



TORONTO FIELD NATURALIST

Number 387, April 1987



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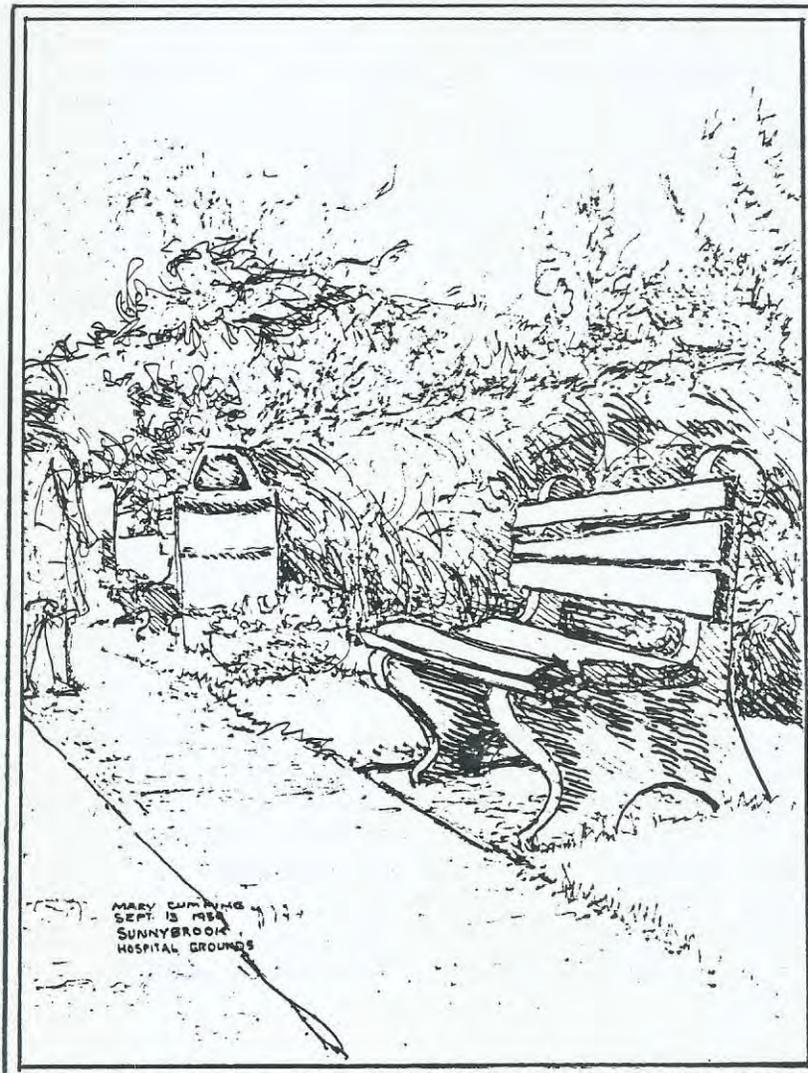
President's Report

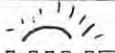
There are just two short items this month. A new leader is being sought for the bird group. This position would be for at least a year. We are looking for someone with good birding skills and a desire to make the TFN birding group one of the most respected in Ontario. Duties will include arranging monthly meetings, with monthly speakers and participation in outings and special events such as the Baillie Birdathon. All facets of bird biology from identification and behaviour of birds in the environment should be brought into play.

Many qualified people are out there, getting them to devote time and energy is another matter. If you're interested in running the bird group or know of a good candidate, please call me at 496-0735 (evenings). New, exciting, innovative ideas will be welcomed. Here's your chance to make a difference.

The second item concerns the Don Valley Brick Works site. By the time you read this its expropriation will be old news, but it is good news and we should savour this important decision. Thanks to all the people who worked so hard; it finally paid off. A skirmish was won; the battle continues. [See page 14 for more on this issue.]

Phil Joiner



 (NO DOGS)	Upcoming OUTINGS	TFN 
RAIN 	OR  SHINE	Everybody Welcome!

APRIL

Wednesday THYRA RAVINE - cleanup Taylor Creek, East York
 April 1 Leader: Eva Davis
 10 am Meet on the east side of Victoria Park Avenue just outside the subway station. Wear old clothes and bring gloves. Garbage bags will be provided. [For more about this ravine, read page 10.]

Sunday HUMBER BAY PARK - birds lakeshore, Etobicoke
 April 5 Leader: Helen Smith
 10 am Meet at the park entrance on the south side of Lakeshore Blvd. West at Park Lawn Road.

Wednesday HUMBER MARSH #3 - nature walk Humber, Etobicoke
 April 8 Leader: Helen Smith
 1:30 pm Meet at the Humber streetcar loop to walk north where we hope to see hooded mergansers in the river and then return to our starting point.

Saturday BEAMER POINT, GRIMSBY - hawks southwest of Metro
 April 11 Leader: George Fairfield
 9 am to Call Eileen Mayo (445-4621) if you want to attend. Confirm by
 5 pm sending a cheque for \$12.00 payable to the TORONTO FIELD NATURALISTS HAWK OUTING to Eileen at 405- 44 Stubbs Dr., Willowdale M2L 2R3.
BUS Bus leaves promptly from the corner of Old York Mills and Yonge (south exit of York Mills subway station) at 9 am and returns there at 5 pm. Bring lunch. Washroom on bus.

+
 Saturday YORKDALE PLAZA - nature arts North York
 April 11 Leader: Mary Cumming
 10 am Meet in front of Eaton's in the plaza. Lunch optional. Topic is genre painting. Everyone welcome.

Sunday ROSETTA McCLAIN PARK - birds lakeshore, Scarborough
 April 12 Leader: Karin Fawthrop
 11 am Meet at the corner of Kingston Road and Glen Everest Road (east of Birchmount).

Tuesday YORK UNIVERSITY - amphibians Black Creek, North York
 April 14 Leader: Allan Greenbaum
 8 pm Meet at the corner of Sentinel Road and Murray Ross Parkway. Bring a flashlight.

- ▷ ALL OUTINGS ACCESSIBLE BY PUBLIC TRANSIT.
- ▷ ALL OUTINGS END WHERE THEY BEGIN UNLESS NOTED OTHERWISE.

Keeping In Touch...

Dear Helen,

Feb. 11, 1987

The TFN Index [for 1986 newsletters] is almost finished -- one issue left and then the typing. What fascinating items get printed -- all sorts of valuable information. I value the TFN newsletter for many reasons but especially because it lets me know about all the environmental issues going on elsewhere in the province and in the world!

My trip to Panama was very eye-opening and has consumed me since my first week there. Not because of the birds and mammals I was able to see (read 'list'!!!) but because I was made forcefully aware of how small this planet really is, and how important it is for all of us to realize that.

I'm speaking environmentally of course. The destruction of the rain forests world-wide was something I knew about and paid lip-service-concern to but it didn't touch me deeply before. Well, it does now. I'm not sure just what particular thing caused me to worry so much -- maybe seeing "our" birds wintering there made me realize that they really do go somewhere specific, not just that great unknown called "south". Maybe it was watching the monkeys playing, feeding, rearing young in an ever shrinking environment, and feeling outraged, angry and sad that these marvelous creatures don't know that their world is dying. It was probably everything: the magnificence of the forests, the amazing array of plants, the incredible (truly incredible) bird-life, and the wonderful mammals, insects and reptiles who all depend upon these rain forests for their very survival.

And the forests are going -- why? Same old story -- too many people putting too much pressure on the land.

Anyway, I've developed an interest in environmental concerns and the third world. As a result of my own sense of urgency about tropical wildlife I wrote the enclosed article.[See pages 19 to 22. See also page 32.]

Christine Hanrahan
Ottawa

Dida -

February 4, 1987

...I was in Spain in January, saw the darling little robins, bluetits, goldfinches and linnets, and flocks of lapwings flying away from the cold weather in Europe. There was much snow on the Sierra Nevada...Heat wave here [The Alhambra, Granada].

Joy (Pocklington)

SCILLAS AT TODMORDEN

*A piece of sky at my feet,
a cloudshape - patch of cirrus
caught amongst leaf litter,
pegged to the ground.*

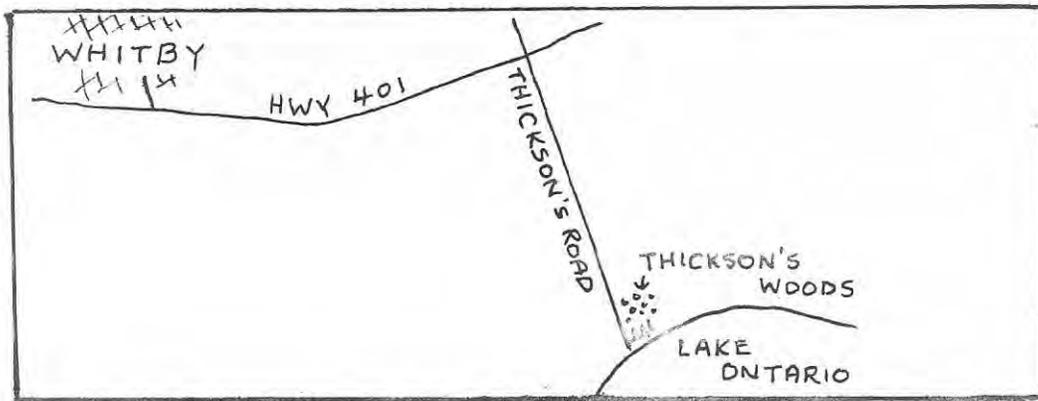
Louise Herzberg

THE CHRISTMAS CARD FUND

In 1984 Thickson's Woods was threatened with development. A group of people formed the Thickson's Woods Heritage Foundation and purchased the property for \$90,000. Although they have raised nearly \$70,000, much of this has gone to pay the interest and they still have nearly \$48,000 principal to clear.

The TWHF is a hard-working and dedicated group. They have planted in the woods trees from roadsides and hydro right-of-way, white pine as replacement for those cut by the developer, and eastern larch in wet areas. They have been transplanting wildflowers from development sites.

Each month this spring outings are organized. The one on March 28 at 8 am is to view waterfowl. You can pay a visit to Thickson's Woods by yourself. The map below shows how to get there. Enjoy waterfowl in nuptial plumage, signs of early spring, bird migrants and wildflowers.



Last year proceeds from the Christmas card sale were donated to the TWHF. Right now they need a shot in the arm to make some real progress in reducing the mortgage on the property. You can send a tax deductible donation to them: Thickson's Woods Heritage Foundation Inc., Box 541, Whitby, Ont. L1N 5V3

This year the TFN Board of Directors voted unanimously to donate the proceeds from the sale of Christmas cards and LOOKING FOR THE WILD to the Friends of the Spit to be used for a special project or to be placed in a special fund. A cheque for \$332.61 was sent to them in February.

Jean Macdonald

A LAUREL

... this month to North York Controller Howard Moscoe. According to media reports, he has twice recently taken notable initiatives in Metropolitan Toronto. First, he's called for an emphasis in Metro on tree planting along Metro arterial roads. Secondly, he's seeking to reject an effort by Metro Parks Department to spend \$7.5 million on commercial developments and facilities on Toronto Islands, pointing out there's a lot to be said for the much less costly policy of leaving more acreage on the Islands as areas where people can go in search of a quiet atmosphere. (And if you want to lend your support to such efforts, send a letter to Metro Toronto Chairman Dennis Flynn, City Hall, Toronto, Ontario.)

from URBAN WILDERNESS GARDENERS NEWSLETTER, Vol. 2, Issue 1, Summer 1986

TORONTO REGION Amphibian & Reptile REPORT

APRIL

This is the month of re-awakening for amphibians and reptiles. Spring peepers, chorus frogs, wood frogs and American toads appear and enrich our day with their calls. No matter how late or early spring arrives, how bad our winter was or how much snow there has been, how warm or cold, how wet or dry, the first amphibians are calling and breeding in the first week of this month.

Turtles climb out of the cold water to bask on sunny days; garter snakes can be seen breeding or stretched out in the sun near the area used as the winter hibernaculum; and yellow spotted salamanders are migrating to breeding ponds, stimulated by warm rains.

If you see or hear reptiles or amphibians, Bob Johnson would like to know about it, even for common species such as garter snakes and green frogs. Your report should include the date, the place, the species (Bob's booklet published by TFN is helpful in identifying them) and what they were doing. Call Bob at the Zoo (284-8181) or write to him there at P.O. Box 280, West Hill, Ont. M1E 4R5.

Bob Johnson

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WHAT IS A "TOAD WATCH"?

Britain, being a small land mass, has encountered a problem only just beginning to emerge in Canada. The British are seeing the virtual disappearance of frogs and toads from the land. This is due to the advancing thrust of agriculture and consequent filling in of lakes and ponds, with even those waterways which are left rendered uninhabitable by the intake of pesticides and oils.

As though this is not enough to discourage the most determined amphibian, toads face a further hazard in their drive to return to long-established breeding sites. These places may now be surrounded by highways. Toads take up to a quarter of an hour to cross the average-width road because they have the contemplative habit of halting frequently to sniff and sample the atmosphere. This sequential immobilization not surprisingly results in a huge death toll.

British conservationists have attempted to resolve this threat by instituting "toad watches", no less. I find it an endearing trait in a race that many of its members will gather at known toad crossings during the breeding season in order to collect the animals in buckets as soon as they arrive and take them to the other side for safe release. Even more imaginative is an alternative adopted on the Continent. There, small tunnels are dug beneath the roads where toads gather and fences so placed that they are driven towards the tunnels and a safe crossing.

This information comes from one of British TV's WILDLIFE ON ONE sequences, produced by Caroline Weaver and entitled "Amorous Amphibians". Garden ponds can supply a substitute habitat, but, as the commentator observes, the destruction of ponds by fill and contaminants must be halted if Britain's amphibians are not to go down to extinction. [See also page 13.]

Eva Davis

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HANDBOOK OF THE CANADIAN ROCKIES by Ben Gadd, Corax Press 1986. 876 pages, including index, on fine paper. Bibliographies, maps, illustrations.

"Geology, plants, animals, history and recreation from Waterton/Glacier to the Yukon", so reads the sub-title of this handbook - a big order! The author has been diligent in including information on everything one might be expected to observe and experience in The Rockies. It is suggested that it could serve as a substitute for all guide-books and field-guides one might want to carry in a back-pack, and this could well happen. It is sufficiently comprehensive. On the other hand, one might want another field guide on one's favourite subject, or make some preliminary marginal notes. (Speaking of margins, the copy at hand couldn't be described as "ample" in this respect.) Much of the material in the handbook, however, comes under the category of "homework". One would be carrying around history as well. Still the weight of the history would be tolerated when one considers the other purpose of the book which is as a general reference. The text is not skimpy (e.g. a whole page for the mountain goat).

The illustrations are gleaned from many sources. The line drawings on just about every page are helpful as well as decorative. Otherwise there are black-and-white and colour photos, charts, maps, and diagrams.

A feature of the handbook are the guidelines for travel, accommodations, safety, first-aid, wilderness skills, much of it first-hand information from a lifetime in the mountains.

DB

STEPPING LIGHTLY ON THE EARTH: EVERYONE'S GUIDE TO TOXICS IN THE HOME, Greenpeace, 427 Bloor St. West, Toronto M5S 1X7 (922-3011), \$2.00

The Greenpeace organization have put out a small but informative pamphlet which zeros in on one of the hot issues of the day: hazardous household waste. With regard to contamination of planet Earth, we are all offenders.

People are well aware of the criminal irresponsibility of many of the large industrial plants but fail to take account of their own small additions in the form of discarded cleaners, paint removers, solvents, pesticides and garden sprays. Individually, our contributions seem minimal. Added to that of our neighbours, the bulk effect is overwhelming.

While we are waiting for municipal authorities to set in place the (admittedly short-term) solution of household toxics management programs in which householders separate hazardous from non-hazardous garbage before collection, Greenpeace suggests that we should consider a list of substitute cleaners which might take a little more of our time than the lightning application of some wonder product containing deadly chemical compounds, but which are cheaper and will not end up in landfills leaching back into the ecosystem.

The pamphlet states that most household cleaning can be dealt with by the application, singly or in combination, of six commonplace ingredients: soap, ammonia, baking and washing soda, borax and vinegar. It lists recipes to deal with all-purpose cleaning and with air freshening, bath and kitchen tiles, carpets, drains, furniture and floors, laundry, garden pests, indoor pests, metals, ovens,

FOR READING (cont'd)

windows and pests peculiar to domestic pets. It names some of the biodegradable pest controls presently available in the stores.

In terms of assisting each of us to eliminate even one toxic chemical from our shelves, it is a great help, if only because of the awareness it induces. Greenpeace compiled the information from many sources and take no responsibility for the effectiveness of the substitutes, but they do ask for feedback and for suggestions from anyone with a well-tried and workable recipe.

Eva Davis

THE ROCKY MOUNTAINS: CREST OF A CONTINENT, text by John Gault, photography by J.A. Kraulis, Key Porter Books Ltd., Toronto, 1986, \$29.95

This is a book of remarkable value. The Rockies in question encompass both Canadian and American Rockies, all the way from Alaska to New Mexico. John Gault's text is erudite and eloquent. As an arresting sample, take the closing of the introductory paragraph:

"... From the top of Mount Rungabee, you can see endless mountains flowing beyond the horizon -- a frozen, angry sea of stone. The imagery is inescapable ... It is a glimpse of the eternal".

Or a single graphic line: that "Yellowstone resembles a vast stove, with all its burners turned to high".

Crowning the text is the matchless photography of J.A. Kraulis. Anyone who knows his work is aware that this man can capture vistas of the ineffable. (Interestingly, if deflatingly, for those of us who "dabble", he is self-taught.) From the massively overpowering to the exquisitely detailed, this book offers an inexhaustible visual feast. It is the next best thing to "being there". Indeed, considering the many threateningly inhospitable ranges on display, the only way for most of us of "being there".

John Gault's final words on the animals of the Rockies and human predation read as a heart-moving tribute to all life:

"By the simple fact of their very existence, the Rocky Mountains and the ranges beyond have given us that second chance ... The Rockies protected our major wildlife from us, and, as it turned out, saved us from ourselves".

A book to be begged, borrowed or stolen. Fortunate members, however, can simply take it out of the TFN library.

Eva Davis

THE NATURAL AREAS INVENTORY OF HALDIMAND-NORFOLK, Norfolk Field Naturalists, 1987

Sponsored by the Norfolk Field Naturalists, this study is in two soft-cover, spiral-bound volumes with a total of 600 pages of text, 120 maps and 60 photographs. Volume I contains descriptions of 80 significant sites with details of location, physical features, vegetation and significant species. Volume II is an annotated checklist of plants, birds, mammals, reptiles and amphibians with additional details for significant species. A special prepublication price of \$30.00 is offered with deadline for receipt of payment April 30, 1987. (After publication May 15, price will increase to \$40.00.) Haldimand-Norfolk includes the town of Simcoe and Backus Woods. To order, send cheque payable to NORFOLK FIELD NATURALISTS for \$34.00 (cost \$30.00 plus postage \$4.00) to: Natural Areas Inventory, Box 424, Waterford, Ont. NOE 1Y0.

Jean Macdonald

TFN Library Report

Acquisitions - December, 1986, to February, 1987

BOOKS:

THE WHALES OF CANADA by Erich Hoyt, LIFE ON EARTH by David Attenborough,
IN WILDNESS IS THE PRESERVATION OF THE WORLD by Eric Porter,
donated by Edith Cosens

SUBSCRIPTION: NATURE SOCIETY NEWS donated by Emily Hamilton

REPORTS: on endangered species, conservation, as well as several Government
reports donated by Emily Hamilton

CATALOGUES: Clothing for naturalists donated by Vera Irving

PERIODICALS: FOREST AND BIRD (New Zealand) donated by Gloria Somerville
BIRDS; SEASONS donated by Heather Harris,
Edith Cosens

BOOKLETS, CALENDARS, ARTICLES: on flowers,
trees, birds - of Florida, donated by Edith Cosens and
California, North America Gloria Somerville

Our thanks to the donors!

DB

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THYRA RAVINE

Thyra Ravine is all that remains of one of the tributaries of Taylor Creek, West of Victoria Park Avenue and north of the Bloor subway tracks. To quote from AN INVENTORY OF NATURAL RESOURCES OF EAST YORK (OUTSIDE OF PARKS), 1984, "The edge of the wooded depression on Thyra [Avenue] suffers from unsightly littering". Of even more interest is the following statement in a letter from B.D. Boyce, Environment Analyst with Ontario Hydro, dated May 26, 1982:

"Triangle of Ravine Land, East End of Taylor Creek, West of Victoria Park Avenue. The ownership at this site has been investigated and it has been determined that no clear title is apparent. Ontario Hydro has no record of ownership although it is assumed Metro Toronto owns this triangular segment. Because of the nebulous nature of the land ownership we have been unable to successfully resolve the garbage problem." Last year three members of TFN cleaned MANY bags of garbage out of this ravine one Saturday morning -- just for fun! This year we hope to do an even better clean-up on this "orphan" ravine. See page 3 for information about our project.

Helen Juhola

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In The News

WE LOSE OUR JACKRABBIT

Canada lost one of its legends when Herman Smith-Johannsen died January 5, 1987. While the Jackrabbit, as he became known, did not trumpet conservation or save areas, he was a conservationist par excellence. The Jackrabbit was born in Norway in 1877. He felt that skiers ought to learn from nature how to use land without destroying it. He was on skis by the age of two years and championed cross-country skiing to the day of his death. He thought that modern downhill skiing was soft and artificial. He pioneered long-distance, cross-country trails in Canada; for example, the Maple Leaf Trail which stretches 150 km through Ontario into Quebec. The Jackrabbit was 112 when he died. Those who wish to mark his passing may make contributions to either the Canadian Ski Museum, 457A Sussex Drive, Ottawa K1N 9EC, or Mont St. Hilaire Nature Conservation Centre, 422 rue des Moulins, Mont St. Hilaire, Quebec J3G 4S6.

from an article by Donn Downey in the GLOBE AND MAIL, Jan. 7, 1987

NOTED BIRD ARTIST DIES

Terry Shortt, noted Royal Ontario Museum ornithological illustrator died in January at the age of 75. Terry found his vocation early in life. His mother was a talented amateur artist and his father was a great outdoorsman and hunter. Terry studied art at the Winnipeg School of Art and at 20 he was appointed to the Royal Ontario Museum. His first job was to skin birds for the research collection and to do a fieldwork study of Ontario wildlife. He was described as a pioneer in wildlife painting and a link to the days of Audubon. His paintings were exact and artistic and his knowledge of birds was encyclopedic. Robert Bateman can testify to this. He once found a feather in Algonquin Park and took it to Shortt to identify. "Terry looked at it for a couple of moments and said 'I'm not sure. It's either the third or fourth primary of an immature female goshawk'. It was the third."

from an obituary by Michael Lewis in the GLOBE AND MAIL, Jan. 1, 1987

PALS GETS A BREAK

You may remember a Niagara peninsula citizen group called PALS (Preservation of Agricultural Lands Society) which objected to a municipal plan amendment in the township of Pelham. The local council wanted to permit a gravel pit to be operated on agricultural land. PALS' objections forced an Ontario Municipal Board hearing. The OMB ruled against PALS, saying that it had failed to establish its case and its intervention was almost an abuse of the hearing process. It also ordered PALS to pay costs -- \$2000 to the company and \$600 to the township. While these amounts are trivial to companies and corporations they are not trivial to citizen groups. Ordering such groups to pay costs may very well discourage them from making objections. It may have far reaching implications.

Cabinet debated the OMB decision and decided to overturn the ruling. This is a most welcome decision. Many advocates of citizen participation are saying that the OMB should open up the whole area of awarding costs to public discussion and permit citizen groups to submit briefs.

condensed from an article by Rudy Platiel in the GLOBE AND MAIL, Feb. 17, 1987

IN THE NEWS (cont'd)

BENEATH THE BRINY

It is always interesting to note how parts of our environment are interdependent. This example shows how offshore communities are affected by inshore communities. Researchers have noted a strong connection between kelp forests, rockfish and a barnacle called *Balanus glandula*. Kelp forests occur along the American Pacific coast. The size of these forests depends on local storm effects, current such as El Nino and the presence of otters and other predators. Living within the kelp forest are rockfish. The barnacles cling to the rocks inshore. They release their larvae into the water and these barnacles-to-be must find their way through the kelp forest to attach themselves to new rocks. The rockfish eat the barnacle larvae. Researchers found that years which were good for rockfish recruitment were poor for barnacle recruitment. For example, 1983 was a good year for barnacles and very poor for rockfish, while in 1985 the situation was reversed.

from an experiment in SCIENCE, Vol. 235 (479-480), Jan. 23, 1987

POACHER KILLS BIRDS IN SCHOOLCHILDREN'S SANCTUARY

Oakwood Elementary School in Windsor, Ontario, is one of three elementary schools in North America which has a bird sanctuary attached. The Windsor sanctuary is a pond with permanent residents as well as wild geese and ducks which fly in at evening. The school bases a science program around the sanctuary. Children study everything from animal reproduction to invertebrate creatures which inhabit the pond. Unfortunately the children had a lesson in human cruelty. While the pond is fenced to keep out dogs, this barrier did not stop someone with ill intentions. On Friday morning the children found that someone armed with a small calibre gun had entered the sanctuary. Several birds had been killed including black swans and Chinese guard geese. Eight Canada geese had been stolen. All dead birds and stolen birds had their wings clipped and could not fly.

from an article in the GLOBE AND MAIL, Feb. 9, 1987

SCOTTISH ANGLER HAS FISH STORY

It's a fish story to end all fish stories. A tag apparently attached to a fish in tiny Grenadier Pond in Toronto's west end 50 years ago by the TORONTO STAR has been found by a fisherman on the Isle of Skye, Scotland. Peter McSween, 46, phoned the newspaper Friday to claim the \$5 prize offered by the tag -- and he wanted the money in 1987 dollars. Ralph Cowan, 84, circulation manager for the STAR in the 1930's, remembered the tagging promotion: "People used to line up shoulder to shoulder along Grenadier Pond hoping for a chance to catch one of the tagged fish." He said the trout were brought from the Simcoe, Ontario, fish-breeding center in a tank truck, tagged and released. "We'd put about 50 fish in," he said. "But maybe only half a dozen would be tagged." But how would a tag get from Grenadier Pond to the Isle of Skye? "The pond is linked to Lake Ontario by a pipe," explained Cowan, "so fish can get back and forth. What could have happened is that one of the fish got out into the lake and was eaten by a bigger fish. This process could have continued until a tag-swallowing fish could have been eaten by a saltwater fish where fresh and salt water come together in the St. Lawrence River." Chris Anderson, of the Royal Bank's press office, calculated that the \$5 prize is worth \$43 today. The STAR agreed to pay the \$43.

from the PLAYGROUND DAILY NEWS (Florida), Feb. 8, 1987

IN THE NEWS (cont'd)

ANOTHER DEMON LOOMS LARGE OVER TEMAGAMI

Ottawa has given permission for the U.S. Airforce to fly B-52 bombers over a corridor between North Bay, Sault St. Marie and Wawa. This is necessary according to Defence Minister Perrin Beatty so that the U.S. Airforce "will provide better defence of the West". These planes will be travelling low -- 400 feet above ground level. The noise will be greater than that produced by a commercial airliner taking off. Brian Back of the Temagami Wilderness Society feels that the noise will ruin the one wilderness area easily accessible to Toronto. Back has sent a telegram to Perrin Beatty condemning the plan and asking him to ban the flights before they begin (March 1987). Would the U.S. Airforce get too much flak if it flew over U.S. wilderness areas...? Enter magnanimous Canada...

partly based on an article by David Israelson in the TORONTO STAR, Feb. 24, 1987

HUMANITY NOTES FROM THREE COUNTRIES

West Germany - Special bird perches will be built on power poles and the power cables close to the poles will have extra insulation. This is to prevent large birds from being electrocuted if their wings happen to touch the cables. The West German Environment Ministry, 10 of the largest environmental and animal protection groups and the Association of Electric Plants are all backing these measures.

Great Britain - In an effort to "Help a Toad Across the Road" a conservation group has arranged for tunnels to be built under a section of road which toads have to cross to get their annual spawning ground. The groups was most disturbed by the mass slaughter of toads on the roads during the spawning season. [See page 7.]

Canada - A great blue heron in Ontario will be winging his way to Florida aboard an Eastern Airlines plane. The bird had suffered a broken wing during a landing mishap on a Sutton pond. The mishap was observed by Jackie Clute who brought the bird to the local vet, Dr. Lawrence Woodley. Woodley repaired the bird's broken wing. The heron is not ready, however, to fly and he is being taken south by the plane. He is going on a full fare ticket, courtesy of a Toronto travel agent. Once in Florida, the heron will be cared for by a Florida zoo. Hopefully in the spring the heron will be able to wing his own way back to Canada. He will be banded so may be recognized if he does return.

based on an article by Alfred Holden in the TORONTO STAR, Feb. 27, 1987

AN IDEA THAT OUGHT TO BE WARNED OFF THE COURSE

The Ministry of Natural Resources just doesn't give up. In the early 80s there was a bitter battle between environmentalists on the one hand and hunters, loggers and mining exploration companies on the other. The previous Minister of Natural Resources, Alan Pope, decided to permit mining, hunting and motorboats in six wilderness areas. This broke the Ministry's guidelines. Now Vince Kerrio is welcoming Pope's idea with open arms. He is backing a plan that will permit hunting in over 90% of new wilderness park areas and mining exploration in 80% of them. This idea is as difficult to put down as dog-strangling vine. Blais-Grenier may have been banished from the federal scene, but her spectre still stalks the Ontario Ministry of Natural Resources. Letters to Premier Peterson and Vince Kerrio are quite in order for this one.

partly based on an article by David Israelson in the TORONTO STAR, Feb. 24, 1987

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IN THE NEWS (cont'd)

SOMETIMES WE WIN A BIG ONE

While we lose many battles to save green spaces we have now won a very big battle to save the Don Valley Brickworks site. Vince Kerrio, Minister of Natural Resources, Ontario, announced on Feb. 16, 1987 that expropriation of the property was reasonable and fair. The site has been the focus of a battle since Torvalley Developments Ltd. acquired it in 1984. Torvalley hoped to erect luxury homes and condominiums on the site and has been filling the quarry since spring 1984. Local residents, conservationists and scientists combined to fight the project and a new group called Friends of the Valley was born. Friends of the Valley proved to be a most formidable opponent. A hearing for the necessity of expropriation was held in two sessions last summer before Enquiry Officer Harold Goldkind. Mr. Goldkind presented his report to Vince Kerrio last December. Goldkind recommended that expropriation was reasonably defensible and that the acquisition was necessary in order for the MTRCA to achieve its objectives of conserving a natural resource and controlling flood damage. For all those who contributed to this battle and hoped for such an outcome, it is time to write congratulatory letters to Premier Peterson and his Cabinet and to Vince Kerrio. Such letters are essential and deserved. Address your letters to the Honourable David Peterson, Legislature Buildings, Queen's Park, Toronto M7A 1A1, and to Vince Kerrio, Minister of Natural Resources, 6th floor, 99 Wellesley St. West, Toronto M7A 1W3. For those who wish to thank Friends of the Valley for their successful fight (they are still in financial debt and would appreciate contributions), send your contributions to Friends of the Valley, 5468 Dundas St. West, Suite 561, Toronto, Ont. M9B 6E3.



IN THE NEWS (cont'd)

For further reading see the GLOBE AND MAIL, Feb. 18, 1987 and the TORONTO STAR, Feb. 13, 1987.

SUPERNOVA

"Star light	
Star bright	from Pinnochio's wish in the
First star that I've seen tonight	Disney film
I wish I may	
I wish I might	
Have the wish I wish tonight"	

The astronomer Ian Skelton has been granted a wish he never even wished. He is being mentioned in the same breath as the illustrious Kepler. Why? Ian Skelton works for the University of Toronto and he is stationed at a small observatory in the Chilean Andes. The telescope there is so small, it has been described as "dinky" and there are so few staff stationed at it that the University of Toronto is under budgeting pressure to close it down. Ian Skelton happened to look at the sky in the area of the Large Magellanic Cloud, a satellite galaxy just outside the Milky Way. He spotted a very bright star. The star had a name CPD - 69° - 402.

What is so exciting was that one day earlier, this star could only be seen with a giant telescope. Now it could be seen with the naked eye. What Skelton was observing was a supernova. It is the closest and brightest supernova discovered since 1604. It will now be called "Supernova - Skelton - 1987 - No. 1".

Supernovas are believed to perform "the primordial alchemy that produces heavier elements from the light hydrogen and helium of ordinary stars. Without these heavier elements life probably never would have come into being. They are also thought to be the initiators of shock waves that concentrate primordial dust and gas into conglomerates that eventually become (new) stars".

There was no way of knowing that CPD - 60° - 402 was going to explode. We now have a record of a star before explosion and are currently observing it during explosion. Astronomers can hardly keep their hats on. Such a chance is unlikely in our lifetimes. The phone lines to the dinky little observatory in the Andes are jammed by scientists calling from all around the world. The supernova is only observable in the southern hemisphere.

based on an article by Stephen Strauss in the GLOBE AND MAIL, Feb. 26, 1987

ENDANGERED SPECIES

For years, East Coast seagulls have been dropping mussels and clams onto paved highways to crack open the shells. In the process, they have shattered motorists' windshields and punctured their tires. At first the Nova Scotia Transport Dept. drew silhouettes of gulls on the roads, to make the birds think there were other gulls waiting to grab the juicy morsels. Now, in frustration, it has pulled out the heavy artillery: with the Canadian Wildlife Service's permission, it has shot a few gulls and strung them from poles along the highway as warning to others. Warning of sorts, anyway. "You see," the seagulls will sagely tell each other, "what happens to birds who steal other gulls' clams?"

an editorial from the GLOBE AND MAIL, Nov. 20, 1985

▷ Send newspaper clippings to Louise Herzberg, 59 Hillside Dr., Toronto M4K 2M1.

□

MINISTRY PRODDED BY TORONTO'S WRAP

Are You Concerned About The Quality Of Our Water?

You are invited to help develop an action plan to restore the quality of Metro's water. **The Metro Toronto Waterfront Remedial Action Plan** is being sponsored by the Ministry of Environment and Environment Canada, with the active involvement of metro municipalities, government agencies and the public. The aim of this process is to develop an overall plan to reduce the contamination of our rivers, streams and Lake Ontario.

Get involved! Background information, brochures and a video are available.

Contact:

The Coordinator, Metro Toronto Waterfront Remedial Action Plan
4th Floor, 7 Overlea Boulevard
Toronto, Ontario M4H 1A8 (416) 424-3000

The above is a typical example of Government hindsight.

There is already in place a Toronto Water Remedial Action Plan produced by the City of Toronto along with ten environmental groups. It is a thoroughly researched document which includes the results of extensive public participation and it was presented at a meeting at City Hall (Toronto) attended by the public, press and Ministry of Environment officials.

The City Hall WRAP was a year in the making and was compiled with the cooperation of the International Joint Commission (the body which indicted Toronto's waterfront as "an area of concern"), with Public Works officials and with Federal officials. In December 1986 a major international conference, held to review Great Lakes water quality, praised Toronto's WRAP as a far-reaching and innovative response.

Ministry reaction has been that the City's WRAP is supernumerary to its own projected plan -- hence the "investigative" feelers put out above. This is to disregard the fact that WRAP was undertaken precisely because there had been no Ministry response to the IJC call for action. The City's Remedial Plan has resulted in insistent Ministry declaration of its own "studies" etc. either in process or, in true Government terminology, about to be set in motion. Official correspondence from the Ministry's Regional Director, meanwhile, continues to ignore the City's plan and to treat assertions about the condition of Lake Ontario as the scare tactics of a clutch of City "amateurs".

The City intend to move for final adoption of WRAP, with a view to extensive implementation strategy.

Eva Davis

[See page 36.]

□

Flotsam and jetsam seagulls tossing and turning against a cloud shore.
--

haiku by Karen Parker

PHOTOGRAPHING WILDFLOWERS AND FUNGI

After a long, cold winter, there is nothing so exciting as finding the first spring flowers in bloom. From now through the growing season, the nature photographer can record an exciting selection of wildflowers and fungi.

EQUIPMENT:

Camera: I recommend a single lens reflex camera which allows interchangeable lens and lets the photographer see exactly what he is getting through the viewfinder. A depth of field preview is essential to check backgrounds.

Lens: The macro lens is the most versatile. It extends from infinity to a few inches from the subject.

Extension Tubes: These may be used between lens and camera body. I often use tubes with my 135 mm lens when I don't want to be too near my subject.

Close-up Lens: These screw onto the front of lenses like filters. They come in varying strengths.

Filters: I use a polarizing filter to cut down the highlights and the shine on leaves and backgrounds.

Film: This is a personal choice but I prefer to stay with Kodachrome ISO 64.

Cable Release: It should be at least 12" long. The cable fits into the camera and is pressed, thus avoiding "camera shake" which often results with direct hands-on operation.

Tripod: This is essential in nature photography as it allows slower shutter speeds and allows the photographer to plan the composition carefully. There are many brands on the market. Mine has a tripod screw on one leg so that I can use it at full height or low down.

Reflectors: I use crumpled kitchen foil which is taped to cardboard and then folded like a book cover. The rippled surface breaks up the direct rays into a more diffused light. I also carry a shaving mirror which can direct light into dark corners; it can be positioned to reflect the sun and create back lighting.

Windbreaks: Clear plastic with a hem at each end supporting inverted stakes serves this purpose. I have two, 30 " long by 24" wide and I use metal cafe curtain rods as stakes.

Backgrounds: Natural backgrounds thrown out of focus or shaded with an umbrella or your own shadow are desirable. A log can sometimes be placed behind low-growing flowers or fungi.

Exposure: I determine this by the use of a through-the-lens meter. When using extension tubes or the extension of a macro lens, the exposure will be increased but this shows on the meter. Close-up lenses require no extra exposure.

For sharp and detailed close-ups, a small f stop is preferable (e.g., f16 or f22). But if the background is very distracting, you can observe your subject and background as you increase the f stop until you have a soft, out-of-focus background but still a sharp subject. Bracket the exposure by one full stop either side of the reading. This can be achieved by using the shutter speed instead of f stops if you want to keep the same depth of field.

Lighting: I prefer available daylight whenever possible. Rainy and hazy days



PHOTOGRAPHING WILDFLOWERS AND FUNGI (Cont'd)

give a pleasing, even lighting, good for soft out-of-focus backgrounds.

Back lighting is dramatic, increases the third dimension effect and is especially good for translucent flowers.

Side lighting gives good texture and form.

I use electronic flash when it is too dark to use daylight. In summer woods, the leaves on trees can almost completely block out the sky and long exposures give an off colour due to reciprocity failure. Flash renders a better blue in flowers such as gentians and irises. I bracket my flash exposures by varying the distance from the flash to the subject.

Composition: I look around for good specimens in a pleasing arrangement. It is a good idea to take habitat, medium-close and close-up pictures. Look carefully through the viewfinder, not just at the subject, but around and beyond. Remove unwanted debris such as light-coloured sticks or leaves which look distracting but do not clear away the natural ground cover because this would give unnatural results. Too much "gardening" not only looks unnatural but takes protection away from the specimen.

The photographer should always remember to put the environment first. Spreading out a groundsheet and stretching full length to photograph a low subject can crush many delicate plants. A right-angle finder attached to the camera viewfinder means that the photographer can bend down or kneel carefully. Care should be taken when setting up the camera as to where equipment is laid.

Preserving the beauties of nature on film is a rewarding hobby. I think the following quotation from an old gravestone in Cumberland, England, sums it up:

"The wonder of the world, the beauty and
the power. The shapes of things, their
colours, lights and shades.
These I saw.
Look ye also while life lasts."

Betty Greenacre

□

This Month's Cover

"Rain or Shine" is the title of the ink drawing by Mary Cumming. The participants of the outing to East Point at the mouth of Highland Creek last summer didn't let anything stop them from enjoying the day. Dressing properly is the key to enjoying any outing -- comfortable footwear being the most important.

PANAMANIAN RAINFORESTS: A QUESTION OF SURVIVAL

The long S-shaped isthmus of Panama stretches between Costa Rica to the west and Columbia to the east. Along its southern coast lies the Pacific Ocean, while the Caribbean Sea laps against its northern shore. Not a large country (Ridgely says it is smaller than South Carolina), Panama nonetheless has recorded nearly 900 species of birds. Its wide variety of bird life combined with relatively accessible habitat, an excellent field guide and good accommodations has made Panama a popular destination for birding tours. Victor Emmanuel calls it a mecca for naturalists.

Primary habitat types are the humid forest (rain forest or jungle), cloud forest, second-growth woodland, savannas and grassland, and shrubby areas and clearings. Marshes, swamps or, indeed, any wetlands are rare in Panama. The best and largest, Tocumen Marsh, was recently drained, thus virtually eliminating wetland habitat in Panama.

Lying close to the Equator, Panama has an essentially tropical climate: hot and humid, with temperatures in the lowlands ranging from 21°C at night to 32°C during the day, year round. Only in the mountains do cooler conditions prevail. Rather than seasonal changes such as we, in the more temperate zones, are used to, Panama has instead a distinct dry and wet period. The rainy season runs from approximately May to December, with the heaviest rainfall occurring on the Caribbean coast (more than 3800 mm annually in some places). The dry season, January to April, is the best time for visiting the country, for obvious reasons. Rainfall, however, can occur even in the dry season on the Caribbean coast, although not with the same intensity or frequency as in the wet period.

Panama has some exceptionally fine tropical rain forest which is home to countless species of wildlife. But just as the rain forests of the world are relentlessly being destroyed, so those of Panama are disappearing at an alarming rate. The situation in Latin America is critical and many scientists feel that unless major steps are taken to halt, or even reverse, the process, most of the rain forests not only in Latin America but in the world will be but a memory very soon.

Panama is a relatively poor country and as with most such countries protection of natural areas is given very low priority. There has been an attempt in the last few years to set aside some strands of forest as national parks. Unfortunately, while the idea is excellent, the practice is not. Environmental concerns are low-status items and consequently little money is set aside for parks maintenance -- or for any other ecological concerns. Panama does have a Bureau of Renewable Natural Resources (RENARE), but because funding is limited they are unable to be as effective as they would like. However, the recent formation of a group of Panamanians dedicated to conservation and ecological problems is encouraging. The National Association for the Conservation of Nature (ANCON) has signed a ten-year agreement with RENARE to identify, protect, conserve and manage national parks, wildlife sanctuaries and preserves in Panama. ANCON plans to spend \$40,000 to help maintain Soberania National Park with some of the money going to supply park keepers with necessary equipment for effective patrols. Right now, although hunting and destruction of habitat are prohibited in the parks, there are too few wardens to actually enforce regulations.

Of course, the biggest hurdle is probably trying to win acceptance for the concept of conservation among the population. Many people do not appreciate either birds or their environment, finding no aesthetic appeal in nature.

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PANAMA (cont'd)

However, poverty does not often breed concern for much other than the problem of survival. Therefore, it seems that the problems facing Latin American wildlife as a whole as well as the environment are indubitably bound up with the problems of poverty. Educating the general population to the importance of wildlife can probably only be truly effective when the question of subsistence standards of living are dealt with. Meanwhile the forests and their inhabitants continue to disappear.

The first national park to be so named in Panama was established in 1968 to preserve a small tract of cloud forest on Cerro Campana about 50 km west of Panama City (Ridgely 1976). The famous Pipeline Road, a pre-eminent birding spot just outside the City, has recently been designated a part of the newly established Soberania National Park mentioned above, which also includes Madden Forest. Several other parks have also been established of late. These are positive steps and the Panamanian government should be both complimented and encouraged.

One very large part of Panama, the Darien Gap, which lies east of Panama City and continues to Columbia has, so far, remained virtually untouched. There, at least, the jungle exists in a state as close to pristine as possible. But this situation will last only so long as no roads are put through the area. At present the Pan-American highway extends, as a paved road, 50 km east of Panama City, and as a gravel road for a further few hundred kilometers to the Darien. As Ridgely (1976) states "the usual pattern, often repeated in Panama ... is for a road to be cut through a formerly 'virgin' area. The land near the road is soon cleared, usually by squatters, and within a few years virtually no forest remains." The Darien Gap could go the way of much of Panama should the Pan-American highway ever be finished unless protective measures are implemented and enforced.

With the continued destruction of the forests Panamanian wildlife is being squeezed into ever smaller areas. On top of that, over-hunting has exerted real pressure on many species of birds, mammals and reptiles. This coupled with the cagebird traffic has almost eliminated certain species such as the macaws from the wild. In recent decades many bird species have decreased dramatically: the beautiful Resplendent Quetzal is still hunted either as a trophy or for the cooking pot, as are toucans, parrots and macaws, to name but a few. Those not shot or eaten often end up as cagebirds -- where most die anyway.

Although a 1973 hunting law protects most bird species from just the sort of thing mentioned above, enforcement is almost non-existent. And while there are hunting seasons and bag limits for most gamebirds, these too are unenforced. Therefore the drastic decrease of many of the gamebirds such as the Great Curassow, Crested and Black Guan, Band-tailed Pigeon, wood quail and tinamous is directly attributable to overhunting. Habitat loss is the final blow. As for resident species of waterfowl, most have been "decimated by unrestricted year-round hunting" (Ridgely 1976).

If you find it difficult to get really concerned about the destruction of tropical rain forests and species which most of us have never seen or heard of, then consider this: the birds you enjoy watching here winter in the tropics and are dependent on that habitat remaining stable. Our birds have to go somewhere and if the habitat of their wintering grounds continues to be decimated, what becomes of them? Decreases in some of our bird populations here are being linked to trouble in the tropics. And species from the temperate zones are just as vulnerable to over-hunting in the tropics as are resident species.



PANAMA (cont'd)

Thus they too suffer from the double-barrelled effect of habitat loss and hunting.

If further incentive is needed to appreciate the importance of these tropical rain forests, the following quotation from Alexander Skutch may help. He is speaking of Costa Rica but his words are equally applicable to Panama or any Latin American country: "But all the birds in Costa Rica, migratory or resident, belong to you, as much as to Costa Ricans. They are yours to watch, to hear, to enjoy, to photograph ... and what more can any true friend of birds want of them? ... [visitors] return home with treasured memories and photographs, leaving the birds unharmed for others ... to see in future years."

The biggest threat, however, is most assuredly habitat destruction. Given enough viable habitat, many species (not all) can recover somewhat from hunting pressures. But stable populations cannot be maintained in the face of threats from both sides. The situation is undoubtedly urgent, not only for our birds dependent on good wintering areas, not only for resident species, but for all forms of wildlife. And not only for wildlife but for plants and trees endemic to the rain forests of the tropics.

Ultimately, however, the destruction of the rain forests affects us all and in tangible ways. Six to seven percent of the Earth's land area is rain forest and the destruction of these forests is affecting the climate around the world. Soil erosion and droughts are only some of the problems scientists think will affect the climate globally once 50% of the world's rain forests are gone -- a situation not far off (statistics taken from Gillian Phillips in TRIBUTE).

So what can we do? Sometimes it seems that the answer is "not much". But if governments of these particular countries can be convinced that saving the rain forests is vital to preserving their own and the global communities, perhaps something can be done. As naturalists we are obviously concerned with the fate of the wildlife and the flora within these forests. The birds, the mammals, the countless forms of wild creatures cannot speak for themselves, so it is up to us to try as best as we can to speak for them. With regard to Panama, if the government is made aware that tourists will come to their country, in numbers, and pay good money to view their forests and wildlife, perhaps, just perhaps, they will gradually readjust their thinking. If an economic value can be placed on something, there is a greater likelihood that the issue will at least stand a chance of being heard.

In neighboring Costa Rica the government has already recognized the value of conserving some of its natural areas. It has set aside a superb system of national parks containing a variety of habitat. Final plans call for 10% or more of the country to be preserved indefinitely for native flora and fauna. Ten percent may not seem like much, but given what is happening in the rest of Latin America this is a tremendously encouraging development. Of course such developments do not come cheap, and Costa Rica is looking to raise \$5,500,000 over the next five years to acquire new areas for their park system.*

Panama would be wise to look to its neighbour and follow suit while it still has enough good tracts of rain forest to do something with. If you are interested in showing visible support, why not plan your next holiday to Panama and see for yourself their superb wildlife. The Panama Audubon Society would welcome letters of inquiry, support and encouragement, for they are working hard to promote the idea of conservation and preservation. The Panama Chamber of Commerce is also a good place to write telling of your concern for, and interest in, Panama's natural heritage. Indications of interest in visiting the country

PANAMA (cont'd)

will probably carry more weight.

Addresses for the above groups are:

- Panama Audubon Society, Box 2026, Balboa, Republic of Panama (President: Ellie Gale)
- Panama Chamber of Commerce, Apto. 74, Panama City, Republic of Panama

*If you wish to support this very worthwhile cause, donations can be sent to:

- ▷ World Wildlife Fund/Costa Rica Program, 1601 Connecticut Ave. NW, Washington, D.C. 20009, U.S.A. (Tel. 202 -387 - 0800) or
- ▷ Nature Conservancy/Costa Rica Program, 1785 Massachusetts Ave. NW, Washington, D.C. 20036, U.S.A. (Tel. 202 - 483 - 0231)

[SEE ALSO PAGE 32.]

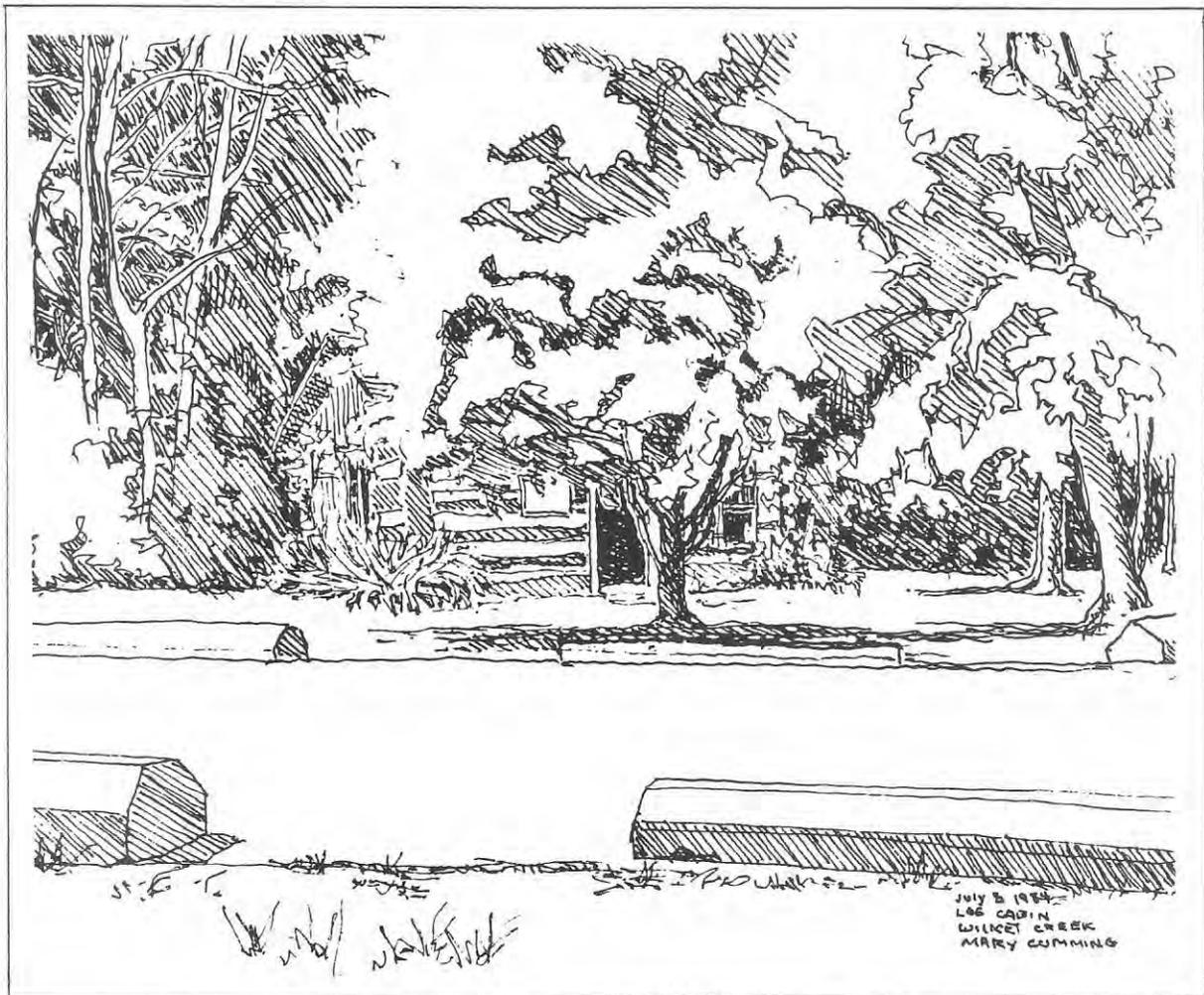
Christine Hanrahan

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THE NOBLEST INSECT OF ALL

Somewhere I have heard the cockroach described as the Aristocrat of the Insect World.

Sue Hubbell, in her gentle, lovely "A Country Year: Living the Questions", enlarges on the "why" of the above statement.

Cockroach: insect of the order of Blattaria.
(Spanish cucaracha - corruption cockroach)*

She writes specifically about wood cockroaches which live outdoors and survive on wood, their intestines host to the same protozoa that enable termites to digest wood. Both cockroach and termite are assumed to have had a common ancestor.

Honeybees and flowering plants evolved during the Cretaceous Period, some 100 million years ago.

Fossil records indicate the existence of roaches long before that--in Upper Carboniferous times. The difference between these fossils and today's live insects involves little more than the position of wing veins.

In that larger-than-life period of 60-foot horsetails, of huge ferns and mosses, roaches scurried around the feet of enormous amphibians and reptiles. Since then, of course, things have changed--land formations, weather, animals, plants have evolved. But not cockroaches. Already, that long ago, they had found a form entirely qualified for survival.

They could, and do, live in a variety of climates and environments, and they could, and do, eat practically anything. As Mrs. Hubbell says, "...roaches sized us up long ago as the providers of good habitat."

They are cousin to the grasshopper, cricket, and katydid. They do not waste time as fragile and vulnerable larvae, but modify slowly from their birth-form. New-hatched roaches look like tiny adult roaches minus wings.

They have always been adaptable and, it would appear, are well-nigh invincible. Mrs. Hubbell recounts how, as someone who earns her livelihood from bee-keeping, she used at first to deal with any roach encroachment into a hive by chopping the invader in two, only to observe the nether end running away, apparently quite functional for all its lack of a head to guide it! Any species capable of this unlikely behaviour deserves to succeed.

It is estimated that humans have been on this planet for some 2 million years. The Upper Carboniferous Period was over 250 million years ago. In the face of such a daunting lineage as that of the cockroach, we are very much Johnny-come-Lately's.

* Sp. cucaracha, Portuguese caroucha, whence Creole Fr. coquerache; unaccountably assim. to cock and roach - Oxford English Etymology.

Eva Davis

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WORM-WATCHING

April can be a good month for observing earthworms. They are sometimes encountered in numbers on the sidewalks but usually one has not the wherewithal to carry home a live specimen to examine more closely. Imagine my surprise when I bent down to pick up a piece of lint from the carpet, and it wriggled! It had escaped from a plant-pot. "What an opportunity!"

The only outcome I hoped for from my first close-range observation of an earthworm was to establish whether the configuration of the head could be detected with a 5X hand-lens. It could! Though my specimen was only of medium size, I could clearly see the "tanylobic" shape →  with the front lobe extending to the back of the mouth segment - not "epilobic", →  - extending only part way into the mouth segment, as in the case of nine of our twelve local species of earthworm. This left only three species from which to choose, all in genus Lumbricus, and all with a "saddle" rather than a "girdle" in the cocoon-forming region of the body. My specimen had a "saddle". (In the fulness of time the worm shrugs off its cocoon.)

If it had been convenient to count the body segments in front of the saddle, this would have told me whether it was a dew worm (30-31) or a red marsh worm (25-26). The dew worm is flattened at the back (not all such worms, it seems, have been stepped on) but my specimen may have been too young for this feature. It seemed quite as cylindrical at the back as at the front. Perhaps it was the red marsh worm which is only 'sometimes' flattened at the back end, and is not as colourful as the dew worm. Both these worms are common and I am satisfied that my specimen was one or the other. I am ruling out the rare chestnut worm - it seems it hasn't been found in Toronto since 1874 (Scarborough Bluffs). A specimen of a fourth member of this genus, known as the Quebec worm, was found in Peel County in 1972.

The English names of the Toronto worms give some identification clues:

green worm	pasture worm	square-tailed worm
black-head worm	octagonal-tailed worm	chestnut worm
southern worm	European bark worm	red marsh worm
Canadian worm	pink soil worm	dew worm

Quebec worm (Peel County)

It seems likely that all of these worms were introduced from the Old World. New World species do exist further south (beyond glaciers' reach?). The American mud worm, belonging to another family, is rare in Ontario.

The earthworms merit field study. Belonging to the group of segmented animals - the "Annalids", they represent a form of life far removed from anything else we can find on land.

Diana Banville

ref.: THE EARTHWORMS OF ONTARIO by J. W. Reynolds 1977 (in TFN Library 690-1963)
 Reviewed in TFN 327:20-22:Nov 79.
 THE ILLUSTRATED ENCYCLOPEDIA OF THE ANIMAL KINGDOM Vol. 18, Danbury Press.

"Clitellum" types
 (cocoon-forming)



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THE TRUMPETER SWAN RESTORATION PROGRAM IN ONTARIO

Trumpeter swans are still rare in Canada. In 1985 there were about 650 in Alberta, Saskatchewan, British Columbia, the Yukon and Northwest Territories. There may be about 10,900 wild birds altogether in the world, most of them concentrated in Alaska.

As James King pointed out at the 10th Trumpeter Swan Society Conference (Sept. 1986) "Reports of the remarkable recovery of the Trumpeter Swans are grossly exaggerated. Trumpeters are still extinct in five Canadian provinces and 33 states where once they were part of the avifauna. Except in Alaska and British Columbia, they survive only as remnants or as struggling introductions". To secure the future of the species we should restore it to as much of its former range as possible.

Before and during the early years of settlement, Trumpeter swans were part of the fauna of Ontario. They disappeared because they were killed for subsistence and for their skins. The last migrants crossed Ontario about 100 years ago. Those who have seen Trumpeter swans in the west can fully appreciate this spectacular bird with its wonderful voice. Ontario is diminished by its absence. To restore it to the province would be a worthwhile objective. Mute swans from Europe have been introduced and have become established as wild birds in various parts of North America. They fill the niche once occupied by Trumpeters. Mutes can live at much higher densities than Trumpeter swans and consequently can have a much more serious impact on beds of submerged aquatic weeds so important to other native species of waterfowl.

The objectives of the Trumpeter swan program are to reintroduce the Trumpeter to Ontario and to eventually replace the Mute swans with them. This can be accomplished by preventing the Mute swans from reproducing by taking their eggs, and giving them Trumpeter eggs to hatch and foster-raise the cygnets. Eventually the remaining Mute swans will be trapped and returned to parks and Zoos where they are wanted.

The Trumpeter swan program was started in 1982. The first four years were devoted largely to finding out if wild Mute swans can successfully foster-raise Trumpeter cygnets. An important incompatibility between the species is the colour of the cygnets. In the breeding season male Mute swans hate anything white -- each other, Snow geese, and egrets. Trumpeter cygnets are white when they hatch, and usually attract aggression from their foster father when they leave the nest. Sometimes attacks on the cygnets can be serious. We have overcome this problem by dyeing the cygnets before they leave the nest. We believe, if certain precautions are taken, and if the techniques developed are used, that Mute swans can successfully raise Trumpeter cygnets.

In 1986 the Trumpeter swan project was partially funded by private agencies. The World Wildlife Fund (Canada) helped by raising money. Canada Life Assurance Co. provided \$5,000.00, the Elsa Wild Animal Appeal of Canada gave \$1,000.00, and the Trumpeter Swan Society gave \$500.00 (U.S. funds). The Federation of Ontario Naturalists kept the accounts and paid the bills. This help is gratefully acknowledged, and made it possible to continue with the program.

In 1986 David McLachlin and Patricia Nash worked hard on the swan program. David Galbraith, University of Guelph, worked on the removal of Snapping Turtles and loaned us turtle traps. Mr. Campbell of the Central Lake Ontario Conservation Authority helped in many ways. The Ontario Tree Improvement and Biomass Institute analysed swan foods for us.

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TRUMPETER SWANS (cont'd)

In 1986 no Trumpeter swan eggs were available from Grande Prairie, Alberta. Seventeen eggs were received from two aviculturists who wish to remain anonymous. This gift of eggs kept the project going through its fifth year.

On April 29, 1986 the first four Trumpeter eggs were placed in the nest of the Mute Swan pair at Lynde Creek. Two hatched on June 1, but the remaining two eggs were rotten and contained embryos which had died at an early stage of development. One cygnet was dead on the nest on June 2 and the other appeared to have deformed feet. It also was found dead on the nest on June 4. On May 2 four more Trumpeter eggs, which had been incubated for three days, were given to Pair C at Cranberry Marsh. On June 2 one cygnet had hatched but the remaining eggs contained dead, undeveloped embryos. At four weeks of age this cygnet was intermittently deserted by its foster parents and on July 19 at 47 days of age it disappeared.

Pair F were given two eggs on May 26. On June 2 one cygnet hatched but the second egg was rotten, although fertile. This cygnet was found dead on the nest on June 3.

More Trumpeter eggs became available on May 23 and four were given to Pair A. Three hatched on June 26 and one egg was rotten. One of these cygnets disappeared on July 8 when twelve days old. Two were still alive on Oct. 17.

The last three Trumpeter eggs were placed with Pair E on June 18 after they had been incubated for 22 days. Two cygnets hatched on June 28 and one on June 29. All were alive and flying on Oct. 17.

Of the 17 eggs used in 1986 seven failed to hatch. This was not due to infertility which usually occurs in entire clutches. There was some development but the embryos died at an early stage in their growth. The cause is not clear. Of the 12 eggs which hatched, five cygnets died without leaving the nest, the cause is also not understood, and will need study in future.

Loss of cygnets in Cranberry Marsh in 1983-1985 appeared to be mostly caused by Snapping Turtles. In 1985, 27 and in 1986, 56 Snapping Turtles averaging 5.67 kg (14.71 lbs) were removed from Cranberry Marsh. The largest was 15 kg (33.1 lbs). Of the seven cygnets which left the nest in 1986, only two disappeared. This is a substantial improvement over the 1983-1985 record when four cygnets fledged and ten disappeared, two of which were seen being killed by Snapping Turtles.

Six of the seven cygnets were dyed before they left the nest. No aggression on the part of the foster fathers was noted.

On Sept. 9 the Trumpeter cygnets on Cranberry Marsh were driven into a trap for banding. Four out of the five were caught, banded, and marked with yellow petaginn tags. The female cygnets weighed 7.3, 7.6, 5.8 kg and the male 8.0 kg (16, 16.8, 12.8 and 17.6 lbs) at about 74 days of age. Except for the stunted female (5.8 kg), these weights are close to the average for cygnets raised on artificial diets at Hennepin Park, Minnesota.

The diet of cygnets at Cranberry Marsh appears to be excellent. There is an abundance of invertebrates and the crude protein content of the pondweeds (*Potamogeton* sp.), which form an important part of their diet, was 19-20% in 1986. The duckweeds (*Lemna* sp.) and the algae (*Spirogyra* sp.) which are also frequently eaten, vary from 18-19% crude proteins. Since the fibre content of these foods is very low, most of this protein is digestible. The cygnets often eat Arrowhead

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TRUMPETER SWANS (cont'd)

(*Sagittarior latifolia*) which contains about 34% crude protein.

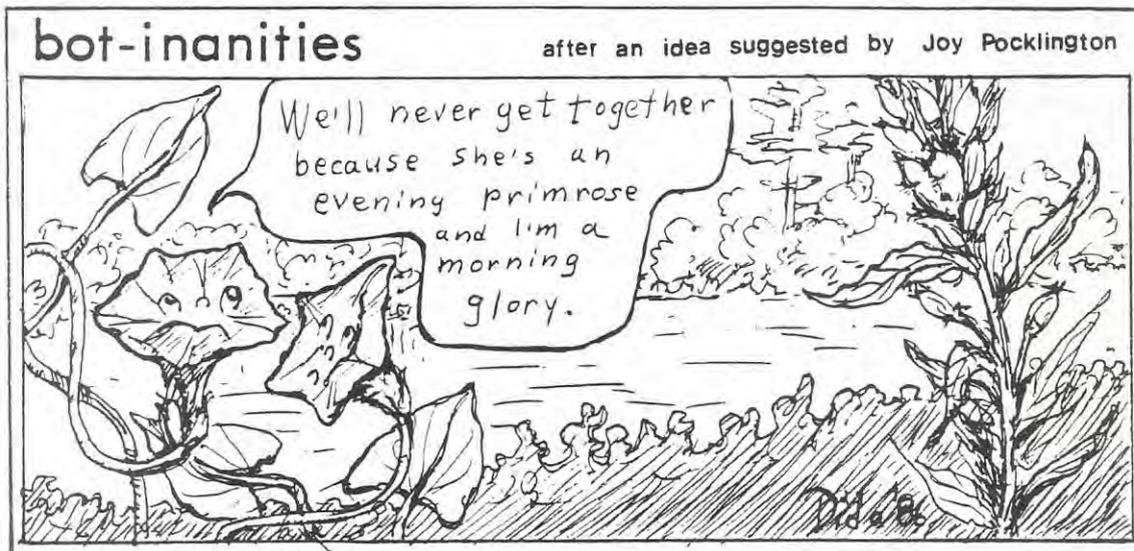
In the last five years the Trumpeter swan program has used 44 eggs for hatching and fostering under Mute swans. This is an average of only 8.8 eggs per year. Of these 44 eggs, 75% or 38 hatched, a rate lower than the 86% estimated for wild Trumpeters at Grande Prairie, Alberta. Of the 33 cygnets which hatched, 33% or 11 were raised to flight stage. This fledging rate is also lower than the 60% estimated for Grande Prairie. Snapping Turtles were probably largely responsible for this high loss of cygnets (62% in 1982-84). In 1986, after turtle control, only two out of seven cygnets (29%) disappeared.

Of the six Trumpeters fledged on the waterfront in 1982-1984, three are known to be dead. One died of lead poisoning, one during transportation, and one from unknown causes. We have no band recoveries or indications that the other three are dead and hope that they are still alive. They were last seen in January and March 1985 and March 1986.

We shall need at least 50 eggs in 1987 to fully employ the techniques already developed. This may involve the rental of a helicopter to pick up eggs in Alberta. We shall need salaries to employ additional staff to find Mute swan nests, to pick up eggs, and to keep an eye on the Trumpeter cygnets once they hatch. We must try to improve the hatchability of eggs, and continue Snapping Turtle control. Some time in the next few years, we should try an experimental release of adult wild-caught Trumpeters. There is a possibility that the job of restoration can be speeded by this technique.

H.G. Lumsden
Wildlife Research Section
Ont. Min. Nat. Resources, Maple

Ed. Note. Anyone seeing a swan with a number on it should report it to Harry Lumsden (832-2761).



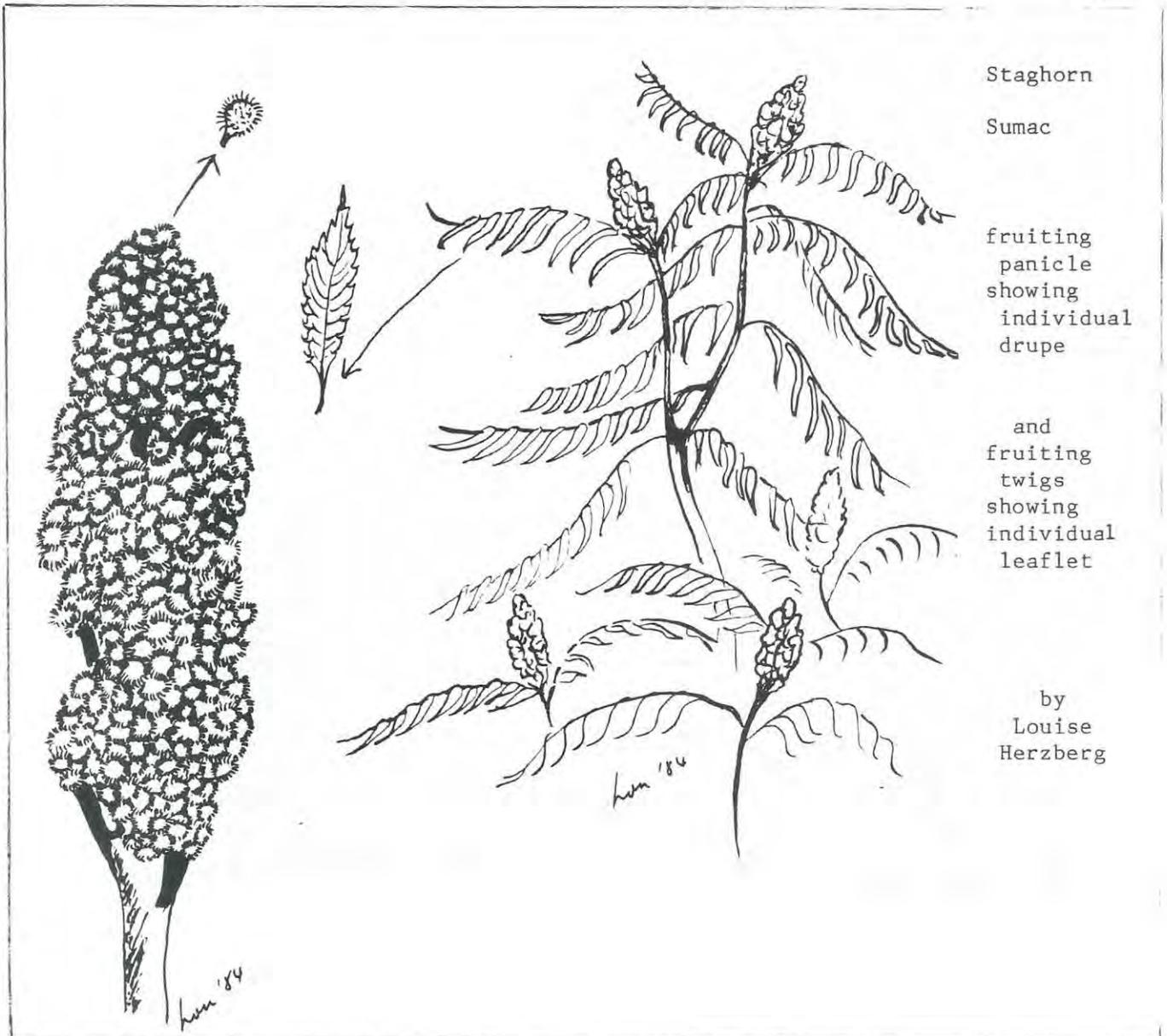
overheard at the Humber...

ON THE EATING HABITS OF A YOUNG COWBIRD

Did you ever wonder what cowbirds eat? On August 29, 1986, Nan Schofield, Clayton Lee and I saw a young cowbird on the bike trail just north of Pottery Road in the Don Valley. The bird was alone and appeared not to notice its three watchers. We saw it catch and eat three small grasshoppers. In each case the bird sighted the insect on the silty asphalt surface of the path (which had been flooded the night before), ran towards and grabbed the grasshopper, attempting to swallow it whole. Any piece that fell out of its beak was immediately retrieved. After three, its luck at catching grasshoppers seemed to run out. (Either the bird had had enough or the grasshoppers were warming up.) It ran towards but missed about six before it gave up and started eating seeds from grass that had been knocked down by the flood. After eating several grains, the bird flew about 20 feet toward a puddle at the side of the road where it drank some water. Then it flew into a nearby tree and we left, satisfied, with thoughts of balanced diets in our minds.

Helen Juhola

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<p style="text-align: center;">THIS NATIVE PLANT STAGHORN SUMAC (<i>Rhus typhina</i>)</p>

In the snowy white of winter we find that bits of colour immediately grab our attention. Driving along any road in southern Ontario, you may find your eye drawn to a furry cone of scarlet fruit atop a thickly branched shrub. Staghorn sumac is recognized by most but not 'known' to many!

A familiar sight in both urban and rural areas, sumac is a tenacious plant. It thrives in dry sandy soils along disturbed areas and embankments, where few other native species care to grow. Its tenacity arises in part from an exceptional ability to produce new stems from root suckers: once it gains a hold in an area, it is very difficult to eradicate.

Staghorn sumac typically reaches heights of 6 metres. The alternate compound leaves are quite long, bearing 11 to 29 leaflets. Their brilliant scarlet colour is one of autumn's first signs.

The yellow-green flowers of this species are fairly nondescript, blooming through July. It is generally monoecious and the sexes are easily distinguished as the red fruits of the female colonies persist through much of the winter.

The importance of sumac as a wildlife food plant is unequalled by many species in our area. Its fat-rich inner bark is an important food item in the winter menu of rabbits and small rodents. The orange to yellow (or even iridescent green) inner wood is often laid bare by tiny teeth in search of a winter meal. The fruits provide a late winter snack for birds, who may also find extra protein in the many insect eggs and larvae that overwinter in the fruit clusters. The berries can also be a taste treat for children of all ages. Try wetting your finger, touching the surface of the fruit, and then tasting your fingertip. The hairs covering the fruits are rich in malic acid, creating a tart sensation. A very palatable sort of lemonade (sumacade) can be made by steeping the berries in water, then adding honey to taste. Don't forget the insects that live in the clusters: use a cheesecloth filter, and pick the berries as soon as they ripen (they can be frozen for later use).

The early medicinal uses of staghorn sumac were myriad and every part of the plant has been used at some point in the past. The dried reddened leaves were mixed with tobacco; the roots, bark and berries have been used to cure everything from dysentery to gangrene (even the common cold!). The juice of the berries and flowers has been used for dyeing and the bark used in tanning (the plant contains a high concentration of tannic acid). Ink has also been made from the milky exudate of the stems and leaves.

One needn't search far from home to find this intriguing though common plant. During winter, examine the withered tips of the branches. Staghorn sumac lacks a true terminal bud. Autumn growth dies back to the first lateral bud: this is referred to as the false or pseudo terminal bud. New spring growth will begin at this point. It is also easy to find many close relatives of this plant in and around your home. Other members of Anacardiaceae include mangos, cashews and our perennial favourite, poison ivy (*Rhus toxicodendron*).

There is even a cultivated cut-leaved staghorn sumac (*R. typhina* f. *dissecta*).

adapted from an article by Barb McKean in THE WOOD DUCK (Hamilton), Vol. 40, No. 6, originally from the PAPPUS, Vol. 4, No. 3.

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SILENT SPRING AND PESTICIDES

Further to Minister James Bradley's heartening determination to come to grips with environmental pollution, NEWSWEEK carried an article last July entitled "Silent Spring Revisited".

Rachel Carson's SILENT SPRING indicted insecticides precisely because they were not selective poisons, merely overall poisons, so that all life was threatened by them. The NEWSWEEK article supported this by stating that less than 1% of pesticides reach their target pest. The rest enter the ecosystem as contaminants in produce and water and, as a result, incalculable numbers of people may be at increased health risk due to low-level, chronic exposure.

The desperate irony of all our frantic efforts to bludgeon Nature into line is that in 1945 an estimated one fifth of (U.S.) crops was lost to insects before modern chemical treatments entered into blanket use, yet today the same percentage is still lost because the pesticides have killed off the pests' natural enemies and then become increasingly ineffective as their targets acquired immunity, leading to ever increasing overkill to get on top of the situation.

Before World War II it was estimated that there were some seven insects resistant to most chemicals. This figure is now believed to have leapt up to 447, with 20 of the worst pests being resistant to every poison in the catalogue. A U.S. 1984 poll found that 77% of the interviewees considered pesticide residue a health hazard, and this ties in with our own newspaper headlines of recent months which have named the state of the environment as the #1 concern of Canadians, even ahead of employment.

It was comforting, therefore, when arborist Bill Granger, in his warm and witty address at last month's general meeting on "Naturalizing Urban Parkland", assured his audience that he uses chemical contaminants only as a very last resort, favouring natural controls as much as possible. His excellent slides showed what parkland should not look like and what it could look like. Lucky North York, to have such a forward mover in the person of Mr. Granger. With regard to pesticide usage and obsessional mowing, will all the other boroughs and cities and Metro Parks PLEASE follow suit. As soon as possible! (This Spring?)

Eva Davis

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A MURMURATION OF STARLINGS

Since reading about starling roosts in Scarborough (TFN 382, page 20), I have been watching my local roost in Queen's Park, near the corner of Grosvenor St. and Queen's Park Crescent, with new interest. The only time I am aware of its presence is at sunset when the birds are arriving and settling. It has been there for years that I know of. I have looked for droppings beneath the trees, some hint of the massive night population, but have found only a few.

Does anyone else have observations on starling roosts?

Helen Juhola

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A flock of sparrows
hopped quickly across the lawn.
A grackle watched them.

haiku by J. Kenneth Cook

IN EXCHANGE

THE ROUGE VALLEY TORONTO HOME FOR FLYING SQUIRRELS

Hidden in the cabinets of the Royal Ontario Museum mammal collection are two stuffed flying squirrels that were captured in Rosedale. Both specimens date from the late 1890's. Wildlife habitat in the Toronto region has been either eliminated or tremendously altered since that time, the result being that we have not seen hide nor hair of creatures such as flying squirrels since.

The Rouge River Valley, however, has acted as a refuge for wildlife in the Metro Toronto area and to this day harbours healthy populations of flying squirrels, those interesting and elusive animals of the night woods.

Two flying squirrel species live in Ontario: the northern flying squirrel (*Glaucomys sabrinus*) of coniferous and mixed forests and the southern flying squirrel (*Glaucomys volans*), an inhabitant of mostly deciduous woods. Both species glide rather than fly, and both are exclusively nocturnal, so people rarely encounter them.

My search for distribution records for flying squirrels in Ontario led me to the Rouge Valley this past summer. I suspected that the extensive tracts of relatively unmanaged forest of the Rouge Valley system would provide prime habitat for at least one of Canada's flying squirrel species and, happily, my instincts proved correct.

In July a colleague and I hiked sections of the valley system and rapped on dead trees with cavities, potential nest sites for flying squirrels. Within an hour we had found one, a "northern", sleeping in a tall, dead and dessicated white pine stem. When we knocked the tree, the squirrel leaped out of a cavity and clung to an adjacent hemlock, blinking its large dark eyes in a half-awake daze. The sliding membrane characteristic of flying squirrels was easily visible even though it was then tucked close to the squirrel's body. We proceeded to take notes on the nest tree and the surrounding habitat and after a few minutes noticed that the squirrel had fallen asleep while keeping vigil on us. We soon left to allow the creature to return to the safety of its hole.

We observed that particular squirrel on the east side of the Rouge, just outside the Metro limits. It seemed likely that we could find the squirrels within Metro's official boundary, so on a warm September Sunday we undertook a second safari to confirm the flying squirrel's presence just a little further upstream. Again, within an hour we had given another flying squirrel a rude awakening. This second northern flying squirrel was found in a fairly short and shaky dead oak tree. Woodpecker holes riddled the broken top of this stem, and one of these held the sleeping squirrel. We took some good photographs of the glider, and even had a chance to show it later to a "Save the Rouge" group out on a fall nature walk. We could not persuade the squirrel to perform a glide for the audience, but the hikers did see the large eyes and extremely long whiskers protruding from the tree cavity.

I think it entirely possible that the smaller southern flying squirrel could also be found dwelling in the deep forests of the Rouge Valley, but only further research can prove this. Besides identifying flying squirrels as official residents of Metro Toronto, these observations indicate two things: first, remnant forest tracts can protect habitat for wildlife not normally associated with urban areas and, second, unmanaged natural forests provide the dead stem habitat that is crucial to the survival of cavity-nesting wildlife species such as flying squirrels. The Rouge Valley has both of these features and hence is a tremendous asset to the ecology of the Metro Toronto Region.

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ROUGE FLYING SQUIRRELS (cont'd)

I would be interested in knowing whether any readers of this newsletter have seen flying squirrels in the Rouge Valley, in the Metro Toronto region, or elsewhere. I am gathering information for a status report of flying squirrels in Ontario and would like any additional records or observations that can be provided, including photographs.

Mark Stabb
Faculty of Forestry, U. of Toronto
203 College St., Toronto M5S 1A1

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A FOREST IN THE CLOUDS

The Monteverde cloud forest straddling the Tilaran mountains of northern Costa Rica is home to an astonishing diversity of plants and animals. The area is famous for its spectacular birds; the resplendent quetzal, ornate hawk-eagle, bare-necked umbrellabird, sunbittern, three-wattled bellbird and great green macaw are just a few of the 400 species recorded in Monteverde's biological reserve. In winter, the forest is alive with flocks of North American migrants, while year round 30 species of hummingbirds provide visitors with sudden flashes of iridescence. Other groups are equally diverse with 490 butterflies and over 500 tree species known from the area. More than 300 orchids and 200 ferns, many still without scientific names, occur within the six distinct forest types recognized at Monteverde. The cloud forest protects some species, such as the golden toad, that exist nowhere else on earth. Together, these animals and plants form one of the richest biological communities to be found anywhere.

Monteverde is a premier site for scientists, students and tourists interested in nature. The Monteverde Cloud Forest Reserve with its field station ranks as the second most used research facility in Costa Rica and the most active cloud forest site worldwide. Scientific tourism provides a substantial economic resource for local residents, while simultaneously educating the public on the value of tropical ecosystems and the need for their conservation. Monteverde, however, is in danger of becoming an ecologically isolated island. The area of forest currently protected covers only 41 square kilometers. The surrounding forest, 385 square kilometers in area which forms an integral part of the natural community, is now receiving increasing rates of damage from unsound development and land speculation. Yet, this forest protects the watershed of Costa Rica's largest hydro-electric facility. Professional land use studies show the steep terrain of the forested slopes to be infertile, prone to erosion, suitable only for forest reserve and watershed protection. Science and the people of Costa Rica will lose a valuable ecological, educational and economic resource if this forest destruction continues.

HOW YOU CAN HELP! The Botany Conservation Group and the Naturalist Society at the University of Toronto are hosting a fund-raising evening to help expand the Monteverde Biological Reserve. The evening will begin with an introduction to tropical rain forests by Dr. David Suzuki and will include a spectacular slide show by Mr. Ron Rideout. A draw will be held for artwork donated by Robert Bateman and a variety of displays will be on hand. Tickets will be available at the door on Friday, April 10 at Convocation Hall. Doors open at 7 pm. Program begins at 8 pm. Admission: \$3.00.

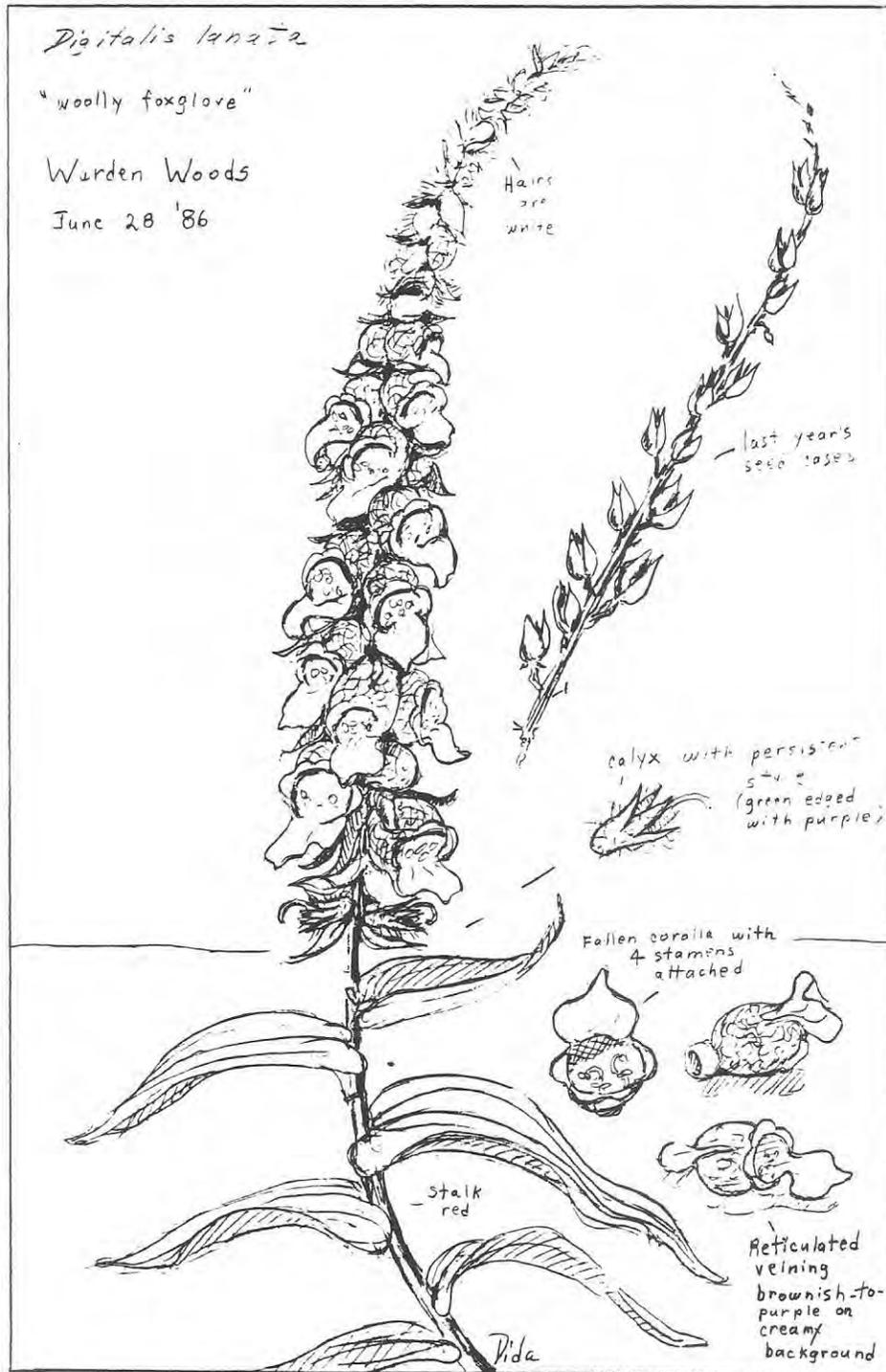
[See also pages 19 to 22 and page 36.]

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YOU WON'T FIND THIS IN YOUR FIELD GUIDE!

Woolly Foxglove (*Digitalis lanata*), a member of the figwort family, is a native of Southern Europe, found in North America only where it has escaped from cultivation. The first record of this plant becoming naturalized in Ontario was recorded in 1978 when it was found growing over a large area of dry open fields in the Rouge Valley in Scarborough. It had apparently escaped from cultivation near a farm site in the upper valley. This past summer hundreds of plants were also found growing in Warden Woods in the valley of Taylor Creek.

Helen Juhola



The Weather This Time Last Year

April, 1986, City of Toronto

April wasn't fooling when the temperature attained record levels on the first, a continuation of the late-March trend. Although reality set in again thereafter, the month, overall, was another warm and dry one. At Toronto City, it was the warmest since 1976.

Cool, windy weather lasted from the 9th to the 12th. A rather chilly outburst hit on the 22nd with a dusting of snow and resulting in daytime temperatures of only about 2-3°; however, from the 23rd on, it was generally sunny and warm. In fact, by the end of the month, it seemed that a drought, albeit minor, was in evidence. In Toronto, the temperatures of the late April warm spell did not reach the 30° heights of the northland, nor did they equal that of April 1st; however, it was impressive.

Sunshine was a little above average; the winds at Toronto Island averaged the lowest since 1972.

Gavin Miller

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AN EVOLUTIONARY SHOWCASE

A number of plants distinct from any others on the planet flourish in BC's Queen Charlotte Islands. The 156 islands which make up the archipelago are home to several disjunct species -- plants which grow nowhere else but in one or two of the exotic and distinct places one dreams of visiting some day: Borneo, southern Ireland or the Himalayas. But there is more to the Charlotte's natural splendour than pleases the eye.

The undisturbed ecosystems on the islands are of enormous importance for scientific investigation. Paleobotanist Calvin Heusser's discovery in the 50's of pollen grains nearly 11,000 years old revealed that some areas of the Charlottes had escaped glaciation. In these refugia, plants -- perhaps even animals, fish, insects and birds -- survived the last ice age.

University of BC botanist Dr. Wilf Schofield has found a number of tiny, elusive mosses -- ancient throwbacks which escaped the glaciers here and nowhere else. The botanical importance of the Queen Charlottes' endemic mosses has until now lacked any real recognition. "If they were animals," Schofield says, "it would be like finding a native monkey in the Charlottes; people would be extremely excited!"

Exactly what other forms of life survived the ice sheet in the Queen Charlotte refugia is still a matter of speculation. Stickleback fish, tiny sea fleas and many of the woodland birds are likely candidates. Even the shrew, martin and ermine are distinct from their mainland cousins. Did the refugia play a part in their separate development, within the evolutionary eye-blink of 10,000 years?

Biologist Bristol Foster, former head of the BC Ecological Reserves Unit, calls the Charlottes an evolutionary showcase. They have also been dubbed the Canadian Galapagos. Yet today resource extraction is advancing with the same thundering relentlessness as once did the great ice sheet. Will the Queen Charlottes survive this next onslaught?

from NATURE ALERT, May 1986 (Canadian Nature Federation)

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COMING EVENTS

COMING EVENTS

CATCH THE GARDENING SPIRIT at a Garden Fair at the Civic Garden Centre on Sunday, April 26, 11:30 to 5:30. Cost: \$25.00 for members, \$30.00 for non-members. Call 445-1552 for further detail.

BIRD-VIEWING DAY AT RATTRAY'S MARSH with the Ministry of Natural Resources. Clive and Joy Goodwin will be present along with Ministry personnel on April 12, 10:00 a.m. - 4:00 p.m. CALL Angus Norman at 832-2761 for more details.

Trips with the Goodwins: Space is still available on the following:

- 1) TINY MARSH AND MINESING SWAMP on Saturday, April 18 - Note this is Easter Weekend. Leave Toronto 8:00 a.m., return about 5:30 p.m. Fee: \$42.00 (includes transportation and leading)
- 2) LONG POINT WEEKEND May 9 and 10 starts at Port Dover on Saturday at 8:00 a.m. and ends about noon Sunday. Fee \$50.00 (includes leading and breakfast Sunday, but not transportation).
- 3) HALTON COUNTY FOREST AND MOUNTSBERG WILDLIFE CENTRE on Saturday, May 30. Leave Toronto 8:00 a.m., return about 5:30 p.m. Fee: \$38.00 (includes transportation and leading).

Call 249-9503 for registration and/or more information.

Spring courses sponsored by the Goodwins are filled. If you are interested in attending fall courses (beginner's and other courses of bird study), call now to be put on the mailing list as these courses fill up rapidly.

POINT PELEE BIRD MIGRATION from Sunday, May 3 to Friday, May 8 with the Canadian Nature Tours (a program of the Federation of Ontario Naturalists and the Canadian Nature Federation). Bird migration in the best inland birding spot in North America. Start: Kingsville, Ontario. Cost: \$495 (includes transportation and motels but not meals). Limit 10. For further information, call Pamela Berton, Co-ordinator, 444-8419.

Royal Botanical Gardens, Hamilton. Tel. (416) 527-1158

- 1) NOON HOUR NATURE WALKS on Tuesdays and Thursdays, April 28 to May 21 at 12:10 p.m. sharp, weather permitting. No registration is required. For meeting place and detail, call the RBG at the number listed above.
- 2) SPRING WILDFLOWER WALKS on Thursdays, April 30 to May 21 at 9:30 a.m. Registration not required. No charge. James Pringle.
- 3) BOTANICAL DRAWING AND PAINTING, a course on Wednesdays, April 8 to June 10. Three-hour daytime classes open to intermediate students. By registration only; deadline March 27. Maximum 20. Fee: \$39.00 members, \$52.00 non-members.

DISCOVER THE BIRDS OF TORONTO'S WATERFRONT: The Marine Museum and the FON co-sponsor walking tours to view the birds who call Toronto's waterfront home. Tours from the Marine Museum every hour, Saturday 10:00 a.m. to 4:00 p.m., Sunday noon to 4:00 p.m., April 11 and 12. For information, call 392-6827.

CREATING A BUTTERFLY GARDEN, a lecture by Cathy Dunster of Urban Wilderness Gardeners, will be presented at Ontario Hydro, 700 University Ave. (at College) on Thursday, April 2 at 7:30 p.m. Call Roy Merrens 736-5142 (days) or Jan Anderson 694-7397 (evenings).

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COMING EVENTS (cont'd)

NINTH ANNUAL NATURALISTS' WORKSHOP is being offered by the Biology Department of Queen's University from May 23 to May 30 at the Biological Station on Lake Opinicon, one of the Rideau Lakes, north of Kingston. Cost \$330.00 This includes accommodation, food, local transport and tuition. Cost to undergraduates or senior high school students is \$230.00. Free transport from Kingston to Elgin is provided on request. Registration by April 30 is necessary. Maximum 20. Address: Queen's University Biological Station, Box 31, R.R. 1, Elgin, Ont. K0G 1E0. Director: Dr. R. Robertson. Direct inquiries to Floyd Connor at (613) 359-5629.

MUSHROOM CROSS-BREEDING, a lecture by Dr. Jim Anderson to be presented to the Toronto Mycological Society on Monday, April 20 at 8:00 p.m. at the Board of Education Centre, 6th Floor Auditorium. Call Eva Davis 694-8928 for details.

GEOLOGY OF DIAMOND DEPOSITS IN AUSTRALIA, a lecture by J. Brummer to the Walker Club on Tuesday, April 14 at 8:00 p.m. at the McLaughlin Planetarium Lecture Room. For further information, call Eva Davis at 694-8928.

SAVE THE ROUGE VALLEY SYSTEM: Work meeting on Thursday, April 9 at the West Rouge Public School. Call Lois James, 284-6409 for details.

THE THIRD ANNUAL WILDFLOWER SYMPOSIUM, Friday, May 8 at the Humber Arboretum from 9:00 a.m. to 4:30 p.m. For further information, call Humber Arboretum 675-3111, ext. 4445.

A FOREST IN THE CLOUDS, a slide show by Ron Rideout, with an introduction by David Suzuki at Convocation Hall, University of Toronto, Friday, April 10 at 8 pm. Admission at door or at TFN April meeting: \$3.00. (See pages 19 to 22, 32.)

Industry now speaks not of risk management but of "risk communication". It employs public-relations specialists to tell us that "there is no such thing as a risk-free world". The implication is that chemical pollution is as natural a risk as, say, lightning or allergy to pollen, and that we ought to live with the chemicals in the water. Such assurances ask us to change our definitions of cleanliness and trust. If they succeed, they will save water as an industrial resource but effectively prohibit its use as a spiritual resource.

What we do to water is part of a revolution in the way we look at ourselves and the world. Human beings are, in a sense, bags of water which evolved spine and intelligence enough to walk around and manipulate other forms of life and matter. It is not hard to imagine that, when we stop to look into the sea or listen to a mountain creek, the attraction we feel is the water inside calling to the water outside, two ponds, perhaps, stopping by the road of time to trade the news.

As we increasingly distinguish between the water within and the water without, as we define human liquidity as clean and the rest as risky, we alienate ourselves from what lies outside our skins. We draw deeper into our own uncertainty and isolation and distrust of the world. If we lose the view that water is a miracle, we lose also some of our ability to look upon the world around us with passion and gladness. And that may be a loss greater than any that government and industry have calculated into their bromidic equations.

from "Trusting Water" by Peter Steinhart in AUDUBON, Vol. 88, No. 6, Nov. 1986

[See page 16.]

TFN MEETINGS

Visitors welcome

GENERAL MEETINGS

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

Monday, April 6, 1987 at 8:00 p.m. (Coffee at 7:15)

PROJECT ANTARCTICA: A NATURALIST'S VIEW OF THE ANTARCTIC

- Jean Macdonald, Past President of the Toronto Field Naturalists

Monday, May 4 at 8:00 p.m. (Coffee at 7:15)

THOSE FASCINATING AMPHIBIANS AND REPTILES!

- Bob Johnson, Curator, Metro Toronto Zoo

*Free parking in the Board of Education Garage on McCaul Street, just below College.

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

GROUP MEETINGS

Botany Group: Plant Identification Workshop: HOW TO IDENTIFY SPRING FLOWERS by Steve Varga, Botany Bldg., Room 207, U. of T., April 9 at 7:30 p.m.

Bird Group: No meeting until September.

Environmental Group: No meeting until September.

Junior Club: Topic for April will focus on insects. The meeting will be held on Saturday, April 4 at 10:00 a.m. in the McLaughlin Planetarium, south of the ROM.

REQUEST for INFORMATION for MEDIA FILE for the PUBLICITY COMMITTEE

Pamela Kertland is compiling a Media File for the Publicity Committee. She would like to have the names of any TV or radio programs that deal with nature and/or local activities. Also, she requires the names and business addresses of neighbourhood and topical newspapers (e.g., Ward Nine News, Nature Digest). If you can provide any of the information, please send it to her at:
31 Thornbank Road, THORNHILL, Ontario L4J 8A1.

SKY NOTES

On April 13, the sun will rise at 6:41 Eastern Daylight Time and set at 7:58 pm EDT. The moon will rise at 8 pm and be full at 10:31 pm.



TORONTO FIELD NATURALISTS

83 Joicey Boulevard
Toronto, Ontario M5M 2T4

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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 by R.M. Saunders, 1965	\$.50	TORONTO FIELD NATURALISTS' RAVINE 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	
CHECKLIST OF PLANTS IN FOUR TORONTO PARKS: WILKET CREEK, HIGH PARK, HUMBER VALLEY, LAMBTON WOODS, 197250	INDEX OF TFN NEWSLETTERS (1938-1978)	10.00
TORONTO THE GREEN, 1976 Metropolitan Toronto's important natural areas are described and recommendations given for their conservation and manage- ment; includes maps, bibliography and index	2.50	ANNUAL TFN INDEX25 ea.
FIELD CHECKLIST OF PLANTS OF SOUTHERN ONTARIO, 19775/\$1.00 or25 ea.	AMPHIBIANS AND REPTILES OF METRO TORONTO, 1983	2.00
TORONTO REGION VERTEBRATE LIST (fishes, amphibians, reptiles, mammals), 1985 5/\$1.00 or	.25 ea.	TORONTO REGION BIRD CHART, 1983	2.00
TORONTO REGION BIRD LIST, 1985 5/\$1.00 or	.25 ea.	A GRAPHIC GUIDE TO ONTARIO MOSSES, 1985.	2.00
		GUIDE TO TORONTO FIELD NATURALISTS' NATURE RESERVE, Leaskdale, Ontario, 1986	2.00

Membership Fees

\$20 Family (2 adults same address)	\$15 Senior Family (2 adults 65+)
\$15 Single	\$10 Single Senior
\$10 Student	Tax receipts issued for donations

Publication orders (add 50¢ per item for postage and handling), membership fees and address changes should be sent to:-

83 Joicey Blvd., Toronto, Ontario M5M 2T4 (488-7304)

ISSN 0820-683X