), north  
                  of Lawrence Avenue East and south of Ellesmere Road.



DARK OF THE MOON (Nov. 2)



FULL MOON (Nov. 16)

## NOVEMBER OUTINGS (cont'd)

- Wednesday VYNER RAVINE - nature walk East Don/North York  
 Nov. 19 Leader: Eileen Mayo  
 1:30 pm Meet at the northwest corner of Leslie Street and Bannatyne Drive  
 (just south of Hwy 401, north of York Mills Rd.).
- Saturday TAYLOR CREEK - nature walk Taylor Creek/East York  
 Nov. 22 Leader: Clayton Lee  
 1 pm Meet on Victoria Park, just outside the Victoria Park subway station.
- Sunday LAMBTON WOODS - birds Humber/Etobicoke  
 Nov. 23 Leader: Ilmar Talvila  
 10:30 am Meet at the park entrance on Edenbridge Drive which runs east  
 off Royal York Road (north of Dundas Street West). Lunch optional.
- Wednesday ONTARIO SCIENCE CENTRE - nature arts West Don/North York  
 Nov. 26 Leader: Mary Cumming  
 10:30 am Meet at the entrance to the Centre on Don Mills Road just south of  
 Eglinton Avenue East. Lunch optional.
- Saturday LAVENDER CREEK - nature walk Black Creek/York  
 Nov. 29 Leader: Gavin Miller  
 1 pm Meet on the northeast corner of St. Clair Avenue West and Weston  
 Road (Keele St.)
- Sunday LESLIE STREET SPIT - birds (ducks) lakeshore/Toronto  
 Nov. 30 Leader: Howard Battae  
 10 am Meet at the foot of Leslie Street. Lunch optional.

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# Keeping In Touch ...

Dear Mr. Davidson,

August 26, 1986

Thank you for your recent letter, it is always a pleasure to hear from you, and we appreciate your continuing interest in the Lynde Shores area.

As far as the golf course matter is concerned, I was glad that your letter, unlike most I have received, asked for some facts rather than levelled accusations. It seems that a frustrated aspirant to the National Inquirer happened upon some material and misdirected zeal has overtaken common sense. From your own authority experience you should know that such an enterprize would require many public meetings to adopt such a concept, to have it vetted at public hearings, to obtain official plan and zoning amendments, and the approval of the Ministry of Natural Resources. There hasn't been any such activity nor am I aware that it's even being contemplated. The Authority has not entertained plans for a golf course; it has not entered into an agreement with any party for a golf course; and I'm not aware of the existence of any Lynde Shores Golf Club organization.

All that really happened is that an individual made a sketchy presentation to the Authority's Executive Committee about a golf course. He was asked to return to a subsequent meeting with something more definitive. He did. It was discussed and the matter was dismissed. As a public agency, the Authority entertains a great many proposals for its varied holdings, virtually as a matter of routine. They don't create any furor, and had the golf course matter not been taken out of context, embellished, and then circulated as something definite and imminent, then there wouldn't be cause for concern with it either.

The Authority has worked too long and too hard, and has made and is continuing to make a substantial investment in the Lynde and Cranberry Marshes as natural and sanctuary areas to put this effort in jeopardy. Surely this is the most basic and self-evident truism.

W.M. Campbell  
Chief Administrative Officer  
Central Lake Ontario Conservation  
Authority

News Release,

Sept. 10, 1986

In order to allay public concerns arising from the circulation of misinformation regarding its Lynde Shores Conservation Area, the Central Lake Ontario Conservation Authority wishes to make it known that it does not intend to lease or sell any of its land holdings, nor in any other manner support the development of a golf course on this site.

The Authority, with a great deal of public participation, has produced master-plans which depict acquisition and development proposals for each of its conservation areas, and these plans are available for reading at the municipal office within which municipality the conservation area is located, or at the Authority office.

Joe Drum, Chairman  
Central Lake Ontario  
Conservation Authority

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KEEPING IN TOUCH (cont'd)

Dear Miss Macdonald,

Sept. 4, 1986

I have been asked to respond to the concerns and issues raised in your letter to the Honourable Ian Scott (dated Aug. 9, 1986). Your letter expresses worry about trail bikes using the valley of Etobicoke Creek because, as President of the Toronto Field Naturalists, you are concerned with the natural heritage of the area and want it preserved.

It is clear that whoever is the "occupier" of the area may prohibit access to the property under the Trespass to Property Act (R.S.O., 1980, c.511). Under the Act, the occupier could allow people into a park or conservation area, while prohibiting an activity such as trail bike or all-terrain vehicle riding. Entrance without permission is clearly an offence under section 2(1) and is subject to a fine of up to \$1,000. A person is subject to arrest without warrant if a police officer, the occupier, or a person authorized by the occupier, believes on "reasonable and probable grounds" that the person is on the premises contrary to section 2 (see section 9(1)). A copy of the Ministry booklet on trespass to property is enclosed.

I am informed that Etobicoke Creek, referred to in your letter, is at various locations under different jurisdictions. Metropolitan Toronto and Region Conservation Authority, Metro Parks, and Etobicoke may be under joint jurisdiction in some places. In any event, the relevant authority occupying the land can act under the Trespass to Property Act.

Beside the issue of trespass, there is the issue of licensing of trail bikes and all-terrain vehicles. This is the focus of the Off-Road Vehicle Act (S.O. 1983, C.53). An "off-road vehicle" is a "vehicle propelled or driven otherwise than by muscular power or wind, and designed to travel on not more than three wheels" (S.(1)(g)(i)). This includes three-wheeled, all-terrain vehicles and trail bikes, as seen in the photographs sent by the Toronto Naturalists.

Section 3(1) of the Act demands that no one shall drive an off-road vehicle, except under a permit and with the number plate displayed on the vehicle and showing the permit number. Furthermore, the driver must carry the permit, or a true copy of it (s.3(2)), unless the driver is the occupier of the land (s.3(3)). Misuse of the plate, or its alteration, is subject to a fine of between \$50 and \$500, or to less than 30 days imprisonment (s.9(1)). A peace officer may stop anyone driving an off-road vehicle as may the owner or occupier of land, if the vehicle is on his/her land (s.17(1) and (2)). Section 21 provides that any contravention of the Act is an offence, and unless otherwise indicated, is subject to a fine up to \$300. A copy of this legislation, administered by the Ministry of Transportation and Communications, is also enclosed.

If the number plates were on the vehicles driving near Etobicoke Creek, then presumably, a trespass prosecution would be facilitated. If plates were not on the vehicle, there would be an offence under the Off-Road Vehicle Act.

In conclusion, there are existing laws that apply to address the situation. The problem seems to be one of enforcement.

Stephen V. Fram, Counsel  
Ministry of the Attorney General  
Ontario

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KEEPING IN TOUCH (cont'd)

Dear Editor,

Sept. 16, 1986

I found both Don Roebuck's letter in the September TORONTO FIELD NATURALIST and the accompanying Ed. Note interesting reading. You see, this spring, here in Mississauga, I too watched a robin with a dark, somewhat irregular breast-band. It, also, was collecting nesting material. Unlike the Santa Barbara bird, however, it provided its own answer for the breast-band, much of which (but not all) it lost in a vigorous session in the garden bird-bath. I wasn't able to follow it to its nesting site but (based on a closer than arm's-length observation of a robin building a nest on the bedroom windowsill) I haven't any doubt that the dark band was a mud-band acquired during the fashioning of the mud cup of its nest. It seems probable that the Santa Barbara bird had acquired its band in a similar way.

I go on, though, to record two robin observations for which I haven't explanations. At the end of August I was surprised to see what struck me as an unusually large robin land on the bird-bath which is about fifteen feet from where I sit. Its large size was confirmed a moment later when it was joined at the bath by what seemed to be an "ordinary" robin. The larger one I think of in retrospect as being blue-jay-size -- not out of the question my field guides suggest -- with an especially vivid breast. But a greater surprise was a broad, buffish wing-bar which went across its back as well as its wings. At first I thought it might be a shaft of light coming through the apple leaves but when the bird moved and the bar held its place on the plumage I decided that was to be ruled out. The bird's head was proportionally smaller than I would have expected and its crown had dark and light markings like the ordinary throat markings of a robin (which were also present). A day or two later the same, or similar, bird came to the bird-bath but this time without a discernible wing-bar. Although an "ordinary" robin didn't come along to help in judging it I was again struck by the bird's size. The markings on the relatively small head were the same as in the first observation but this time I noticed that the outer tail feathers were shorter than the others and deeply tipped with white. The feathers of the bright breast were more contrastingly tipped with buff than on the female shown on page 221 of Peterson's guide to eastern birds. Interesting.

We have since been entertaining a grackle sporting white spots -- not nearly as numerous as a starling's, perhaps a dozen spots uniformly spread over wings and back. Perhaps Mississauga is establishing new fashions.

Manley Maltby

Dear Editorial Committee,

Sept. 18, 1986

For some time, I have been concerned about the reluctance of the TFN to become involved in conservation issues falling outside of the borders of Metro Toronto. Our president, Phil Joiner, made this policy quite clear in the President's Report in the October newsletter. I think that it is time for this policy to be re-examined and hope that this letter will stimulate the membership to consider the issue and to write in their views for publication in future newsletters.

The expressed aims of the TFN are "to stimulate public interest in natural history and to encourage the preservation of our natural heritage." In earlier

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## KEEPING IN TOUCH (cont'd)

days, the club took a very broad view of these aims. A quick perusal of the Jubilee Issue of the TFN Newsletter (March 1974) shows that the TFN was involved in helping set up a wildlife sanctuary in Point Pelee Park, helped the Federation of Ontario Naturalists (FON) to acquire the nature reserve at Dorcas Bay, and helped to set up the initial banding station at Long Point. An issue of much concern to the club in 1964-65 was the development of Rattray's marsh. The efforts of a committee set up in 1966 to investigate the purchase of land culminated in the purchase of the Jim Baillie Reserve in 1970-71. Further acreage was added to the reserve in 1973-74. This reserve is outside the boundaries of Metro Toronto; if the current policy of the TFN had prevailed in those days, would we have a reserve now?

I disagree with our president's view that we would be spreading ourselves too thin if we became involved in issues outside of our region. Has the membership ever been surveyed for volunteers to spearhead a campaign against a particular development? Let's try that approach for the fight to keep a golf course out of Lynde Shores Conservation Area!\* Do we know how many new members we might attract if we took a more active approach to provincial problems?

There are too many natural areas under threat today for us to rely on "umbrella" groups such as the FON and the Canadian Nature Federation for all non-local issues. These groups are very "distanced" from the individual member and require long response times for most issues. Our club has the ability to rapidly communicate with the membership either through the newsletter or the monthly meeting -- an ability sadly lacking in the umbrella groups. Let us at least put that asset to better use.

Verna J. Higgins

\* See letters on page 5; also page 2.

Dear Phil,

Sept. 26, 1986

The BIRD FINDING GUIDE TO THE TORONTO REGION has now been unavailable for a couple of years, and parts of it are out-of-date. We're looking at revising and republishing it, but first would like to obtain input from knowledgeable birders in our area on possible corrections, changes or additions. We're aware of some needed changes, but there are sure to be others.

We wondered if you had any suggestions along these lines? We'd welcome information on any possible changes: we don't expect you to provide all the detailed information, which we can work out ourselves, but simply an indication of where and what changes may be appropriate. A phone call (239-9503) or note would suffice. We would, of course, acknowledge any help we receive.

Many thanks for any assistance you can give.

Clive and Joy Goodwin  
103 - 45 La Rose Ave.  
Weston, Ont. M9P 1A8

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## Nature Reserve Report

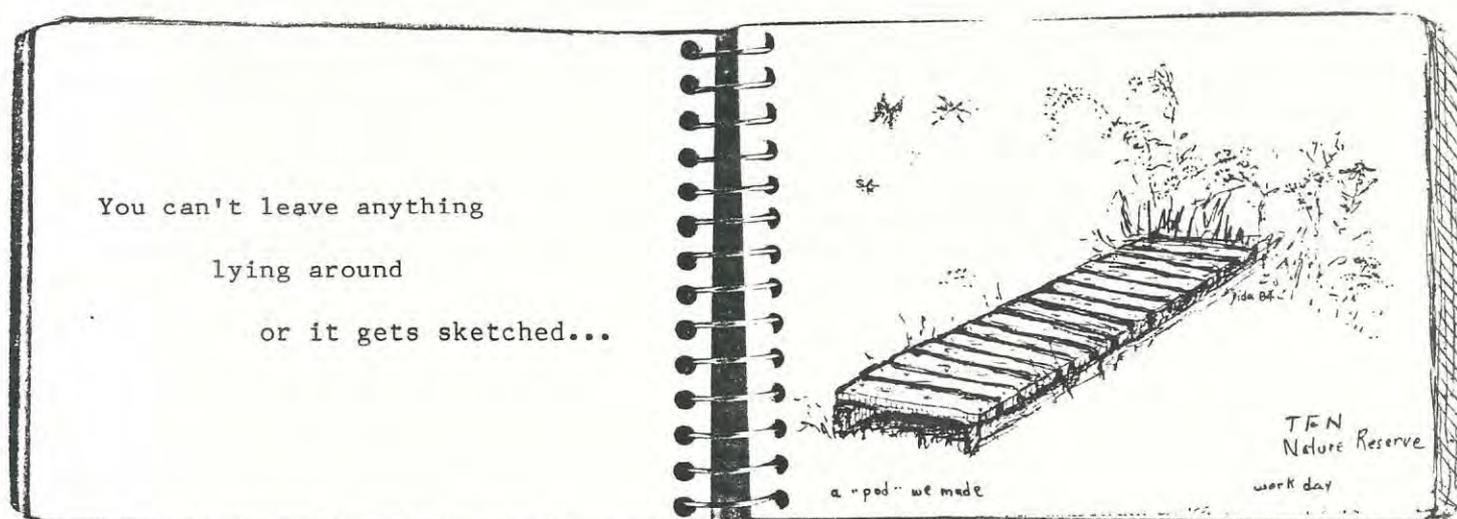
The year started with the publication of an excellent new guide to the reserve. The guide contains three maps: one showing how to get there; another a map of the trails within the reserve; the third, a watershed map. Lists of animals (mammals, amphibians, reptiles, birds) and plants (mushrooms, mosses, trees, shrubs, herbaceous plants) as documented to November 1985 have been included. The guide also contains a description as to what may be seen at different times of the year. The editor and contributors are to be congratulated for the new guide.

There have been four outings to the reserve this year. On the first outing, Herb Smith and Aarne Juhola and others constructed a new washroom facility. This brings the number in the reserve to three. The new one, not shown in the new guide, is sited on the yellow triangle trail a few metres before the white square trail as you walk towards the brook. At all subsequent outings, the mini-bus was used and our parties of 12 to 13 people have included members with many varied interests. Sketchers and photographers have had a field day. Robin Powell took many photographs to update the TFN photographic files. On all outings a small work party spent some time clearing paths and marking the trees. Other valuable maintenance work has also been done by individual members.

The reserve itself is a valuable natural resource of interesting habitat. Due to some construction work in the neighbouring property, the water level in part of the reserve has been considerably lowered. This, in time, may have far reaching effects on the habitat and change both the plants and animals of the reserve. All changes within the reserve will need to be carefully monitored.

I would encourage members, who have not already done so, to visit the Jim Baillie Nature Reserve either on their own or on one of our outings. The gate to the reserve is locked. The combination for the padlock can be obtained from any members of the TFN board. The guide can be purchased at the monthly meetings or from the TFN, 83 Joicey Blvd., Toronto M5M 2T4.

Ann Reynolds



## This Month's Cover

Nodding thistle from the East Don Valley south of Finch Avenue East drawn by Mary Cumming.

### PURPLE, PRICKLY AND PRECIOUS

St. Andrew's Day comes at the end of the month and with this event we are reminded of the Scots or Scottish thistle which is used in heraldry, crests and emblems -- and even logos today! It is just the flower head which is used in emblems, with no hint that it belongs to an enormous prickly plant.

The SCOTS THISTLE (*Onopordum acanthium*) was never abundant in Scotland -- according to the field guides -- and today is seen cultivated there, usually at the back of the herbaceous border, where it stands six feet tall with its stout, white-woolly, winged and prickly branches spread wide, ending in purple two-inch flowers.

Though it turns up as a waif in ditches from time to time, the Scots thistle is rarely found in Ontario. It was collected at "a roadside near Streetsville" in 1889, and in various locations in southern Ontario until 1942.

The two common thistles around Metro Toronto are the BULL THISTLE (*Cirsium vulgare*), called the spear thistle in Britain, and the CANADA THISTLE (*Cirsium arvense*), formerly called the creeping thistle. These two plants are not native on this continent, and one can imagine it was an irate farmer who called the big thistle invading his field a "bull". It is a bit of a mystery why "Canada" was applied to the fragrant lilac-coloured creeping thistle. Perhaps if its former name was better known, the farmers would have realized it must be controlled at the underground level.

A conspicuous newcomer is the NODDING THISTLE (*Carduus nutans*) with its bright reddish-purple flower which nods after the bees have visited it. It was first collected at Woodbridge in 1938, and appeared on the Leslie Street spit in 1977 and has been seen in various waste places since then.

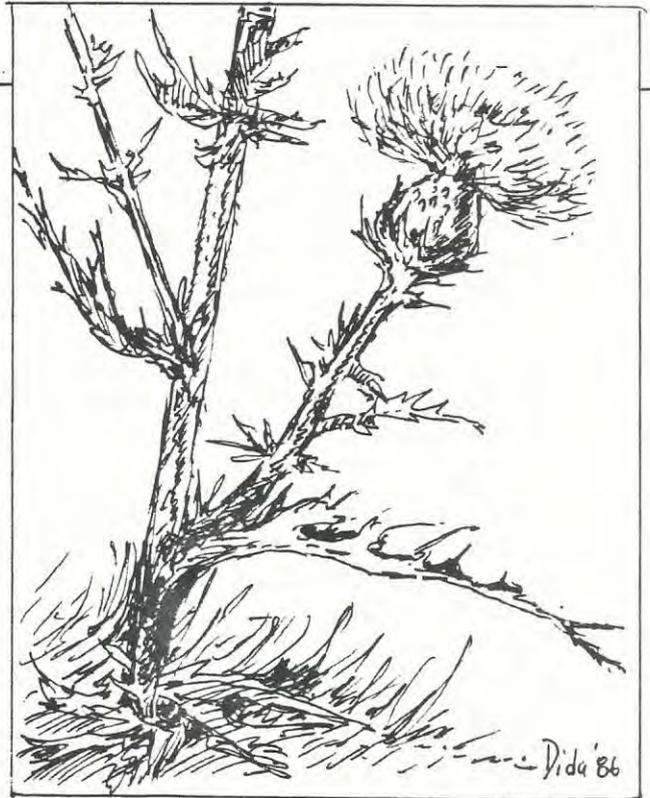
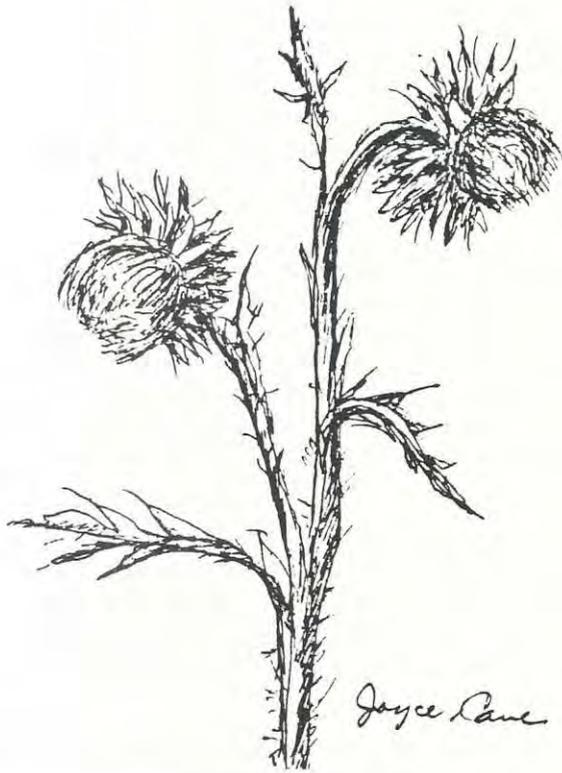
Two native thistles are the swamp thistle and the field thistle. In 1887 the SWAMP THISTLE (*Cirsium muticum*) was collected from the swamp in High Park and again in 1953 just before the swamp was drained to make a toboggan run. The FIELD THISTLE (*Cirsium discolor*) with its leaves white-woolly on the under-surfaces has been on the Scarborough Bluffs for many years and is still to be seen there in late summer and fall.

Another newcomer from Europe is the PLUMELESS THISTLE (*Carduus acanthoides*) which was collected in Metro Toronto from the banks of Etobicoke Creek in September -- a very colourful specimen, five feet tall, with small bright pink flowers and prickly throughout!

Emily Hamilton

A thistle in bloom,  
what a perfect powder-puff!  
But, oh, the handle!

haiku by Diana Banville



Four Toronto Thistles  
 1. Nodding Thistle by Joyce Cave  
 2. Bull Thistle by Peg McEwan  
 3. Canada Thistle by Louise Herzberg  
 4. Field Thistle by Diana Banville

RABIES RESEARCH: THE FACTS

In case any TFN members feel happy and relieved because of the Ministry of Natural Resources' rabies research in urban areas, you ought to know that some aspects of the program are not mentioned in the article on page 24 in the September newsletter.

In the first year of the program, 1984, many of the 50 traps set in the Sherwood Park/Mount Hope Cemetery study area were set in totally exposed areas. With no trees or shrubs to protect them, the trapped animals received excessive morning sun and the full brunt of any rainfall, often experiencing temperature extremes. Other traps were placed at the bottom of very steep slopes which carry torrents of run-off during even average rainfalls. The traps, supposedly set at dusk and checked in early morning, were, in fact, usually set as early as 4 pm and often not checked until after 10 am.

Raccoons caught tried in vain to get out. They repeatedly rubbed their paws against the wire as they reached out through the traps. Often the fur was rubbed off and the flesh became raw and even bled. Sometimes a large raccoon, caught in a medium-sized trap, was so cramped that it couldn't stand, let alone turn around. MNR spokespersons suggested that both situations were simply the result of normal raccoon behaviour.

The Ministry proclaims that the goal of its program is to inoculate urban skunks, but the majority of wild animals caught are raccoons. Although the program reports do acknowledge that adjustments are necessary to catch more skunks and fewer "others", no action has been taken to modify the bait, trap design or trap placement in order to trap fewer raccoons.

Many domestic cats have spent wet, cold nights in these traps. Most cats seen in traps were absolutely frantic, not relaxed as described in a report. The owner of one trapped cat which was wearing a collar was horrified to learn that the traps were so close to her home. Yet the Ministry reports that all residents in the neighbourhood were contacted. They were not! Letters and brochures which were circulated contained alarming exaggerations. Nevertheless some people cooperated fully, proudly letting the Ministry place one or more traps in their yards. (Do these people blindly trust any government program and ask no questions?)

One of the reports mentions that several raccoons caught were tested for rabies, but admits that the tests were all negative. What the MNR does not mention, but confirms when asked, is that testing any animal for rabies requires its head to be cut off.

During the May and June trapping sessions, very young raccoons, sometimes two in the same trap, and lactating females were caught. Sometimes mother and babies were separated for over 24 hours, 15 to 18 hours in the trap and 4 to 10 hours for processing. Processing sounds simple, but it is far from simple for the animals caught. The animals are immobilized with a drug, a tooth pulled out, a blood sample taken, a tag attached to each ear, a tattoo put in one ear, an antibiotic shot given and then a further drug administered to help the animal wake up. The blood sample, by the way, is taken by cardiac puncture. Simple processing?

When calls were made to the supervisor of the program, he seemed friendly, willing to answer questions and always eager to pass on alarming statements about rabies; however, his sincerity or honesty is dubious because questions repeated on various occasions received different answers. The questions asked



## RABIES RESEARCH (cont'd)

dealt with a variety of biological, ecological and procedural matters. When questions were asked about trap placements and the timing of trap setting and checking, he explained how, with such a low budget, he could not get good help and couldn't always be in the field to supervise. Yet when the processing procedures were questioned, he assured me that these same technicians were highly trained and responsible. When these technicians were personally questioned, they seemed very fuzzy about procedures and even the program's actual purpose. In fact, they did not appear to be very interested in learning more. To them, it was merely a job. The following are examples of questions asked and answers received.

- 1984: Q. Won't the ear tags irritate the raccoon's ears, making them try to pull them off and, thus, damage their ears?  
 A. The clips do not cause irritation. None have been lost.
- Q. Why do many raccoons have their hind quarters and tails sprayed with red paint?  
 A. To act as back-up identification for raccoons which have lost their ear tags.
- 1985: Q. Why are raccoons being given two ear tags?  
 A. In case they lose one.
- Q. Why not tattoo one ear?  
 A. We do.
- Q. Why bother with tags?  
 A. The tags are easier to read.
- 1986: Questions not yet asked of MNR:  
 Q. If the ear tags are not irritating, why do many raccoons without tags have bits missing from their ears exactly where tags are usually placed?  
 (I suggest that the tags were an irritant and that many tore them off intentionally.)
- Q. If the tags were attached to the appropriate ear margin, why do many Mount Hope raccoons have ear abnormalities at the tag sites?  
 (I suggest that in some cases the heavy tags have caused the ear tips to become permanently bent over and that in other cases the ear tissue has grown around the tag.)
- Q. Why does one adult female now have a third ear tag?

The report of the 1984 program uses pages and pages to discuss how much the Ministry has learned about the habits of urban skunks and raccoons. It reports that skunks and raccoons will occupy old garages and sheds or spaces under porches, but if both species are in the same area, raccoons tend to occupy tree cavities and skunks the ground sites. Isn't that a startling revelation? The report goes on to describe how researchers used trial and error to find the locations most frequented by skunks and raccoons and, thus, the appropriate places to set traps. They also learned that raccoons are not very active in the winter months. I daresay that any observant TFN members who walks in our parks and ravines could have provided all of the above information without an extensive, expensive trapping program. In spite of all the "valuable new information", the report concludes by saying how little is really known and how further studies are necessary.



## RABIES RESEARCH (cont'd)

There is probably some need for rabies research. There is also a desperate need for extensive good, clear, unemotional public education about rabies and responsible pet ownership. I suspect, however, that there is a hidden agenda behind the current program. I suspect that within five years, municipalities of Metro Toronto will be asked by the MNR to allow, and probably pay for, a trapping program for skunks and raccoons within our parks and ravines. The up-front purpose of such a program will be to protect people and their pets. The hidden purpose is to provide the MNR with on-going funding and specimens for studies and research and employment ad infinitum. As specimens of these two species are removed, others will constantly move back into our parks and ravines because of available habitat and food. The traps used will, undoubtedly, be live-traps, but trapped creatures will be "sacrificed". Releasing them in distant areas is too expensive and would only create problems in those areas already supporting large populations of these species.

There are many more inconsistencies, disturbing aspects and unanswered questions about the program, but let me describe one final gem to help you appreciate my cynicism and frustration. The bait used is sardines. The technicians regularly toss the empty tins throughout Sherwood Park. I have found them in and under bushes, in the stream itself and along the path. How many non-trapped raccoons, skunks, dogs and cats have sliced their paws, tongues or lips on those incredibly sharp edges before I picked up the cans? The fact that any littering contravenes City of Toronto By-law 319-69 seems to be of little concern to the Toronto Parks person to whom this was reported. The MNR person expressed dismay when told, but this irresponsible behaviour continued through August 1986.

In spite of the many serious flaws with this program, the Rabies Advisory Committee continues to recommend further funding to keep this project going. The members of the Committee have lots of credentials, but do they read the reports critically and think about the long-term implications? Are they so human-oriented that they think anything can be justified to protect humans? Why are those who truly care about the whole earth and all its resources branded as extremists? How can we get this program stopped, at least until the goals are clarified and procedures greatly modified?

I would like to hear from others with similar concerns about this program.

Janice Palmer (487-5755)

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We should everyone of us try to remember that the land of our Province is a heritage for us all; each generation holds it in trust for the next, and we should do all we can to be true to our trust and pass it on to our successors, not spoiled but improved in natural resources, wild life and native beauty.

from OUR WILD FLOWERS: A PLEA FOR PROTECTION by Frank Morris, Publication No. 3, Federation of Ontario Naturalists, 1939

SCARBOROUGH'S VANISHING HERITAGE.

In the summer of 1981 an inventory and assessment of the natural areas within Scarborough took place. Air photo analysis identified over 40 semi-natural to natural sites requiring detailed investigation. Due to time constraints only 17 areas were assessed, and these were primarily the tableland sites facing immediate development pressures. (In order to avoid a duplication of efforts, the researchers did not inventory those natural areas being studied by the Metro Toronto and Region Conservation Authority.) See both on map on page 16.

The 17 sites shown on the map on page 16 were classified as follows:

Hazard Lands: those areas which have inherent environmental hazards such as flood susceptibility, steep slopes, highly erodable soils, organic soils, or any other physical condition which constitutes an environmental constraint to urban development.

Landscape Quality Areas: those areas high in visual diversity and scenic appeal. They may include areas with unique topographic features such as ravines, high vantage points and cliffs, as well as woodlots in various successional stages. These areas are not necessarily ecologically sensitive, but are valuable from a planning point of view in that they provide visual relief from the urban landscape.

Environmentally Significant Areas: are generally defined as those land or water areas containing natural features or ecological functions of such significance as to warrant their protection. They may contain bogs, swamps, woodlots, marshes, floodplains, lakes and other natural and man-modified landscapes, and as such may overlap with both Hazard Lands and Landscape Quality Areas.

In 1982, four study areas from the 1981 report were re-assessed and 17 new areas assessed. (See map on page 17). The purpose of this study was to record and assess the biological components of Scarborough's natural areas, and to describe their dominant characteristics, relative sensitivity and biological value; to identify candidate environmentally significant areas -- those land or water areas containing natural features or ecological functions of such significance as to warrant their protection; to identify significant natural areas to be incorporated into the land use planning process; to make recommendations as to how these areas are to be woven into the urban landscape, specifically addressing the issues of accessibility, adjacent land uses, buffering and appropriate land activities; and to give direction to land use planners in terms of establishing priority resource areas.

Fine words! But does anyone wonder what is actually happening to these sites? To my knowledge as of Sept. 1986, Morningside Bog (G) has been bulldozed; Centennial Forest (I, 7) has been drained and rezoned for housing; Bellamy Ravine (P, 2) is being filled by the Conservation Authority; Morningside Tributary (C, 9) has been rezoned and much of the area has been bulldozed; \* and Fallingbrook Ravine (O) has had fill dumped in it.

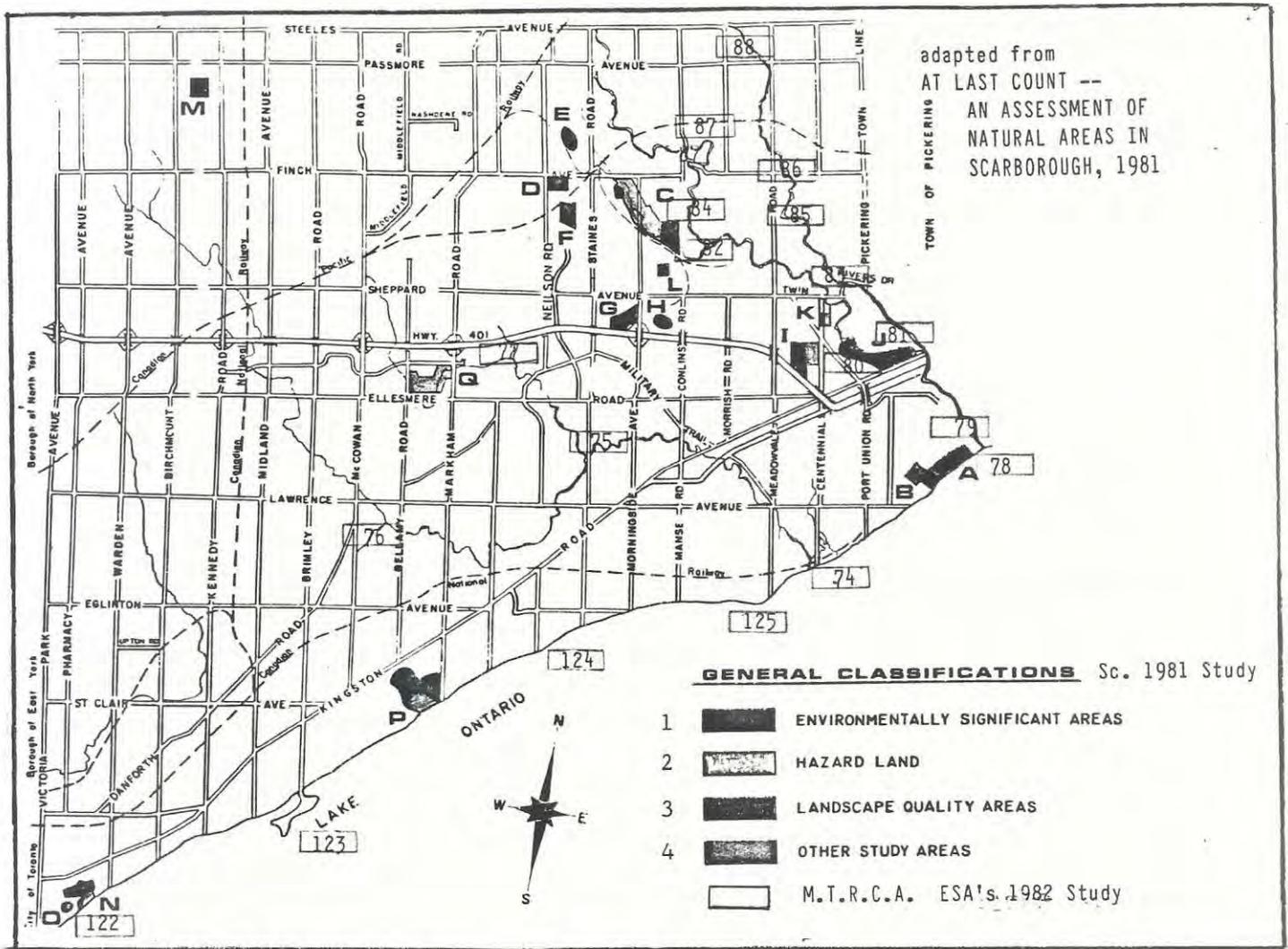
Obviously too few people are aware of Scarborough's valuable and diverse natural heritage to see that the remnants identified are not destroyed. Although TFN has cooperated in identifying E.S.A.'s in Scarborough and defended their continued existence, it is the individual citizens of Scarborough who must convince their politicians that the natural features that make Scarborough unique must be saved for future generations.

Helen Juhola

\* See page 37 notice of Environmental Meeting.

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SCARBOROUGH'S VANISHING HERITAGE (cont'd)



adapted from  
 AT LAST COUNT --  
 AN ASSESSMENT OF  
 NATURAL AREAS IN  
 SCARBOROUGH, 1981

GENERAL CLASSIFICATIONS Sc. 1981 Study

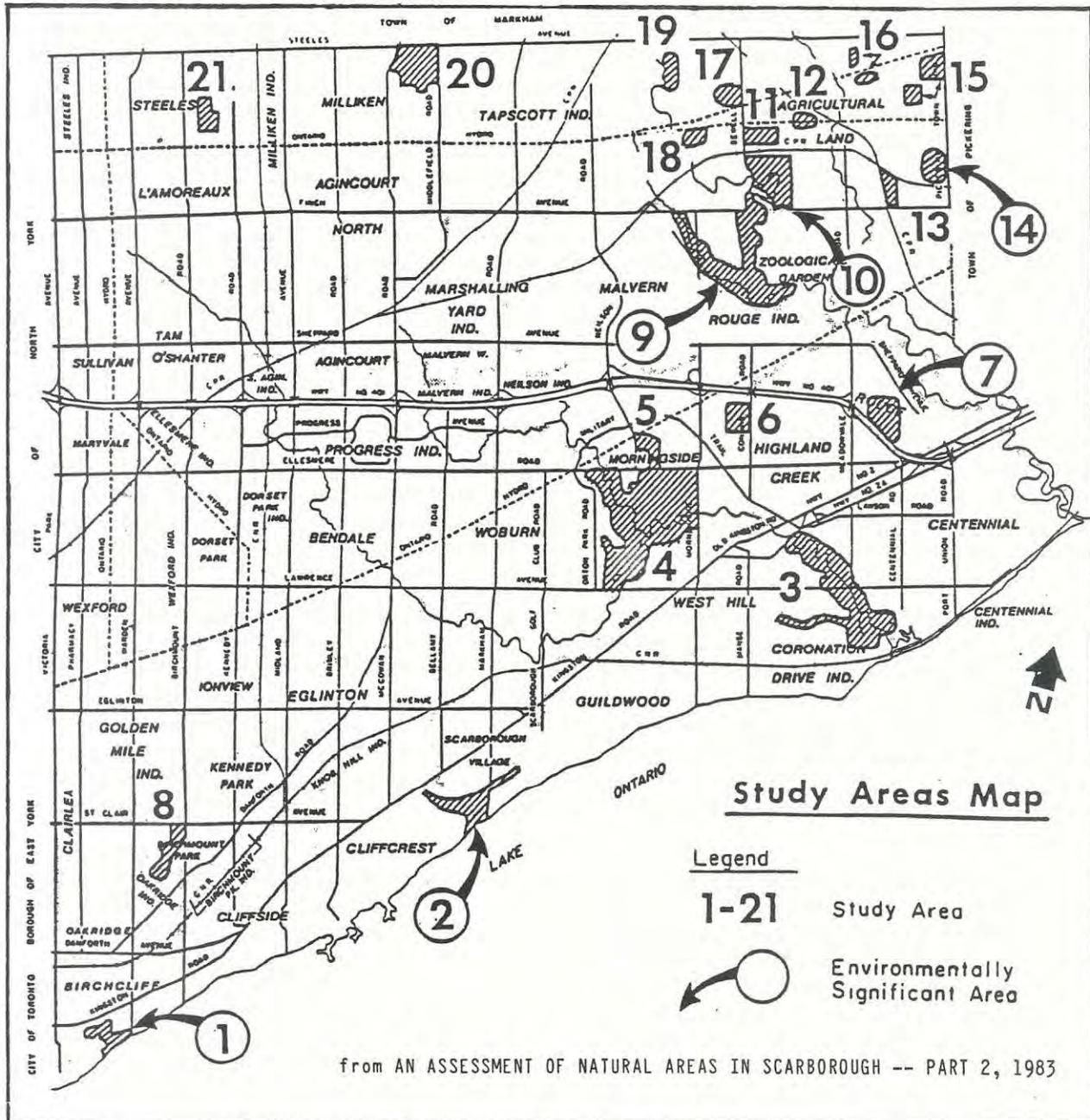
- 1 ENVIRONMENTALLY SIGNIFICANT AREAS
- 2 HAZARD LAND
- 3 LANDSCAPE QUALITY AREAS
- 4 OTHER STUDY AREAS
- M.T.R.C.A. ESA's 1982 Study

- |   |                                       |
|---|---------------------------------------|
| A West Rouge Lakefront 1, 3                 | B West Rouge 2                        |
| C Morningside Tributary 1, 2, 3             | D Neilson/Finch District Park 4       |
| E C.P.R./Neilson 4                          | F Malvern Woods 4                     |
| G Morningside Bog 1                         | H 401 Buffer 4                        |
| I Centennial Forest 1, 2, 4                 | J Rouge Hills 3                       |
| K Twyn Rivers Drive 2, 3                    | L Repac Woods 4                       |
| M Passmore District Forest 3                | N Toronto Hunt Club Forest 1, 2       |
| O Fallingbrook Crescent Ravine 2            | P Bellamy Ravine and Sylvan Park 1, 2 |
| Q Highland Creek Tributary/Markham Branch 2 |                                       |
| 74 Stevenson's Swamp                        | 75 Highland Forest                    |
| 76 Hague Park                               | 77 Morningside Park Forest            |
| 78 Rouge Lakeshore Swale                    | 79 Rouge Marsh Area                   |
| 80 Rouge River Whitby Formation Section     | 81 Little Rouge Forest                |
| 82 Morningside Creek Forest                 | 83 Tabor's Horsetail Meadow           |
| 84 Core Woods                               | 85 Pearce Woods                       |
| 86 Diller Woods                             | 87 Milne's Forest                     |
| 88 Woodlands                                | 122 Fallingbrook Woods                |
| 123 Scarborough Bluffs Sequence             | 124 Guild Woods                       |
| 125 East Point                              |                                       |



## SCARBOROUGH'S VANISHING HERITAGE (cont'd)

1. Toronto Hunt Club Forest
2. Bellamy Ravine and Sylvan Park
3. Highland Creek -- East
4. Morningside park and Highland Creek - West
5. Ellesmere Woods
6. Conlins Woodlots and Pond
7. Centennial Forest and Swamp
8. Warden Woods
9. Rouge/Finch Meander
10. Reesor Woodlot - East
11. Sewells Forest - East
12. Reesor Woodlot - West
13. Beare Road Woodlot
14. Townline Swamp
15. Barkey Woods
16. Meadowvale Woodlots
17. Sewells Forest - North
18. Sewells Forest - West
19. Cedarbrae Woods
20. Milliken Woods
21. Passmore Forest



WATER SUPPLY AND SANITATION IN TORONTO

Fouling the Nest 1797-1833

In the early 1800's only a small proportion of our region's watersheds had been cleared of trees. The environs of York were still dominated by natural landscape features, most notably an abundance of ravines, springs and streams. Forest soils were still capable of absorbing the annual allotment of water, filtering it slowly throughout the year through layers of forest litter, humus and mineral soil before releasing it into springs and streams.

York was blessed with an abundance of pure, clear, cold water -- so much so that it got in the way. The early inhabitants of York often complained about the difficulty of road construction and transportation because of the numerous streams and swamps in the area. In the early 1800's two streams and several springs interfered with traffic on Yonge Street between College and Bloor, and 18 culverts and/or sections of log road had to be installed in swampy areas along Beverley and St. George Streets, between Davenport Road and Queen Street. Even until the 1830's, Yonge Street south of Queen Street was too swampy to use.

No waterworks existed in York prior to 1834. Residents obtained their water, often via water carters in the streets, from private or public wells, streams, or from Toronto Bay (Toronto Harbour). Although private wells had probably been dug earlier, the first recorded mention of a well is found in the minutes of the Court of Quarter Session for 1800, which mentions a tender for the sinking of a well in the gaol yard, just northeast of King and Yonge Streets. Years later, on June 9, 1823, the Clerk of the Peace called for tenders for the sinking of the first public well in York in the market square at St. Lawrence Hall.

These supplies of water were safe and adequate for many years, but by 1834 when York had grown to some 9000 people, more reliable and wholesome supplies of water were needed. An application was made to the Legislature to incorporate a private water company to convey water by pipes to the City of Toronto from the headwater of Garrison Creek. The application reported that city well water was brackish and impregnated with limestone deposits, although the water from the Bay was of excellent quality. In fact, it is likely that both the groundwater and the Bay were dangerously polluted with sewage by that time.

Like most rapidly growing urban centres in the first decade of the nineteenth century, Toronto by 1834 had exceeded the capacity for local groundwater to both assimilate the wastes of the populace and to supply pure well water. As N.M. Blake states in the preface to WATER FOR THE CITIES, "Villages could safely draw their water from local wells and cisterns. City dwellers could not." Torontonians were aware of this problem and eager that new supplies of water be obtained, but as of 1834 few influential people were concerned with dealing systematically with the primary cause of the problem -- disposal of human and animal waste.

It is interesting to speculate on the extent to which sanitation practices in early York had influenced the quality of the local groundwater, as of 1834. The quantity of groundwater was probably not greatly diminished, although in 1836 the Special Committee for Bringing Water into the City had reported that some city wells were drying up in the summer. It seems likely that most of the groundwater in the city was influenced by the widespread use of privy pits. It was common practice at the time for city dwellers to dig a large "bog hole" or privy pit in their backyard to contain and absorb human and household waste and refuse. Such pits and their public analogues, the "collects" and box-sewers, invariably accumulated dead cats, dogs and horses as well. The high

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## WATER SUPPLY (cont'd)

density of privy pits in urban areas, and their often close proximity to private wells rapidly led to the contamination of ground water with mineral salts, organic compounds from decaying waste and with various disease organisms associated with sewage. In New York and Philadelphia, crowded cemeteries were implicated in the contamination of groundwater. This was a concern in Toronto, particularly with regard to the Church of England cemetery at King and Church Streets.

These unsanitary conditions were being described in U.S. cities before the end of the eighteenth century. It took a little longer in Toronto, but by the 1830's when the first in a long series of cholera and typhoid epidemics occurred, Torontonians began to notice and write about the unsanitary conditions in their city. During 1832 Francis Collins, editor of the newspaper CANADIAN FREEMAN and a victim of the first cholera epidemic, printed articles decrying the filthy state of York:

"Stagnant pools of water, green as a leek, and emitting deadly exhalations, are to be met in every corner of the town -- yards and cellars send forth a stench already from rotten vegetables sufficient almost of itself to produce a plague -- and the state of the Bay, from which a large proportion of the inhabitants are supplied with water, is horrible.

"All the filth of the town -- dead horses, cats, manure, etc. (is) heaped up together on the ice (of the Bay) to drop down, in a few days, into the water which is used by almost all the inhabitants of the Bay shore ... There is not a drop of good well-water about the Market Square and the people are obliged to use the Bay water however rotten. Instead therefore of corrupting the present bad supply, we think the authorities ought rather adopt measures to supply the town from the pure fountain (probably Garrison Creek) that springs from the Spadina and Davenport Hill, which could be done at trifling expense."

The paper went on to suggest measures to improve the circulation of water in the Bay by making cuts through Ashbridge's Bay into the lake. Later that year, with a cholera epidemic sweeping across North America and seeming imminent in Toronto, the magistrates of the General Quarter Sessions of the Peace initiated daily garbage and sewage, or "night soil" collection (the manure dump was beside the Parliament buildings on Front Street west of John Street), built drainage pits on some of the filthiest streets, issued lime to householders and prosecuted 30 citizens charged with violating sanitation procedures.

By most accounts, problems of urban sanitation were not remedied on a wide scale until late in the nineteenth century. Certainly the "privy pit menace" and other nuisances were still prompting ameliorative legislation in Toronto until the 1880's.

Public Health and Private Enterprise 1834-1872

In the first council meetings after Toronto was incorporated in 1834 the issues of waterworks, public sewers and a full-time board of health were raised. This agenda reflected the concern of Torontonians regarding supplies of pure water, the filthy condition of the streets and privies in the town and the recent cholera epidemics. People were beginning to suspect connections between filth, contaminated water and disease, and generally encouraged "sanitation" as a means of preventing epidemics of such diseases as cholera and typhoid fever.

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## WATER SUPPLY (cont'd)

Waterworks

The earliest proposals to bring water into the city originated with independent contractors who proposed piping water from the streams north of the city. In 1834 an unsuccessful application was made to incorporate a water company to pipe water from the Rosedale Ravine tributary of the Don, just east of Davenport and Spadina Roads. On January 24, 1835, at the first meeting of the City Council, a proposal to pipe water from the Humber was refused because of its high cost, as was an 1836 proposal to bring water from Scarborough. On October 13, 1836, the Special Committee on Bringing Water Into the City advised City Council that water should be brought from the Garrison Creek headwaters near the present Christie Street gravel-pit park. The Garrison Creek water was described as having "quality most excellent, and able to supply water for four times the present population" (of about 10,000 people).

On July 6, 1840, some influential businessmen organized a public meeting to pressure Council to proceed with plans to establish gas works and waterworks for the city. On July 18, 1840, the subcommittee for Obtaining a Plan and Preparing an Estimate for Constructing the Proposed Water Works had narrowed the field to two choices: pipe water from the "springs or streams near Captain Baldwin's residence (Garrison or Taddle Creeks?), or pump water from the Bay, with a waterworks at the foot of Graves (now Simcoe) Street. On July 27, 1840, the leaders of the July 6 meeting presented a petition of 140 persons urging City Council to proceed with the matter of gas and water works. In response, Council established a standing committee on Gas and Water Works. This committee subsequently advocated a publicly-owned gas and water works as it was thought that sufficient money could be raised in England to finance the venture. Though local support for public ownership was strong, English financiers were not interested and the city was forced to seek a privately-owned works.

Furniss's company was granted a 50-year franchise and was required to establish a water works within two years. Construction was completed and water service commenced in 1843. The works consisted of a beam-type steam engine and pump located at the foot of Peter Street. The water was drawn from the Bay, a short distance from shore, and pumped through wooden pipes (bored logs) to the St. George reservoir on the northeast side of Huron and St. Patrick's Streets. From there, it was distributed through 15 to 20 miles of wooden pipes to the western portion of the city. In general, the technical aspects of Furniss's water works were shared by other North American works such as those in Philadelphia (1800), New York (1803) and Baltimore (1808).

The shortcomings of the Toronto waterworks soon became apparent. In 1845, less than two years after the works were completed, there were complaints of inadequate water for fire fighting. In 1848, the Committee of Fire and Water complained that the water supply was intermittent, of low pressure and "the existing water works system is more of a nuisance than a convenience and deludes people into a false sense of security in no way justified by the service available".

On July 1, 1848, Consumers Gas Incorporated bought the gas interests from Furniss's Toronto Gas-Light and Water Company, which Furniss then renamed the Toronto Water Company. In 1851 Furniss sold his waterworks to Charles Berczy who renamed it the City of Toronto Water Company and reorganized it as a publicly-held company. Berczy defaulted on the mortgage and Furniss repossessed the works in 1853. In the same year the Metropolitan Gas and Water Company was chartered with the intent of eventually competing with Furniss.

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GARRISON CREEK WATERSHED

from a City of Toronto map c. 1876

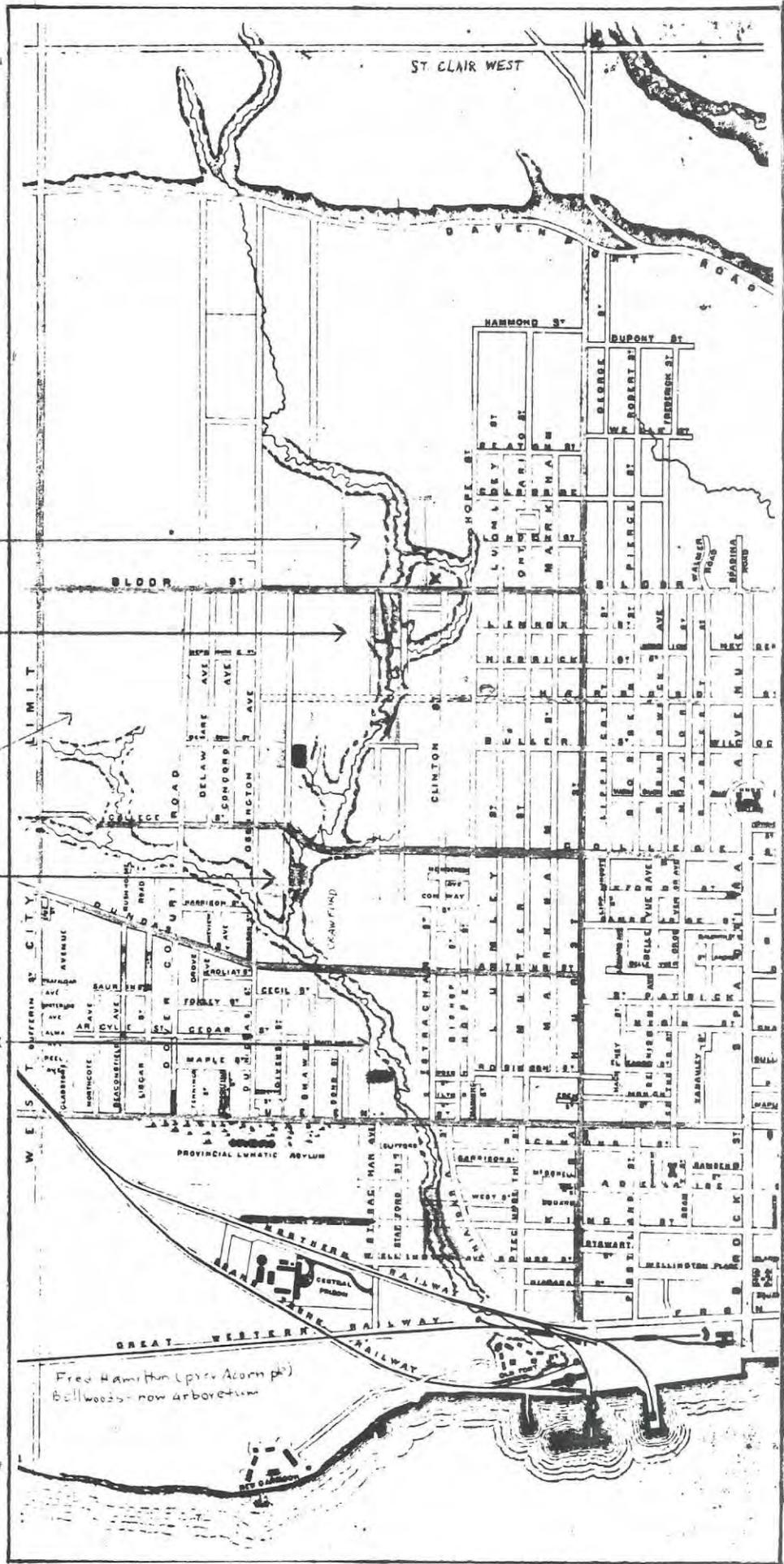
now Willowdale Park  
(formerly Chistie Pits)

now Bickford Park

now Dufferin Grove

now Hamilton Park

now Trinity Bellwoods Park



## WATER SUPPLY (cont'd)

By 1858 the Metropolitan Toronto Gas and Water Company bought Furniss's works, and in 1861 the gas and water interests were separated, leaving the Metropolitan Water Company. They fell behind on payments, and Furniss again repossessed the the waterworks.

During the next several years the City negotiated with Furniss regarding expansion of his system, and also considered the possibility of acquiring Furniss's system or building a new one. In 1872 the Legislature passed a waterworks bill that enabled Toronto to issue debentures to fund the construction of a new waterworks. Later in the year the citizens of Toronto voted in favour of a by-law implementing these initiatives. Toronto newspapers, which had been complaining in print about the contaminated water pumped by Furniss, were strongly in favour of a new city-owned waterworks.

"We have neither the quantity nor the quality (of water necessary to secure the health and comfort of the citizens) and we are equally destitute of what is indispensable for the safety of our houses from fire, the flushing of our common sewer, and for watering and clearing of our streets...Disease and death lurk in the poisonous liquid now supplied to our houses five days out of the week"

Furniss died in 1872 and the City finally acquired his water works. These they incorporated into an expanded system proposed by the Water Works Commission.

#### Sewerage Developments

The first council meetings also dealt with issues of "draining and paving the city". Drainage was considered to be essential to a clean city, especially after waterworks increased the amount of waste water for disposal. Nineteenth-century civil engineers were outspoken proponents of the role of pavements in improving drainage and covering wastewater-soaked ground. They rated these benefits equally with those of improved transportation. By 1870 paving and sewer construction had become important components of Toronto's works budget.

In a letter to Council on May 20, 1835, Capt. R.H. Bonnycastle of the Royal Engineers reported that there would be no problems with grades, etc. in constructing a public sewer along King Street from Peter Street to the Don River. On June 19, 1835, the Select Committee on Draining and Paving the City reported that tenders had been received for the construction of a sewer along King Street from the creek above Government House (Russell Creek) to the creek below Parliament Street (Taddle Creek). On August 3, 1835, the same committee reported that although "lake stone" was available, it would be more economical to build the sewers of more readily available brick. By 1836 householders were buying permits allowing them to run pipes into the King Street sewer.

Sewer construction proceeded rapidly along other streets. In 1845 a major outfall was placed at the foot of Peter Street beside the pumphouse of Furniss's recently completed waterworks. In a letter to the City Council on June 12, 1846, Furniss complained that the sewer discharged only a few feet from the intake of his works, and that it often rendered the water supply unfit for distribution. This situation, he said, was the cause of many of the complaints lodged against his business:

"At present, the issue (from the sewer) is nothing worse than surface dirt and clay, but the whole of the gravelly bay, which formerly presented so pure a supply of water, becomes now whenever there is any wind or rain,

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## WATER SUPPLY (cont'd)

to use the expression of the engineer, as white as milk"

It seems unlikely that the effluent from the Peter Street sewer was as innocuous as suggested by Furniss, as it almost certainly contained sewage and other waste in addition to the sediment he described.

Other writers since the early 1830's had been complaining about the foul state of the harbour waters, and the new sewers were clearly exacerbating the problem. Residents complained during the 1840's of the excessive growth of weeds in the shallow waters of the Harbour, and of the way that they piled up and rotted on the shore. The "noxious exhalations" from this material were presumed to be causing the high incidence of "fevers" among people who used the harbour for water. One man suggested that ashes from the soap factories be used to bury the weeds and fill in the shallow areas where they grew. In 1853 the newspaper PATRIOT complained of pollution in the bay referring to the odour of gases rising from it and to the contamination of the ice which was harvested from it for domestic use.

#### Sanitation and Disease Theory

Prior to the 1880's, when the microbial causes of disease began to be understood, public health officials were aware of an empirical relation between the filthy conditions that often prevailed in urban centres and frequent outbreaks of cholera, typhoid fever and dysentery.

The Toronto cholera epidemics of 1832, 34, 49, 54, and 66 were probably caused by sewage contamination, first of the groundwater, and later of the harbour. Typhus outbreaks, probably of similar origin, were recorded in 1845, 46 and 47. It is quite probable that these were really typhoid fever, which was considered to be a variety of typhus until the late 1800's.

Three theories of disease causation were popular throughout the nineteenth century: the filth or zymotic theory which attributed disease to vapours (miasma, sewer gas, etc) from putrefying human, animal and vegetable wastes; the germ theory which attributed each disease to a specific germ transmitted from one individual to another; and a compromise theory, the contingent-contagionist theory which held that disease germs, abundant in rotting effluvia, became active and virulent under certain conditions, especially hot, stifling weather. This knowledge formed the rationale behind the public health programs of the time which placed an emphasis on "sanitation" or the removal of filth, especially by flushing the streets with water and the provision of clean fresh air and water to the city.

In Toronto, coordinated attempts to control disease outbreaks and ensure public health were initiated in 1834 when the first local Board of Health was established. A major mandate of the Board was to oversee the control and elimination of contagious diseases and the improvement of the environment through effective sewage and garbage disposal. Each year a board of health was appointed from among the aldermen: during epidemics and other health emergencies, temporary Medical Health Officers were hired to administer publicly-supplied medicine and hospital care. In general, the Boards of Health were ineffective at eliminating the unsanitary conditions that prevailed in Toronto during those years.

In 1869 City Council abolished the Board of Health, reasoning that it would be more economical for the Board of Works to assume that role, since sanitation

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## WATER SUPPLY (cont'd)

was the key to public health. The City hastily reversed this decision in 1872 when it became apparent that the Board of Works was not able to administer adequate medical care during a smallpox epidemic. The new Board of Health assumed a "crisis management" function as it had before.

In 1883, as part of a province-wide public health initiative, Dr. William Caniff was appointed as Toronto's first full-time Medical Health Officer. Caniff subscribed to the theory that filth and noxious odours contributed to the virulence of disease germs (the contingent-contagionist theory), and began a campaign to persuade Torontonians to clean up the city and harbour. He was an early proponent of moving the intake pipe of the water works to the far side of the Island, and of constructing a trunk sewer (interceptor sewer) to carry the city's waste away from the harbour. As he had neither the legal nor the financial authority to act on these sensible (but expensive) ideas, and because he made little progress with the City Council in these matters, he resigned in frustration in 1890. Caniff's ideas had been about 25 years ahead of their time, and had been defeated by a municipal government which had always been loath to interfere in private matters of sanitation and which generally found urban expansion and low rates of taxation preferable to expensive public health projects.

#### Public Ownership and Persistent Problems 1873-1954

Although it became virtually a truism that private water works, which were intended to show a profit, were not able to meet adequate standards of supply in North American cities, Toronto moved relatively easily from private to public ownership in matters of water supply. That all problems of management and planning did not disappear when the city took over suggests that Furniss was not the profiteering scoundrel the city made him out to be. Besides the huge capital expenditures needed to supply increasing quantities of water to the rapidly growing city, the crucial problem of water quality was not susceptible to easy engineering solutions such as adding more and bigger pumps and reservoirs. In 1873 there was no real choice to be made. It was faster and less expensive to find a new source of water and to continue using the harbour to inactivate the City's wastes than it would have been to consolidate the sewer systems and pipe wastes out of the City.

Albert Furniss had been able to make a profit from the civic water contract only by being very frugal in all aspects of the operation of his waterworks. This made him reluctant to expand and improve his works to keep pace with the rapidly growing city, and had led in part to the constant barrage of complaints about the quantity and purity of the water that he distributed. It is ironic that the city, having acquired his works and added to them in 1879, proved equally reluctant to expand and renovate when their new system began to show its age.

The new city-owned waterworks were greatly expanded over the Furniss works, and the intake was moved to the lake side of the Toronto Islands in the hope that this would place it beyond the effects of the severely polluted harbour.

In January 1873 the Water Commissioners awarded the first contracts for the new municipal waterworks. This consisted of a filtering basin dug into the beach on the south side of the Island, a 48-inch wooden conduit pipe across the island and through the shallow water of Blockhouse Bay, a 36-inch cast iron pipe across the harbour and a pumping station at the foot of John Street. The

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## WATER SUPPLY (cont'd)

water was pumped to the Rosehill reservoir on the east side of Yonge Street just south of St. Clair Avenue. This reservoir which is still in use is the largest reservoir in the Metro Toronto waterworks system.

The three pumps of the old Furniss works were unable to pump to the new reservoir and were scrapped in 1875. The new system was practically finished by the end of 1877 and passed into the control of City Council. Water rates were reduced to attract new customers and by 1880, 8000 new connections to the system had been made.

The decision to dig filtration basins on the island was based on the success of a similar system which had been in operation at Hamilton for 16 years. The Toronto basins were not able to supply even 50% of the 10,000,000 gallons of water per day that was required of them and in 1877 the first of a series of trenches was dug to connect the basins directly with the lake.

In 1882, with the filter basins causing almost continuous problems and becoming putrid and weedy, the City built an intake six feet in diameter and 2628 feet long, terminating south of the Island in 30 feet of water. For about 50% of the time during the period 1877-1882, while attempts were being made to supply pure water from the filtration basins, water had in fact been supplied from the contaminated waters of Blockhouse Bay.

In 1887, two consultants from New York reported to the City on supplying additional water by gravity from lakes on the moraine north of Toronto and from the Don and Rouge Rivers. This report was rejected, and by 1890, when water demand had exceeded the capacity of the pipe under the Harbour, a duplicate pipe was constructed and the intake was extended another 340 feet into the lake to a depth of 70 feet.

By this time there were nearly 200,000 people in Toronto, and all of their sewage was deposited into the harbour through at least nine major sewer outfalls. So much sewage sludge was deposited that the harbour slips had to be dredged annually. The City Engineer's Annual Report of 1891 stated that:

"The sewage system of the City is very complete and extensive; its defect lies in the place of discharge into the harbour in front of the City. When this is remedied by the construction of a trunk sewer, that will discharge into the lake five or six miles to the east of the City, Toronto will have an unrivalled system."

Unfortunately, the trunk sewer was not to be built for another 20 years. By that time the city had doubled in population, and there were three or four feet of sewage sludge on the bottom of the harbour. About 20,000 cubic yards of sludge had to be dredged every year from the harbour slips. To help alleviate this problem, some outfalls had been extended farther into the harbour.

On Christmas Day, 1892, and on September 5, 1895, blockages caused the pipe in Blockhouse Bay to rise and break. Each time, while repairs were being made (for approximately one month), water was again supplied from Blockhouse Bay, and each time there was an outbreak of typhoid fever. During these outbreaks the people of Toronto went back to the practice of buying water from carts.

The clear, cool streams once considered as city water sources no longer existed. As the city had expanded, covering the watersheds with pavement and fouling the watercourses with sewage, these streams had become convenient trenches for the construction of trunk sewers -- such was the fate of Russell Creek (1870's),

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## WATER SUPPLY (cont'd)

Taddle Creek (1860-1884) and Garrison Creek (1884-1890), as well as several tributaries of the lower Don River.

In 1896 the City rejected a British consultant's report that recommended bringing water from Lake Simcoe, and accepted a City Engineer's report that recommended an enlarged system with a conduit in a tunnel under the bay and a filtration plant on the Island. The old filter basins were abandoned in 1897 and a new steel intake pipe into the lake was constructed, but the tunnel under the bay was not completed until 1908, and the filtration plant, with electric turbine pumps, was not completed until 1911.

In the winter of 1910-11 the intake pipe broke in a storm and became blocked with sand. For several months while repairs were made, water was supplied from Blockhouse Bay and there was another typhoid epidemic. In 1912 a new, well-protected intake pipe was laid at a southwest 45° angle to the old pipe, extending 2400 feet into the lake to a depth of 100 feet.

By 1912 the high and low-lever interceptor sewers were being completed. They conveyed most of Toronto's sewage away from the harbour to the Main sewage treatment plant at Ashbridge's Bay where the sewage was treated by chlorination and sedimentation before being discharged into the lake.

The main sewage treatment plant was located at Ashbridge's Bay against the advice of Professor Coleman, a prominent University of Toronto Geologist, who warned that the prevailing lake currents would carry the effluent over the intakes of the newly completed Island Filtration Plant. Thus it was found that the Island Filtration plant was pumping dilute sewage to the residents of Toronto from time to time. Chlorination of water supplies had first been developed for municipal waterworks about 1910, and Philadelphia was one of the first large North American cities to use it. Toronto introduced superchlorination in 1926 to reduce the unacceptably high bacteria counts that were being found in the intake water of the Island Filtration Plant.

On March 18, 1927, a major expansion of Toronto's waterworks was approved. It was intended to duplicate the existing system with a new filtration and pumping plant at the foot of Victoria Park Road in Scarborough (now known as the R.C. Harris Filtration Plant). Construction started in 1932 and the plant was completed in approximately 1942.

Since 1954 when the Metropolitan Corporation assumed responsibility for water filtration and distribution, the R.C. Harris plant has been doubled in size (1955-58) and the R.L. Clark filtration plant in Etobicoke (1962-68), the Easterly filtration plant (1974-79) and the new island filtration plant (1975-77) (for summer use only) have been constructed.

Toronto assimilated 13 of the surrounding municipalities through annexations and the creation of the Metropolitan Corporation and inherited a total of 19 sewage treatment plants of widely varying size and efficiency. Most of these outdated plants, which were receiving sewage from a total of approximately 1.6 million people, discharged partially-treated effluent into Metro Toronto's rivers.

Metro Works became responsible for the collection and treatment of sanitary sewage from each of its member municipalities; on January 30, 1954 a report was endorsed recommending that all sewage treatment plants on the watersheds of the Humber and Don Rivers be abandoned eventually and replaced by large,

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## WATER SUPPLY (cont'd)

efficient plants along the lakeshore. Since then, the main sewage treatment plant has been upgraded, the Humber plant constructed (1955-60), some watershed plants temporarily upgraded and many smaller watershed plants abandoned. Sewage sludge is no longer dredged from the harbour, but the water is still contaminated by effluent from storm and combined sewer overflows.

Conclusion

In a 1978 article, Schultz and McShane noted that "virtually the only problems successfully attacked by nineteenth-century urban leaders were those susceptible to engineering expertise". They went on to quote Albert F. Noyes, a leading nineteenth-century civil engineer:

"The office of the municipal engineer is of the greatest importance to the community...In fact, the city government of today is in large measure a matter of municipal engineering."

It is certainly true, as Schultz and McShane point out, that the civil engineers with their core of professional (= exclusive) knowledge and scientific tradition were well-equipped for long range, comprehensive planning of urban sanitation and water-supply systems.

After 1850 or so, the technical capabilities of the civil engineers seemed to be far ahead of the budgetary capabilities and public health priorities of municipal leaders, especially when it came to reconciling long-term, indirect benefits of public sanitation, with the short-term, direct political costs. If Toronto seemed reluctant to deal in a far-sighted and effective manner with its disastrous sewage and water supply interactions in the nineteenth century, then Ottawa was positively negligent. In his introduction to "Fire, Disease and Water in Ottawa", J.H. Taylor focussed on some possible explanations for the inability of Ottawa's civic government to deal with chronic water and sewage problems. These insights are probably relevant to the situation in Toronto.

Taylor emphasised that change in sanitation procedures and priorities was ultimately a political act that required the re-education of both politicians and their constituents. Even at the best of times the philosophy was one of change by crisis. The scientific debate regarding the origin of disease may also have delayed decisive action, since it occasioned apathy and indifference rather than explicative understanding and permitted ethnic and political problems to dominate health issues.

In summary, Taylor wrote:

"Both as politicians and businessmen (the interests of civic leaders) generally lay in the political economy of property. It did not often intersect with the collective welfare."

This conclusion applies equally well to environmental issues of sanitation in the nineteenth century as it does to present environmental issues such as acid rain and chemical waste disposal.

Robert Steedman

Ed. Note. See page 36 notice for "Waterfront Remedial Action Plan. ▷

## WATER SUPPLY (cont'd)

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APPLY FOR CONSERVATION SCHOLARSHIPS

The Metropolitan Toronto and Region Conservation Foundation will accept applications for three B. Harper Bull Conservation Fellowship Awards of \$1,000 each.

The deadline for the acceptance of applications is Friday, Feb. 20, 1987. The scholarships are available to encourage and assist University and College Students residing or studying in the Metropolitan Toronto Region, and wishing to broaden their knowledge of conservation through study, travel and practical experience.

For further information and applications, write:

Waneeta Robertson, The Metropolitan Toronto and Region Conservation Foundation, 5 Shoreham Dr., DOWNSVIEW, Ontario, M3N 1S4.

SPRAY NOW, DIE SOONER?
------------------------

This summer, walking a dirt road deep in the country, I rounded a bend to find a Hydro van and Hydro employees who looked like something from outer space. Helmeted, goggled, gloved, booted, covered from neck to ankle in over-alls, they were spraying from large cannisters with all the gusto of firefighters wielding a water hose.

They were protected. Children, adults, and wild life venturing down that lane thereafter were not.

Closer to home, I query more and more the continuing necessity for spraying in city parks. These are the very places to which mothers take their young in the fond belief that they are getting them away from automotive exhausts. Children frolick in parks, they roll in the grass. Can Metro Parks and Hydro continue to justify what appears to have become unquestioned and routine spraying in the light of what we now know - more to the point, in the light of what we do not YET know - of the longterm effects of environmental poisoning.

The Human Ecology Foundation of Canada estimate that there are 1,500 cases of ecological illness in Ontario, with no count yet taken of the numbers in the rest of the country. Of that estimated 1,500, I know intimately two people who are cripplingly debilitated for days after a Parks spraying. Both live in buildings which border ravines. Neither invites her reactions by going into the park at such a time; it is enough for the spray to be airborne. (What price those wonderful "green lungs" about which Toronto citizens could formerly congratulate themselves?)

To question this practice is, of course, to question one of the justifications for a billion dollar industry, and obviously the petrochemical giants are not about to rock their own boat. But surely it is time to re-assess, in the light of present day experience, whether the benefits derived from the blanket use of pesticides and insecticides have not, like cells turned cancerous, taken on the character of a slow malignancy.

Children are more vulnerable to lead in the atmosphere than are adults. The same vulnerability must apply with regard to other chemicals, whatever the assurances of those producing them. The fact that the people I mention are given (at their own request) advance warning by Parks personnel shows that policy administrators are aware that spraying is hazardous to some of the populace. What they continue to turn a blind eye to is the possibility that these few are only the aware tip of an iceberg of sick people, most of whom have no idea what, literally, has hit them.

I am assured that Parks personnel undergo regular blood tests and that there have been no ill effects amongst them consequent upon the use of sprays. This is an estimable precaution on the part of their employers, but who checks out the rest of us each time a further dousing of our already chemical-laden atmosphere is undertaken? (As to why a dousing is thought necessary, I was informed - in all seriousness - that the latest spraying of 2,4-D in Taylor Creek, this September, was to subdue what administration obviously regard as that ravaging bespoiler of parkland, the dandelion.)

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## SPRAY NOW (cont'd)

2,4-D, the most widely used herbicide, is presently under governmental review. It came into use in 1946, before governments required detailed health studies. According to a Globe & Mail article of September 18, 1986, 2,4-D was a key ingredient in Agent Orange, the defoliant linked to many health problems of Vietnam veterans. A recent Kansas study has found that farm workers who were exposed to 2,4-D for 20 days or more were six times more likely to develop a rare cancer known as non-Hodgkins lymphoma than those not exposed. Home gardening products containing 2,4-D are at more diluted levels, according to Canadian officials.

The Federal Agriculture Minister now has various options on the use of 2,4-D ranging from issuing new warning labels, to restricting its application, to outright ban. The Canadian Environmental Law Association is calling on the Government to take 2,4-D off the market.

Parks authorities, obviously in good faith, have been giving assurances down the years about the safety of the sprays used. However, in a Toronto Star article of July 30, 1985, a Health & Welfare Canada spokesman pointed out that "Every pesticide is toxic, otherwise it wouldn't be effective". There is an alternative in the development of natural forms of control and governments could channel their support and research in this direction.

The Department of Agriculture proposed "a permanent consultative committee to provide a focus for groups interested in the pesticides sprayed on crops and forests". The date of this "initiative"? 1983! We should not allow the issue of Parks and Hydro spraying to be sidetracked for a similar period of years.

If you feel strongly on the use of 2,4-D in particular, and on the issue of Parks and Hydro spraying in general, write to:

The Hon. John Wise  
Minister of Agriculture  
House of Commons, OTTAWA K1A 0C5

Send a copy of your concerns to Prime Minister Mulroney and Premier Peterson, as well as the Provincial Minister:

The Hon. Jack Riddell  
Minister of Agriculture and Food  
11th Floor, 801 Bay Street  
TORONTO M7A 1A3

Don't forget to alert your M.P. and your M.P.P.

It is primarily the young who will bear the consequences of our present sins of omission and commission. The time is now, and already it is late.

Eva Davis

□

TIME BOMB

TFN members have been calling in about the best trees in their areas not looking as healthy as they should. "Best trees" are usually heritage trees -- those trees that are best adapted to conditions here. The best trees in Ontario are here in Metro where woodlots or "bush" were only cut once or not at all rather than high-graded over and over again. "Selective cutting" is what in the mining industry is called high-grading, or removal of the best first, and is common practice by lumbermen in Ontario even now.

In Metro Toronto and a few other places that were not so easily accessible to the lumber merchants, there are some survivors of the original forest. "Mrs. Simcoe's oak" in the park outside the Castle Frank subway station is one of them. When you go there, there is no doubt which tree it is. Trees of this stature are beloved throughout the region. Everyone knows an oak tree or two as a special landmark.

But the oaks are in trouble. Even the High Park oaks are in trouble, with the Parks Department of the largest city in the country looking after them. The largest white oak -- probably the oldest tree in Metro -- is also in trouble. And that one has had for years and years the best care that the tree-care industry has to offer.

What the tree specialists are slow to notice is that some farmers in the USA and Canada have found ways to avoid the pollution that damages natural environment, kills trees, sickens animal life and calls loudly to insect and disease "cleanup crews" such as slugs and earwigs, grasshoppers and blue mould, aphids and mildew, brown rot and Japanese beetles. The farmers claim that we don't need to have these if we cooperate with nature.

What has this to do with Toronto trees? Well, Toronto has the option to take care of its heritage trees, preserve its much admired and cherished image as "Toronto the Green", but it has to be a conscious decision to change the careless disregard of our tree heritage that has brought us to this point. Our trees are not going to make it on their own. Trees of all species in Metro are suffering and dying from a multitude of mistakes, any one of which can easily be fatal to a tree; for example, changing contours. Raising the level kills more trees than lowering the level. Raising the level is so easy to do, and looks so neat with the grass running right up to the tree trunk! Bark on tree trunks, kept damp, rots. If the tree species originated on a floodplain where frequent inundation is a natural occurrence, then new roots form above the old, and the tree grows on. Willows, silver maple and Manitoba maple belong to this group but are definitely not on the preferred list of urban species because they are "highcost maintenance" species and often need expensive pruning to prevent hazardous conditions from developing. All other species are damaged if the bark of the tree trunk is kept damp.

What also "looks so neat" is a manicured lawn. But stop and consider, what is a manicured lawn? It's a monoculture...an area of land artificially supported with chemicals... poisoned, in fact, in order to survive in this continental climate.

Gad, and we all enjoy lawns, new, soft and fragrant. We like to remember what they feel like on our bare feet. I remember the green stains on my Sunday-best white sandals, on my hands and on my clothes.

But what of the children who feel their first freedom running barefoot on these wide expanses today? The neighbours' Chemlawn truck operator oversprayed the line,

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## TIME BOMB (cont'd)

or Aunt Martha spread Weed'n Feed under the trees (with the broadleaved characteristic of weeds defined on that label). The result is that many trees are now showing the characteristic down-cupped leaf edges of hormone damage that points the finger at herbicides of many kinds. Or I used a "killer cane" myself. What then? When will it be safe for my grandchildren to run barefoot?

Our trees are dying. Metro trees are visibly "not so good". Even High Park has stag-topped trees still being trunk sprayed with weedkillers. And the Children's Garden at the Royal Botanical Gardens has had vegetation around the trees in it killed. Are we all mad?

Where is our choice, our option to choose a clean zone to live in? A small haven where poisons will not be used? Is there one small creek where polywogs come like magic in spring and fairy shrimp abound? Where my garden toad can survive the winter this year?

Every neighbourhood, every zone of the city, every park, every road allowance, every tree is a target for poisons here in Toronto, today.

I think it is time for a "no poison" area -- a clean area with by-laws to match-- to give at least a few people the option not to pollute or be polluted. Not to poison or be poisoned.

There must be a corner, somewhere, to begin. After all, we did it with smoke, why not poison?

Mary Smith

□





LOON MAGIC by Tom Klein, Paper Birch Press Inc. 1985; 130 pages plus introduction, illustrated, \$49.95

Author Tom Klein, the guest speaker at our November general meeting, says LOON MAGIC is a "book for loon people. Not an ornithological textbook, it is intended to be an accurate and interesting look at loons ...It is meant to be read not studied." He has succeeded in this informative and affectionate account of his favourite bird, the common loon. And nearly 100 colour photographs -- 22 full-page -- are nicely framed in this handsome, large horizontal-format book.

Tom Klein and loon have been on the best of terms since his boyhood days. Later he helped launch the Wisconsin Project Loon Watch. He has also served as vice-chairman of the North American Loon Fund.

LOON MAGIC puts us right beside the birds above and below water. It tells us how they spend their summers and winters and conjectures on how they migrate in between. In spring the loons often return the day the ice goes out, suggesting the birds may send "scouts" ahead to check ice conditions.

There's an absorbing chapter on the different calls of loons. They made a deep impression on Henry David Thoreau and on many other nature watchers since. Listening to the loon's music on our northern lakes it's easy to call it "primitive". And it is: the loon was the first of the birds we have in North America.

The loon's nickname on this continent (and its common name in Britain) "great northern diver", is well earned says Klein. He tells of loons reaching depths of 100 feet or more propelled by powerful feet. One bird was found to have feet so large that, in proportion, had they been on a man he would have needed a size 45 triple R shoe. We also read that one reason the birds can dive successfully for fish and minnows is because their red eyes do not block out any of the underwater light. We also learn that loons have to run along the water before getting airborne because they have the least wing surface in relation to body weight of any flying bird. Many of us have watched that hold-your-breath takeoff. We've also been enchanted at the sight of a pair of chicks on a parent's back. It seems loon chicks are especially susceptible to chilling. So, as well as hitching a ride, they're keeping warm.

What of the loons' future, beset as they are by motor boats on their nesting grounds, the ravages of botulism, increased chemicals in many of their lakes, and acid rain? It's acid rain that Klein believes is the most serious threat. Some Canadian readers may wish he'd given more attention to our acid rain problems. In a very short section he notes that an estimated seventy per cent of Canada's loons live in areas sensitive to acid rain, and writes, "When that problem is licked, Canadian loons should have fairly smooth sailing".

To loon watchers who lament about the future of loons on their lake, Klein says, "Loons are long-lived birds, adult mortality is relatively low, and it takes only two surviving chicks over the pair's entire life span to continue the species".

"Most loon problems are people problems", sums up Klein. And he's optimistic we'll solve them: "In the twenty-first century, loons fitted with transmitters will probably be routinely followed by satellite from their northern summer homes to warm coastal waters." LOON MAGIC readers, as well as listeners on November 3, hope future events will fulfill his optimism.

Harold Taylor

Ed. Note. See page 37 notice of monthly meeting.

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# The Weather This Time Last Year

November 1985, City of Toronto

This was one of the gloomiest, dampest months in the history of southern Ontario weather records.

Precipitation records were broken all over, from Windsor east. Toronto's 186.2 mm handily defeated 1966's record of 147.1 mm in records going back to 1840. In fact, it was Toronto's wettest month since August 1915. To the east, a station at Frenchman's Bay in Pickering had 193.8 mm, while to the west, Hamilton's Royal Botanical Gardens recorded a stupendous 230.3 mm. Most of the precipitation came as rain, although snow was also near to much above normal in our area.

Sunshine was well below average; the 39.6 hours at Toronto City was the lowest on record.

Mean windspeeds were near normal, as were temperatures.

The month opened with one nice day followed by heavy rain from Hurricane Juan. Toronto City recorded 94.8 mm on the 2nd to 4th. Pickering got 101.1 mm of rain during the same period from Hurricane Juan. No really major flooding resulted, even though conditions were reminiscent of Hurricane Hazel; the preceding two weeks had been quite dry as had much of 1985. However, there were some small landslides in the ravines. One at Millwood Road in early December closed part of the road until spring and phones in the area were cut off for a week.

After Hurricane Juan, a stationary front hung over Toronto the remainder of the month with cloud, rain and snow continuing. Very cold weather of record-breaking proportions hovered over the north and west, while the southeastern U.S.A. was unusually warm. We were inbetween. One spell of fairly pleasant weather intervened, the 18th to 20th, when the warm southeasterly air invaded the area. No records of temperature were broken this month however.

Phenological observation: The last yellow-jackets of this rather infested season were observed Nov. 1.

Gavin Miller

□

Lyn Hancock's new book LOOKING FOR THE WILD will be published in October. TFN is sponsoring a reading when Lyn will show slides, tell of getting material and discuss her book which is the story of a 100-day trip she took with Gus Yaki, well-known Ontario naturalist and nature tour leader. Their route follows that of a trip taken by Roger Tory Peterson and James Fisher in 1953 who, in turn, were visiting many of the sites visited by John James Audubon in his travels around America in the early 1800's. Admission is free.

Date: Monday, November 17

Time: 8:00 p.m. (come at 7:15 for book display)

Place: Hydro Place Auditorium, 700 University at College St.

# COMING EVENTS

## COMING EVENTS

A Bird Feeding Bonanza will take place at the Royal Botanical Gardens in Hamilton on Sunday, November 9 from 11 a.m. to 4 p.m. Admission at the door is \$1.00 per person. For further information, call (416) 527-1158.

Save the Rouge Valley System: Work meetings will be held on the second Thursdays of each month at 7:30 p.m. at the West Rouge Public School, 401 Friendship Drive, Scarborough. For information, call 284-6409.

Black Creek Project: Meetings will be held on the second Wednesday of each month at 7:30 p.m. at the Mt. Dennis Community Centre, 41 Hollis St., Toronto (Weston Rd. - Eglinton West).

Toronto Mycological Society will meet on Monday, November 17 at 8 p.m. Dr. James Ginns from Ottawa will talk about Polypores. Meeting is at the Education Centre, 155 College St. in the 6th Floor Auditorium.

Toronto Entomological Association will meet on Saturday, Nov. 22 at 1 p.m. at the McLaughlin Planetarium.

The Royal Canadian Institute lectures will be given on Sundays at 3 p.m. in the Medical Sciences Auditorium at the University of Toronto. Admission is free. For detail, call 928-2096.

Oct. 26 - Darwin's Other Islands by Dr. J. Ralph Nursall  
Joint meeting with the TFN.

Nov. 2 - Coloured Symmetry (Illustrated by Escher's Pictures) by Dr. H. S. MacDonald Coxeter

Nov. 9 - The Ancient Egyptian Composite Bow by Dr. Wallace E. McLeod

Nov. 16 - Reassessing Don Mills and the Design of Suburbs by John Sewell

Nov. 23 - The Sun and Solar Eclipses by Dr. Jay M. Pasachoff

Nov. 30 - The Myth of Women's Masochism by Dr. Paula J. Caplan

Coffee with the Curators at the Royal Ontario Museum at 10 a.m.

Nov. 4 - Speaker: Dr. Glen Wiggins, Curator of Entomology  
Tour: Life on Earth

Space limited; call 586-5788 for reservation.

Nov. 25 - McLaughlin Planetarium - Astrocentre Tour with Dr. Thos. Clarke

Recycling Conference: Seventh Annual meeting of the Recycling Council of Ontario, Friday and Saturday, October 24 and 25 at the Delta Meadowvale Inn, Mississauga. Telephone (416) 593-1756; outside the Toronto calling area, use toll-free number 1-800-387-2617. Call early for registration. Cost for professionals, \$160; for students and volunteer organizations, \$80.

COMING EVENTS (cont'd)

An Environmental Science Display by Environment Ontario will be open from October 22 to 26 at the Rexdale Laboratory Complex at 125 Resources Rd., Rexdale, Ont. Lectures, workshops, panel discussions and a conference on dioxin will be held; as well, there will be tours of displays which focus on air quality, drinking and recreational use of water, acid rain and other related subjects. Telephone 248-7485 or 965-7117 for more detail.

Technology Transfer Conference; Organized by the Research Advisory Committee of the Ministry of the Environment, on December 8 and 9 at the Sheraton Centre, Toronto. Research aspects of air pollution, water quality, leachates, liquid and solid wastes and other environmental issues will be discussed. Fees are \$125 pre-registration, \$85 for the first day, \$45 for the second; \$35 for students, or \$20 for one day only. Call the Ministry Research Management Office at 965-5788 for further information.

Greening the City: An International Symposium on Ecologically-Sound Approaches to Urban Open Space Management sponsored by the Pollution Probe Foundation, 12 Madison Avenue, Toronto, will take place at the Civic Garden Centre - February 18 to 20, 1987. Registration on or before November 30, 1986 is \$195, \$225 thereafter; one-day registration is available. For more information, call 967-4511.

\* Waterfront Remedial Action Plan:

Toronto Harbour has been designated an "area of concern" by the International Joint Commission, a Canadian-U.S. group dealing with water quality issues in the Great Lakes. That's why the City of Toronto, through the Neighbourhoods Committee, gave money to a coalition of environmental groups to develop a Waterfront Remedial Action Plan.

Since clean beaches, quality drinking water, and unpolluted fish are important to everyone, the public is urged to participate in forming this plan. Contact Barbara Wallace at 392-6788 for a copy of the draft plan (either the full 200 pages or the executive summary). You can share your ideas by submitting a written comment to WRAP, Environmental Protection Office, 12 Shuter Street, Toronto, Ontario M5B 1A2 or by attending any of the following meetings.

Nov. 18, 1986 BEACHES - Parkdale Library, 1303 Queen St. West

Nov. 19, 1986 HUMAN RISK- Deer Park Library, 40 St. Clair Ave. East

Nov. 25, 1986 BEACHES - Kew Beach School, 101 Kippendavie Ave.

Dec. 3, 1986 ACTION PLANS (Final City-Wide Meeting) - Council Chamber, City Hall  
[All meetings 7:30 pm to 9:30 pm]

Waste Study:

A citizens' committee is being set up to advise Metro Toronto Council and a consultant team in preparing a study of solid waste management. The study will assess Metro's requirements for solid waste disposal over the next 20 to 40 years. Anyone interested in serving on the citizens' committee or expressing views should contact Andy Keir at 863-0073.

\* See article on pages 18 to 28.

# TFN MEETINGS

VISITORS  
WELCOME

## GENERAL MEETINGS

Board of Education Centre, 6th Floor Auditorium  
155 College Street, at McCaul

Monday, November 3, 1986 at 8 p.m. (Coffee at 7:15)  
"The Common Loon in North America" - Thomas Klein of Ashland, Wisconsin will give an illustrated presentation on the natural history and present distribution of the common loon.\*

Tuesday, December 2, 1986 at 8 p.m. (Coffee at 7:15)  
"Photography of Birds" - Robert Woods  
Please note that the meeting night is Tuesday, not Monday.

## GROUP MEETINGS

Bird Group: Second in a series of five lectures on shorebirds -  
Wednesday, November 12 at 7:30 p.m. at the Board of Education Centre, 6th Floor Auditorium. Note that the next meeting will take place on Jan. 14, 1987.

Botany Group: "Poisonous Plants" by Debby Metzger  
Thursday, November 13 at 7:30 p.m., Room 203, Botany Bldg., University of Toronto, northwest corner of College and University. In January, Paul McGaw will speak on Newfoundland.

+ Environmental Group: "Proposed Wilderness Park for the Morningside Tributary of the Rouge River" with slides and maps, (trying to work within the system) - James Garrett and Jim Robb of the Save the Rouge Valley System. Thursday, November 27 at 7:45 p.m., Room 252, Board of Education Centre, 155 College St., at McCaul.

Junior Club: "The Otter" by Ms. Brenda Penak, Ontario Ministry of Natural Resources in the McLaughlin Planetarium Lecture Room on December 6 at 10 a.m.

\*Mr. Klein will be available both before and after the lecture to answer any questions concerning loons and also to autograph his book "Loon Magic." See book review on page 33.

TFN publications, hasti-notes, prints of selected newsletter covers, pins and crests are for sale at all General Meetings.

Also, Christmas cards, calendars and diaries from the CNF and FON will be available at the November and December meetings.



**TORONTO FIELD NATURALISTS**  
83 Joicey Boulevard  
Toronto, Ontario M5M 2T4

TFN 383

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**TORONTO FIELD NATURALIST**

published eight times a year by the Toronto Field Naturalists, a charitable, nonprofit organization, the aims of which are to stimulate public interest in natural history and to encourage the preservation of our natural heritage.

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Members are encouraged to submit notices, reports, articles up to 1,500 words in length and illustrations at least six weeks before the month in which the event is to take place or the material is required to appear.

Other Publications

**TORONTO FIELD NATURALISTS' CLUB:**  
ITS HISTORY AND CONSTITUTION ..... \$ .50  
By R.M. Saunders, 1965

**CHECKLIST OF PLANTS IN FOUR TORONTO PARKS: WILKET CREEK, HIGH PARK, HUBBER VALLEY, LAMBTON WOODS, 1972** ..... .50

**TORONTO THE GREEN, 1976**  
Metropolitan Toronto's important natural areas are described and recommendations given for their conservation and management; includes maps, bibliography and index ..... 2.50

**FIELD CHECKLIST OF PLANTS OF SOUTHERN ONTARIO, 1977** .....5/\$1.00 or ..... .25 ea.

**TORONTO REGION VERTEBRATE LIST (fishes, amphibians, reptiles, mammals), 1985** 5/\$1.00 or ..... .25 ea.

**TORONTO REGION BIRD LIST, 1985** 5/\$1.00 or ..... .25 ea.

**TORONTO FIELD NATURALISTS' RAIVNE SURVEYS. \$ 2.00 ea.**  
Survey #1-Chatsworth Ravine, 1973  
Survey #2-Brookbanks Ravine, 1974  
Survey #3-Chapman Valley Ravine, 1975  
Survey #4-Wigmore Ravine, 1975  
Survey #5-Park Drive Ravine, 1976  
Survey #6-Burke Ravine, 1977  
Survey #7-Taylor Creek-Woodbine Bridge Ravines, 1977  
Survey #8-West Don Valley, 1978

**INDEX OF TFN NEWSLETTERS (1938-1978)** ..... 10.00

**ANNUAL TFN INDEX** ..... .25 ea.

**AMPHIBIANS AND REPTILES OF METRO TORONTO, 1983** ..... 2.00

**TORONTO REGION BIRD CHART, 1983** ..... 2.00

**A GRAPHIC GUIDE TO ONTARIO MOSSSES, 1985.** ..... 2.00

**GUIDE TO TORONTO FIELD NATURALISTS' NATURE RESERVE, Leaskdale, Ontario, 1986** ..... 2.00

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