



TORONTO FIELD NATURALISTS' CLUB NEWSLETTER

Number 255

December, 1970

Give a Nature Reserve for Christmas this year!

We're serious. If you have Naturalist friends,

or other friends who would value the idea of helping to preserve a piece of land in natural condition,

give them a donation to the JIM BAILLIE NATURE RESERVE. We will send a note to tell them of your gift, and you both will have made a needed contribution to our fund-raising drive.

Of course, there is still time to make your own contribution, if you have not yet done so. Contributions have been most encouraging, but \$20,000 is a huge sum and we need every penny we can get.

Remember -- this is your reserve!

To Mr. A. D. Fry,
250 Martin Grove Rd.,
Islington, Ont.

Date _____

I enclose cheque/money order made out to the "Toronto Field Naturalists' Club" in the amount of \$ _____ as a donation towards the purchase of our new reserve.

Mr./Mrs./Miss _____

Address _____

(For gift donations please include the following information):

This donation is a gift to

Mr./Mrs./Miss _____

Address _____

MONDAY, DECEMBER 7, 1970, at 8:15 p.m.
at the
ROYAL ONTARIO MUSEUM

SPEAKER: Dr. Glenn B. Wiggins

SUBJECT: "The Remarkable Invertebrate Animals of Temporary Ponds" - illustrated with colour slides.

Although insects and other invertebrates are familiar as residents of ponds, it is not so well known that a small and select group of these animals have become adapted to temporary or vernal ponds -- ponds that are regularly without water for some seven months of each year. Some of the intricate adaptations through which these pond animals bridge the annual drought period will be discussed in a general account of how some of them were recently discovered.

Next month: On Monday, January 4th, the speaker will be Dr. George Peck, and his subject, "The Birds of Polar Bear Provincial Park".

LITERATURE TABLE A new feature in the rotunda at our meetings this year is the literature table, run by Mrs. Leila Gad. Look for Mrs. Gad's interesting displays and inspect journals and bulletins from other nature clubs. Some of the materials may be borrowed by Club members for closer reading. Anyone wishing to donate files of magazines and journals which would be of interest may contact Mrs. Gad at 924-9926 (evenings).

HINTS FOR CHRISTMAS -- Available in the rotunda at the December meeting, FON Christmas cards, also daily reminders and hasti-notes in a variety of designs.

- For a fellow-member, a TFNC badge or car decal would be a fine Christmas remembrance.
- The FON Bookshop, 1262 Don Mills Rd. (beside the north parking lot), carries a full line of nature books, recordings, and visual aids. Open weekdays from 8:30 to 4:30, and Saturdays from 9:30 to 4:30.
- Best of all, give friends a donation to our nature reserve. See page one of this Newsletter.

LAST CALL FOR FEES! We regret that those who have not paid their 1970-71 fees must be removed from our mailing list after the December meeting. (Check your membership card.)

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To Mrs. H. C. Robson, Secretary,
Toronto Field Naturalists' Club,
49 Craighurst Ave., Toronto 12, Ont.

Date _____

I (We) wish to renew our membership and enclose cheque or money order.

- () Single \$4.00 () Family (adults) \$6.00 () Life \$100.00
- () Corresponding (living more than 20 miles from the Museum) \$2.00
- () Full-time student (aged 16 or over) \$1.50

NAME _____

ADDRESS _____

December Outing

Sunday WILKET CREEK PARK - BIRDS Leader: Mr. Fred Bodsworth
Dec. 13
9:00 a.m. The entrance to Wilket Creek Park is on the west side of Leslie St. just north of Eglinton Ave. East. Meet at the inner parking lot, near the entrance to Serena Gundy Park. Morning only.

Outings Chairman: Mr. Stu Corbett, 261-6807

FIELD Meet at St. James-Bond United Church, Avenue Rd. just north of Eglinton
BIOLOGISTS' Ave. West. Speaker: Mr. James Kemp. Subject: "Nature's Wild Glory" -
GROUP illustrated with colour slides taken in Ontario and British Columbia.
Thursday (See note below re parking.)
Dec. 10
8:00 p.m.

Chairman: Mr. Don Burton, 222-6467

BIRD GROUP Meet at St. James-Bond United Church, Avenue Rd. just north of Eglinton
Tuesday Ave. West. Christmas party! Birding games - indoor field trip!
Dec. 29 Note re parking: As parking can be hard to find on side streets, three
8:15 p.m. parking lots are suggested for those attending meetings at St. James-Bond
United Church: (1) Gulf gas station, south side of Eglinton, just east of
Avenue Rd.; (2) lot on corner of Eglinton and Braemar (south side, just
west of Avenue Rd.); (3) Parking Authority lot at Castle Knock Rd., which
is the first turning north from Eglinton, west of Avenue Rd.

Chairman: Miss Rosemary Gaymer, 925-9007

There will be no meeting of the BOTANY GROUP or the ECOLOGY & CONSERVATION GROUP in December. Watch for January activities of these groups.

BOARD OF We are pleased to announce that Mr. Mike Singleton has consented to join
DIRECTORS the Board of Directors until May 1971, in place of Mr. Walter Hutton,
whose retirement we have regretfully accepted.

BACK ISSUES Miss Amoi Bird has a set of back issues of the Newsletter, virtually comp-
AVAILABLE lete, which she would be pleased to give to an interested member of the
Club. Miss Bird may be reached at 923-8552.

NEW MEMBERS Welcome to the following new members, enrolled to October 28th:

Dr. Douglas B. Campbell, Miss E. Margaret Clarkson, Miss Beatrice
Clendenning, Mr. and Mrs. J. B. Corbett, Miss Jane Gusler, Mr. and Mrs.
J. V. Dampsy, Mr. L. O. J. Denys, Mrs. Dorothy Gibb, Mr. and Mrs. P. R.
Gosling, Mr. and Mrs. G. Kearns, Mr. Charles Klemka, Miss Margaret
Murphy, Mrs. Irene Pappin, Miss Carole Parsons, Mr. and Mrs. Ray
Pillman, Mr. Stanley Roberts, Mr. and Mrs. George Robinson, Mrs. Stephen
Rose, Mr. M. J. Stirling, Miss Anne M. Wright.

APOLOGIES! We regret the typographical error in the last Newsletter giving Mr. Jim
Baillie's age at his death as 55. This should have read "65".

President: Mr. Clive E. Goodwin

Secretary: Mrs. H. C. Robson,
49 Craighurst Ave.,
Toronto 12, Ont.
481-0260

ECOLOGY AND SURVIVAL

Thoughts on the Reith Lectures of 1969

by Jack Crammer-Byng

Every winter in England a series of lectures is given over the B.B.C. network by a distinguished authority on some theme of world-wide importance. In 1968 these Reith Lectures were given by Lester Pearson on the theme of "Peace in the Family of Man". The 1969 lectures were given by Dr. Frank Fraser Darling, an internationally recognized authority in the field of conservation, and have now been published under the title Wilderness and Plenty.¹ The theme of this book is basically the impact of man on his environment; the explosion of population and its concomitant, pollution, and how this affects the delicate balance of ecosystems. Before going further it may be useful to explain, briefly, the technical terms used. By ecology the author means "the science of the organism in relation to its whole environment, in relation to other organisms of different species, and to those of its own kind." Defined more shortly ecology is "the organized body of knowledge which deals with the inter-relationships between living organisms and their environment". In order to study this wide subject biologists and others normally study particular ecological systems ('ecosystems'). "The roles, and also the exact numbers of plants and animals, are inseparably bound up with the numbers of other living things, as well as with the amounts of materials and with the kinds and magnitudes of the physical forces acting at any time. The plants cannot grow without phosphates, but the phosphates would soon be all locked up in the bodies of dead plants and animals if they were not decomposed by bacteria on the ocean bottom, and the phosphates returned to the water to be reused. These ceaseless exchanges of materials and of energy between living things and their environment follow circular pathways, which are repeated in endlessly repetitive cycles. Such cycling systems are called ecological systems or ecosystems, and they can occur at any level of biological complexity. The ecosystem that keeps a single individual alive and self-renewing is the chief interest of the physiologist. Most often the ecologist concerns himself with large, self-contained units, like a desert, a prairie, a forest, or a lake, that require little replenishment from the outside, except for sun and rain. Of course, the most completely self-contained ecosystem is the biosphere, but its size and complexity require that it be studied a part at a time."² The biosphere, a kind of surface envelope, includes the soil to a depth of relatively few feet, all the oceans and fresh waters, and the atmosphere. Having defined these terms we can now examine the author's main arguments.

The two most fateful problems of our age are posed by population and pollution. Pollution comes from getting rid of wastes at the least possible cost. We are still not prepared to pay the price of our technology, namely the cost of cleaning up properly after ourselves. Dr. Darling points out that had Britain tackled this task at an earlier time it would have cost considerably less than it will in the near future when her predicament will compel her to spend a great deal of money to clean up effectively. We in Canada should take warning from Britain's experience. Population pressure on environment is not merely the result of the increased birth rate but even more the result of the death rate falling precipitately in many countries as life expectancy increases. As population increases in any region beyond the capacity of that region to absorb it so an increasing strain is put upon the environment. More and more of us have to live in expanding cities and in doing so we create more roads, buildings and car parks. With the expanding population and the continual industrialization of the economy urbanization accelerates and towns and cities stretch out to

¹Published by the British Broadcasting Company, London, 1970, 21/-. In North America by Houghton Mifflin, October 1970, \$6.50 Cdn.

²Ralph and Mildred Buchsbaum, Basic Ecology, The Boxwood Press, Pennsylvania, 1957. \$3.25 Cdn.

strangle the countryside. When this happens on a large scale the ecosystems cannot carry out their role of energy flow and recycling effectively. Meanwhile, humans begin to show signs of stress. Eventually, when cities become overcrowded, they bring with them psychosomatic disorders and spasmodic breakdowns in social behavior. However, Dr. Darling points out that there is a big difference between high density and overcrowding. Industrial societies seem to need high density for economic convenience, but how many of us really wish to regard the object of our society to be "an efficient conglomerate of production-consumption units"?

Having pointed to the major problem of our times what does Dr. Darling suggest that we should do about it? We cannot expect any early relief from the world's population explosion -- only education and a gradual change in the outlook of each individual will bring any substantial easing, except, of course, for some world-wide catastrophe. Nevertheless we can and must work hard now to preserve the remaining undamaged plant and animal communities and their habitats, and also to rehabilitate existing environments which have been degraded by man and become derelict areas. All of us need to understand the broad principles of ecology, and to support the ecological specialists who are working to devise methods for the conservation of what is in good heart and the revival of what is derelict. Among the specialists the immediate need is for the disciplines of medicine, ecology, psychology, architecture, landscape and town planning, and conservation to combine in certain fields of study and action. The ecologist senses that stress and psychosomatic diseases stem in part from environmental factors though he cannot state them in medical terms. The psychologist, also, is beginning to sense the part played by environmental dissatisfaction and frustration though he cannot explain this in ecological terms. The two professions need to work together experimentally in this unexplored borderland between their two disciplines. Certainly it is possible to recreate good environment, for instance from the seas as is now being done in Holland, through the art of landscape architecture and the well thought out establishment of nature reserves.

In Britain a good start has been made on cleaning up and then re-creating good landscape in the wake of open-cast coal mining and gravel diggings. The aim, here, is to create ecological repose, thus bringing a sense of harmony and well being to all who come into contact with it instead of landscapes that assault the eye and the senses. Yet while these modest improvements are being achieved the irresponsibility of individual industrialists is adding acres of industrial dereliction every day in various parts of the world. This is land filched from posterity and turned into squalor because of a greed for maximum profits. Governments and local authorities in several countries have the legal powers to prevent the causing of derelict lands but in fact most of them just log-roll, making a maximum show of force, but with little actual achievement to show for it.

In brief what is now needed is a far tougher attitude towards such anti-social action. This can best be brought about by the widespread and continuous pressure of responsible public opinion, by an overwhelming number of concerned individuals who refuse to be put off by soft-soap and a froth of words. In democratic countries it seems no use looking to politicians for forthright leadership and for vision; they are so hard pressed balancing one interest against another in order to keep in power that the very last thing they wish to do is to wield the big stick against powerful offenders for fear of losing powerful political support. But in this present age of mass media no juggling politicians, no small but influential elite, can for long oppose the overwhelming majority of individual citizens provided that they are persistent and determined. After an aroused public conscience the next requirement is a measure of environmental control whereby every industry which contributes to damaging the environment or causing it to become derelict should be required by law to give up a portion of its profits sufficient for the rehabilitation of the area affected. This

rehabilitation should be carried out in full public view so that individual citizens can know exactly what is to be done, and can satisfy themselves that it has been done efficiently. Politics, as Fraser Darling remarks, is a profound ecological factor in itself, and those who are concerned about the quality of their environment have got to organize themselves so as to bring strong political pressure to bear wherever it is most effective.

The points mentioned above are of immediate practical application. There are, however, deeper problems which require long-term solutions. To make an impression on these we require a gradual change in outlook - or perhaps a revolution in outlook. In the West our attitude towards the natural world has been moulded by our inheritance from our Judaic-Christian background which has saddled us with an image of a man-centred world. Our technology is a monument to the belief that Jehovah created us in his image and that therefore all the resources on this planet have been specially created for the use of man, and could have no higher end than to serve him. Given such a belief no one could doubt the rightness of technology. But our Western civilization is only one among others in the world, though because of our religious belief we have assumed that our culture is superior to any other in the world. This is a pity since, had we less of this spiritual arrogance, we might have paused to consider the viewpoints of other cultures, in particular those of China, Japan and Hindu India, all of which taught that man is not the centre of the world to which everything else must be sacrificed. The Chinese, until very recently, believed in the idea of natural harmony, and looked on man as playing a part in the natural world but not its *raison d'etre*. They developed a cosmological outlook in which man shared with the natural world the rhythm of creation; the cycle of birth, life and death, and alternation of the four seasons; man co-operated with the natural world and lived in harmony with it rather than despoiled it. Sometimes he even sought to enhance his natural surroundings by creating conditions of 'ecological repose' himself. First of all, then, we need to rid ourselves of the assumption that man is the centre of the universe which was created expressly for him to dispose of as he sees fit for his own pleasure. This is a crass misconception, one which the laws of ecological survival are likely to shake us out of in no gentle manner during the next twenty-five years. Secondly, we need to jettison the myth of inevitable progress which we are apt to accept without thinking. This is another of our Western aberrations. A belief in the inevitability of progress has not been shared by other major civilizations of the world, and for very good reasons. We need to stop confusing progress with change, and to take a long hard look at what we mean by progress. Progress for what? Towards a greater destruction of the natural harmony on which, in spite of our technology, we ultimately rely for our continued life? Do we really desire to go in the direction that so called "progress" is leading us? The trouble is that technology is apt to condition us psychologically so that we become its servant and no longer its creator and master.

Dr. Darling then comes to what is perhaps the most dangerous threat posed by the activities of man to the long-term future of life on this planet, and to the part played by the natural environment in preserving a safe balance. He explains that in the biosphere the rise in the level of carbon dioxide has increased considerably, due to the increased consumption of fossil fuels, coal and oil, being burned in various forms of the internal combustion engine. Now, there is a carbon dioxide cycle which naturally keeps levels right. It is a system of great age and stability but one which we are now taxing with the immense amounts of carbon dioxide we are adding from the fuel we burn. Vegetation has always been the great buffer; the forests and woods remove a great deal of the carbon dioxide by the photosynthetic activity of the leaves, which turn it into wood and give out oxygen in exchange. If so happens that a higher carbon dioxide content of the air creates a greenhouse effect, favouring the growth of trees,

which lock up the carbon dioxide again until a lower level is restored. But unfortunately we are cutting the wildernesses all the time and reducing the all important buffer of vegetation. The oceans also soak up carbon dioxide and lock up carbon in the deeps. But the increasing concentration of carbon dioxide in the air leads to a gradual warming of the oceans with the result that they can hold less carbon. Thus unfortunately the activities of industrial and technological man are today adding carbon dioxide in far greater amounts but at the same time, just when most needed, we are drastically reducing the kind of plant cover which normally would have served to lock up this increased amount of carbon dioxide. Fraser Darling considers that the carbon dioxide problem is as yet remote, but it exists and needs to be studied urgently and a new outlook on ecology developed in every citizen. The sins of our fathers and forefathers, from which we are now suffering in the sphere of ecology, were partly caused by ignorance, partly by greed and indifference. Their attitude tended to be "the good Lord will provide" or "posterity must look after itself". Today, such attitudes are wilfully irresponsible, for we are ignorant no longer. We must be continually concerned for posterity, and we ought to be probing ecologically into the future. But in general we are doing very little except talk. Since we are now beginning to face up to the basic natural laws which govern the existence of all living organisms, including man, we should act on the knowledge that natural wilderness is a factor for world stability, not some remote place hostile to human beings. "It is strange that it has been so long a place to fear to many men and so something to hate and destroy. Wilderness is not remote or indifferent, but an active agent maintaining a habitable world, though the co-operation is unconscious." Yet our hard-headed pragmatic men, typified by too many of our politicians and industrialists, who pride themselves on having their feet firmly on the ground, in fact have their heads in a world of illusions of their own making. What is the use, they ask, of forest unless it can be brought into the service of man? "The answer is that it is already in the service of man if he is willing to accept fellowship with the world of nature. The forest is generous; it can spare him some trees for his timber, and all the time the silent forest is busy, giving us our oxygen, taking away the surplus carbon dioxide, helping to remove the pollutants." Hedgerow and garden trees also play their vital part. Even visually trees are beautiful and help to relieve human stress, but in their silence they do much more, for they function to provide the conditions necessary to the survival of all living organisms within the biosphere. Yet the practical man, who can so often be depended upon to repeat the mistakes of his ancestors, can presume to destroy a people's heritage and nature's air purifier in order to maximize profits or to 'open up' new areas to 'progress',

Conclusion

In a passage which should be read and pondered by all Canadians for its urgent message Fraser Darling writes: "The art of conservation stems from the science of ecology, a delight in knowing how nature works and a love of beauty which may or may not be conscious. Every acre, not only of Britain but of the globe, demands thought before its biological and visual relations are altered . . . Conservation is not just the importance of Nature and all that, but a concern with the human being and his habitat, a concern for the survival of the human species on the planet from the environmental viewpoint. Sometimes Nature has to be protected from the human species, and in conservation we do not subscribe to any notion that nature is worthy of protection merely for the enjoyment or education of the human being. Nature exists in its own right and our attitude to it is a measure of our consciousness of the whole situation of which our own survival is a part, not be-all and end-all." One useful concept which the author stresses is that of "ecological repose". Much of what we call beauty in the countryside stems from conditions of ecological repose. We sense the beauty even if we know nothing about the ecology underlying it. What, in nature, is good to look at is so often what is naturally right.

At this twelfth hour some people, in some parts of the world, have woken up to the main ecological fact that protection of any one creature or a complex of species depends primarily on the persistence and survival of the habitat. This applies the world over, from the tropics to the arctic, from the deep ocean to the sea shore. We are now seeing the beginnings of an urge to prevent irrevocable harm to the environment, but not enough people, either in or out of power, are convinced of this overriding importance, "nor do those in development industries have a sufficient sense of urgency to value and preserve our remaining bits of wilderness for their beauty, their air- and water-purifying action, or their value as study areas." There is still much research to be done in this direction, and the fullest understanding of the energy flow of various ecosystems is essential for our future safety. To this end the International Biological Programme, which is concerned with "biological productivity and human welfare", is stimulating international effort towards acquiring sites that exhibit natural ecosystems at work. But experience in this international venture reveals how rapidly natural ecosystems are being destroyed. In this aspect the next ten years may well be crucial.

Clearly we need to educate ourselves to a much greater awareness of our dependence on the proper energy flow and recycling within the world's ecosystems. The present generation of the establishment (those of us who are now in positions of authority in business, education, community affairs, and in the home) will soon be giving place to a younger generation which hopefully will have a more enlightened outlook on this problem, a more responsible concern for the future. But it is the young people of today to whom we must look mainly for the future salvation of the planet earth. It is essential that they should grow up with a new outlook on man's place in the natural world. "The exclusion of man from the hierarchy of nature, so common in the past and even in our own time, is to put him in the position of a bourgeois rentier, living off an economy but having no responsibility for it." As individual men and women we must regard ourselves as integrated members of the planet and animal world about us, having our own particular role to play. This is no reflection on man's intelligence and inherent nobility. Rather it means that man accepts his true position in nature as the species granted the privilege of understanding its intricate balance, and therefore of protecting its ecological systems. We each, individually, bear this grave responsibility towards our own planet and its living organisms. Since pleasant scenery is, in fact, nature in a state of ecological repose, then landscape is of importance. Just as the reciprocation of conscious concern is often the very essence of love, and is basic to harmonious human relationships, so conscious concern should underlie our attitude towards landscape and our whole environment. In this direction lies intuitive religion, the deep indwelling sense of awe and gratitude at being a part of the living universe. Every parent today has a responsibility to see that his or her children grow up knowing and caring about these deep concerns.

Today we have reached a point at which we have sufficient knowledge to architect the landscape on a regional plan for biological productivity and for the contentment of man. We are also beginning to realize the true meaning and function of wilderness. Whether it is forest, mountain, tundra or steppe is immaterial as long as it is not a man-degraded wilderness of recent making. But we should clearly realize that wilderness does not exist simply for our recreation and pleasure; this is something incidental. The wilderness and the oceans have their own great function to perform as part of the guardianship of the world in which we human beings have so recently arrived as denizens.

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COMING EVENTS

Royal Ontario Museum

- To Dec. 6 -- Forest Ecology, 3rd Floor Rotunda
To Dec. 31 -- New Guinea: Big Man Island, Exhibition Hall
December -- Sunday movies, 2:00 p.m. R.O.M. Theatre - phone 928-3690 for titles.

Royal Canadian Institute: Saturday evening lectures, Convocation Hall, University of Toronto, at 8:15 p.m. Further information: 922-2804.

- Nov. 28 - "Planning the environment of the Toronto-centred region" - Ian Macdonald, Deputy Treasurer and Deputy Minister of Economics of Ontario. (Planning for 8 million people by 1980)
- Dec. 5 - "Antarctic profile" - Donald Archibald, Chief of Basic Weather Division, Canadian Meteorological Service. (Colour slides of weather stations and native fauna.)
- Dec. 12 - "Rivers and people" - Dr. L. E. Jones, Prof. of Mech. Eng., U. of Toronto. (Demonstrations, colour slides and colour motion pictures of Bryce, Zion, Grand Canyon, etc.)

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BOTANICAL NOTES

~~NOTE~~ Mr. Ralph Presgrave of 5 Woodhaven Heights writes: "Here is an addendum to the list of plants in the four Toronto parks: White Dog's-tooth Violet (Erythronium albidum) (Gray p. 436) - Humber Valley, west side, north end. It flowers somewhat intermittently below my house which overlooks the park. I have a colour slide establishing identity."

~~NOTE~~ Available: "The Vegetation and Plant Species of Rattray's Marsh" - a booklet by Ian MacDonald of the South Peel Naturalists' Club. Price \$1.00. Order from the F.O.N., 1262 Don Mills Rd. "Including the herbs at least 421 species have been found in this 220-acre area and there are potentially about 50 that still could be found there."

~~NOTE~~ Did you know that there are some 500,000 trees in the Toronto area? This winter the Toronto Parks and Recreation Department will be adding another 2,000 oaks, maples, locusts and little leaf lindens to the number. Many of these will be planted on public sidewalks. The targets this year are Bay St. between College and Davenport and east Queen St. near the Don Valley Parkway. In commercial areas trees cost from \$50-\$200. Vandalism is negligible because Torontonians seem to appreciate trees. This is in contrast to New York City where they have to chain down their trees and shrubs; last year in New York thieves dug up \$55,000 worth of newly planted trees and shrubs.

~~NOTE~~ Irish moss and spruce beer might take over from the lobster and the cod as the mainstays of the Maritimes and Newfoundland economies. Irish moss (Chondrus crispus) is one of the red algae seaweeds; 75% of the world's production comes from the Maritimes. If you have ever eaten ice cream, blancmange pudding, drank beer or chocolate milk you've probably eaten carrageenin which comes from the seaweed. It serves as a thickener. Fishermen in the Maritimes now earn more from Irish moss than from lobsters. ~~NOTE~~ In Newfoundland spruce beer is making a comeback - it's great for hangovers. Non-alcoholic, it's a pleasant drink made from boiling branches of spruce trees in an iron pot filled with water, sugar and other compounds.

NOTE Cucumber-Trees (Magnolia acuminata) are still thriving in the Niagara Peninsula according to Gus Yaki writing in the Niagara Falls Nature Club Bulletin #45. He lists 11 occurrences including one tree many of you have no doubt seen; it's 150 feet north of the Refectory Restaurant. This is the only native Magnolia found in Canada and here only along the shores of Lake Erie. (Horticultural varieties are common in Toronto.) It gets its name from the fruit which resemble young green cucumbers. One of its cousins, Magnolia macrophylla, has probably the largest single leaves of any tree in the world - 30 inches long - and flowers to match, 12 inches across. It and 5 other magnolias are natives of the southern Appalachian Mountains.

NOTE A Guide to the Flora of Elgin County, Ontario has been published by the Catfish Creek Conservation Authority. Price \$1.50 plus 25¢ postage. Order from: 1229 Talbot St., St. Thomas, Ont.

NOTE Having trouble with your house plants? Entertain them with a bit of music and watch them grow. Music to Grow Plants By has now been recorded and it is claimed after laboratory tests that the high-frequency sound waves threaded throughout the music will make plants bloom earlier and grow faster. The sound waves apparently cause the plants to keep their stomatic pores open longer and wider allowing greater exchange with the air around them and hence faster growth. This might be the beginning of a new industry. Some enterprising guitar-strumming high-frequency amplified hippies could hire themselves out to the farmers next summer as combination growth-promoters and scarecrows.

NOTE It was a pleasure to walk in the Royal Botanical Gardens at Hamilton last September and to see how well the four Sweet chestnut trees (Castanea dentata) are thriving. They were loaded with prickly burrs of sweet tasting nuts. These trees are the progeny of some central Michigan trees which for some unknown reason completely escaped the chestnut blight of 40 years ago. They came from the nursery of a B.C. man, Dr. Clarence Brown, who sold his trees in 1956 to such places as the Morton Arboretum, U. of Western Ontario, and of course the Royal Botanical Gardens. It is not known what was the saving factor that permitted trees from four different places in Michigan, Illinois and British Columbia to escape the blight. One clue is that all the survivors are growing in heavy clay-loam much different from the sandy, gravelly soils in which the original stands of chestnuts flourished. I wish them luck, for the chestnut is, or was, a beautiful tree which all of us would welcome back.

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BOARD DOINGS

The Nature Reserve has continued to occupy a good deal of the Board's attention. John ten Bruggenkate was earlier appointed Chairman of the Land Management Committee, and on November 14 the survey of the reserve commenced under the supervision of George Fairfield. The area is posted to discourage casual trespass and hunting, but this should not discourage our own members.

Another appointment at the October meeting was Hugh Walker as Chairman of the Action Committee. The objective of this committee will be to "ride herd" on the various environmental issues of concern to naturalists in our city. He will act on these problems in conjunction with the Board itself. Our approaches to action are still being developed, but obviously we will need a variety of kinds of help. Anyone who is interested in becoming involved in this kind of activity should make themselves known to Hugh or to a Board member. Volunteer action could range from typing to presenting submissions to observing at Council meetings.

We have been in contact with those responsible for sections of the Metropolitan

Toronto Waterfront Plan, and are working on briefs on Toronto-Centred Region and on the Belt Line Park. The public hearings on the Belt Line will probably take place in November - the final decision has still to be made. As the major Naturalists' Club in the Toronto area, we believe it is important to respond to these plans and proposals.

Although we now have a nature reserve it became obvious to us that an inventory of natural lands in the Toronto region was needed, to enable us to identify areas in need of protection, and possible sites of future reserves. Paul Catling has agreed to continue his Land Acquisition Committee for this purpose. In a later issue of the Newsletter Paul will be outlining the type of information needed, and members will have an opportunity to assist with this programme.

Paul has also consented to co-ordinate an allied project; that of revising our portion of the Naturalist's Guide to Ontario. We hope to be working with the other nature clubs in the Toronto region to provide this material for the Federation of Ontario Naturalists. We have also responded to another request from the Federation, on possible wildflower legislation.

In the weeks ahead the Board will increasingly be discussing the pleasant, but still challenging, problems of rapid growth and size. The impersonal character of the Museum theatre, the needs of members in the suburbs, the difficulty faced by beginners in large outings, all are parts of these large subjects. Our initiative is the "secret location" birding trips of the Bird Group - an attempt to confine an outing to manageable size for the beginner who is really anxious to learn more.

The Board would like your views and ideas on the success of these trips, and on other possible programmes you would like to see us initiate. We have had some excellent suggestions already from our questionnaires, but if you have an idea - please, let's hear from you!

C. G.

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The King City Story

This is the upsetting story of the destruction of a pleasant village of 2,000 people which was ravaged by two 4-lane highways through it despite the strong opposition of the people that lived there. It is a story of bureaucratic stiffness and blackmail ("if we don't widen the road, we won't continue to maintain it"), of narrow-minded self-interest ("only interest is in the fast and efficient movement of traffic... we can't get involved in any emotional problems along the way"), downright bullying ("we've done this before against opposition"), and an unwillingness to listen to other points of view (Canadian Audubon invited the Toronto and York Road Commission to give the reasons for putting four-lane highways through Maple and King City, but the offer was declined).

The whole tragic story has been set down by the Save King Committee in a booklet summarizing their struggles and reprinted in the March-April 1970 issue of Canadian Audubon from which the following brief excerpts are taken:

"Among the many interesting and melancholy lessons we learned while trying to save King City from two four-lane highways and a concrete railway overpass, were two that seemed to us of importance and interest to all Canadians.

The first thing we noticed was the frequent and casual way some people referred to the disaster as "progress". It was common to hear them say "You can't stop progress". What our research pointed out was that this type of highway was the absolute reverse of progress and was

a good many years behind the times. We have dozens of quotations from other countries to support this view.

The second important point we learned was that the public must lead the government in matters of this kind. I think it is fair to say that activity and pressure by private groups first roused interest in pollution...which the government is at last beginning to do something about. The same holds true of pollution by roads...we the people must lead the government."

"...it was perfectly clear that the public and press were just as knowledgeable and concerned as we were...but at government levels there was nothing but silence or basic opposition to anything that might change their plans.

We believe we have isolated the nub of the problem as we face it today. Our highways are laid out, planned and built by highways engineers...who are trained to think only in terms of moving traffic as quickly and economically as possible. What is in the way of their ruling pens is of little consequence.

And while it is claimed that there are reasonable checks and balances on the engineers, we suggest there are none. The Commissioners of the Toronto and York Roads Commission are political appointees. They are not experienced in planning, conservation, sociology or any of the arts or sciences that would help them to guide or direct a highways engineer. Below them are the Township Council and the Village Trustees, neither of whom are in a position to argue professionally with highways engineers."

"If what we did is of any use to anyone else we will not feel that our efforts were wasted. May we sum up with the following suggestions:

1. Do not accept the defeatist attitude that "you can't fight City Hall". Remember that the public must lead the government, unfortunately, as was the case with pollution.
2. Do everything in your power to get the SYSTEM changed to a more modern basis. The placing of highways must not be left as the sole responsibility of highways engineers. They are trained to build roads economically and well. They are apparently not trained to realize that the motor car is not necessarily the most important thing in our lives.
3. Try to get a registered plan for your village or community immediately. Even highways engineers prefer not to run headlong into a planned community if they can avoid it.
4. Consider joining the Community Planning Association of Canada. It was formed in 1946 to awaken public interest and participation in the orderly development of our living environment. It is a citizens' volunteer organization -- composed of more than 6,500 members. There are branches in most major cities. They can supply speakers, films and reference books. Membership fees are \$7.50 for adults, \$1.00 for students. In Ontario write to CPAC, 32 Isabella St., Toronto 5.
5. Take more interest in those you vote into power, at all levels. This is really the core of the matter; if you have intelligent people in your Councils they will work with you, not against you.
6. And remember, as the California Roadside Council put it "...modern transportation is one of the factors serving human needs but not necessarily one to which all others must be subservient."

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Toronto's Major Polluters

Mr. George Kerr, Energy and Resources Minister, has at last released the names of the major industrial air polluters of the Metropolitan Toronto area. These are the institutions which are asked to curtail their operations whenever the sulphur dioxide pollution index reaches 50 as it has several times this year. If you work for one of these firms please try to find out what they are doing about reducing pollution and write us a letter. We would be happy to print some good news once in a while too.

The complete list for Metropolitan Toronto:

Commissioner of Works, Metropolitan Toronto (Wellington and Commissioner Street incinerators); Ontario Hydro, Toronto (Hearn and Lakeview generating plants; E. S. & A. Robinson, 69 Laird Drive, East York; Canadian SKF Co. Ltd., Scarborough; Canadian Pacific Railway yard, Union Station, Toronto.

Goodyear Tire and Rubber Co., Toronto; Campbell Soup Co. Ltd., Toronto; Anaconda American Brass Ltd., Toronto; McGuinness Distillers Ltd., Toronto; T. Eaton Co. Ltd., Toronto; Lever Bros. Ltd., Toronto; Molson's Brewery (Ontario) Ltd., Toronto; Domtar Chemicals Ltd., tar and chemical division, Toronto.

Lambert Lodge, Toronto; Wellesley Hospital, Toronto; Toronto General Hospital; Massey-Ferguson Ltd., Toronto; Maple Leaf Mills Ltd., Toronto; Toronto Terminal Railways, Union Station, Toronto; York University, North York.

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M E R R Y C H R I S T M A S

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