



TORONTO  
ENTOMOLOGISTS'  
ASSOCIATION

34 Seaton Drive,  
Aurora, Ontario,  
Canada, L4G 2K1.

Greetings to all T.E.A. members:

Our new season of meetings will be starting in September as usual and the accomodations have been booked for the following dates:

|      |          |                |
|------|----------|----------------|
| 1991 | Saturday | September 21st |
|      | Saturday | October 26th   |
|      | Saturday | November 23rd  |
| 1992 | Saturday | January 25th   |
|      | Saturday | February 22nd  |
|      | Saturday | March 28th     |
|      | Saturday | April 25th     |

The Planetarium Lecture Room is booked from 12:30 - 3:30 p.m., however, the meetings will start at 1 p.m. promptly.

A sheet for dues payment is enclosed - please return it with your cheque or money order as soon as possible, so that records may be updated and a revised membership list prepared. Please note that the membership fees have been raised to \$20 for regular members and \$10 for students, as per the agreement reached during the second meeting of the last season. A financial forecast will be available at the first meeting.

If you have any queries, please call Alan Hanks at 727-6993 (evening).

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TORONTO  
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PRESIDENT: Quimby F. Hess (482-1637)  
VICE-PRESIDENT: Phil Schappert (832-6206)  
TREASURER Alan J. Hanks (727-6993)

Meeting No. 1 - 91/92 Season

The first meeting of the 91/92 season was held on Sept. 21st in the Planetarium Lecture Room, starting at 1 p.m. Members present were Alan Hanks, Quimby Hess, Duncan Robertson, Phil & Pat Schappert, Carolyn King, Paul McGaw, John Eberlie, John Prideaux, Bill Edmonds, Tom Toyomi Ikeda and Nancy & Michael van der Poorten. Guests were Siglinde Mackay, Carol Sellers, Harry Riva, Gigi Page, Jim Hunter, Terry Corbett, Diana Fancher, Ralph Veecock and Catherine Ukas, most of whom heard of our meetings through the TFN or NOW magazine.

1. Minutes of the last meeting of the 90/91 season were approved.
2. The President reviewed the known findings of the 1991 season, which was notable for being relatively warm from early spring to the end of summer. This meant that most Ontario fauna and flora was about 2 weeks in advance of an average year. The status of the Inornate Ringlet in southwestern Ontario is that it has moved into Lambton and Middlesex counties. Mention was also made of the Bog Elfin in eastern Ontario, the Garita Skipper at Grand La Cloche Island, The Karner Blue and the West Virginia White. The Monarch population in 1990 was very low and in 1991, this increased to some extent, but still not into large numbers. The main Monarch migration south took place during the period August 19-21. Since then, reports received indicate very few Monarchs encountered.  
The spring and summer field trips were quite successful and the leader on the Twin Lakes trip (Phil Schappert) and in the Pelee area (Al Wormington) were complimented and thanked. John Eberlie suggested that the next field trip include a visit to Rod Parrott's Insectarium at Port Hope to see the important work he is doing in rearing livestock for Insect Zoos such as the one in Montreal. This will be included in our 1992 spring field trip.
3. Ontario Butterfly Atlas: This important TEA project is in the hands of a committee consisting of Tony Holmes, Quimby Hess, Alan Hanks and Ron Tasker. We are pleased to report that the necessary funding (about \$24,000) has been received from the Ontario Government, Ontario Heritage Foundation and McLean Foundation. The Atlas is in the final stages of preparation and will soon be awarded to the selected printer. It will have about 180 pages and include numerous colour plates.
4. New T.E.A. Publicity Brochure: Due to the efforts of Phil Schappert, Carolyn King and Tom Mason, 500 copies have been printed. A copy is enclosed to enable each member to try and obtain another member. This brochure will be very useful during TEA exhibitions etc.. Our thanks to the committee.
5. The Karner Blue Conservation Project: The President reviewed the status of promoting awareness of the habitat protection problem in the Port Franks locality south of Grand Bend on Lake Huron. Newspaper clippings on promotion of protection of the remaining habitat from further development were shown. So far the TEA has not sent a letter to the Minister of Natural Resources, pending possible action by the local MNR staff to mitigate the problem, which is complex and political.

6. The West Virginia Writce: This situation was discussed. Since the Government of Ontario has delisted the butterfly, members of the Aggregate Industry have made quick moves to slash and destroy some of the best habitat areas. A slide was shown of lot 10, conc. 7, Nassagaweya twp. (the second best habitat in Halton county), which was completely bulldozed and destroyed by a well-known aggregate company. MNR staff are very upset but say they were powerless. Apparently "The Aggregate Resources Act" supersedes all other statutes such as "The Trees Act". This Act is currently being revised to give the Municipal Governments more clout on tree protection.
7. 1991 Summary: This project will be handled by Al Hanks, with assistance from Quimby Hess. Records, therefore, should be sent to Al at 34 Seaton Drive, Aurora, Ont. L4G 2K1 (416) 727-6993. Quimby has been asked to write up a special report on the status of the Monarch butterfly in Ontario and is soliciting comments and records from the membership and others - including populations, life history, clustering and migration dates. This information will be included in Section 4. Other data and reports are requested for this section of the summary.
8. New Business:
  - a) A letter was tabled from Marshall, Macklin, Monaghan Consulting Engineers re the widening of Regional Road # 55, City of Oshawa, Town of Newcastle. A letter may be sent regarding the local populations of the American Copper.
  - b) Revision of "A Naturalists' Guide to Ontario" by the FON is underway. It was decided that a letter should be sent advising that many special Ontario butterfly habitats are being lost to development.
  - c) A request from Chairman Alan Tonks to comment on the Metropolitan Toronto Government Strategic Plan. It was thought we should send a response with reference to special interest areas such as Leslie Spit and High Park.
9. Treasurer's Report: Al Hanks presented a rough cost breakdown of operations by the TEA during the 1990/91 season. This shows that with 80 members, the costs average \$18 per member. The dues increase to \$20 will cover this for 1991/92 provided costs do not escalate. Early payment of dues was requested.
10. The Vice President advised on future speakers for our meetings, and these are listed below.

We then had a show and tell period featuring the following:

- a) Jamaica and its Butterflies - an illustrated talk by Phil Schappert.
- b) Ontario Moths in 1991 - slide show by Duncan Robertson.
- c) Ontario Butterfly & Moth Life Histories - illustrated by Dr. John Eberlie.

All of these presentations were well received by the audience.

The next meeting will be held in the same location on Saturday, October 26th. The main speaker will be Wayne Gall, Assistant Curator of Invertebrate Zoology at the Buffalo Museum of Science. The topic is "Dragonflies, Stoneflies and Other Underwater Monsters".

At the Nov. 23rd meeting, the speaker (on videotape) will be Dr. J. M. Scriber of Michigan State University, who will speak on "Plant Ecotones and Butterfly Hybrid Zones in the Great Lakes Region".

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TREASURER Alan J. Hanks (727-6993)

Meeting No. 2 - 91/92 Season

The second meeting of the 91/92 season was held on Oct. 26th in the Planetarium Lecture Room, starting at 1 p.m. Members present were Alan Hanks, Quimby Hess, Duncan Robertson, Phil & Pat Schappert, Carolyn King, Paul McGaw, John Eberlie, John Prideaux, Bill Edmonds, Tom Toyomi Ikeda, Nancy & Michael van der Poorten, Jim Spottiswood, Terry Corbett, David Hislop, Tony Holmes, Merne Powers, Chris Rickard, George Bryant, Sid Daniels and Greg Daniels.

Guests were Siglinde Mackay, Carol Sellers, W. Leitch, G. Byers, Ian Blaney, Miriam Richards, Dmitri & Adonis Skandalis, Robin Sager, Jim Hunter, Donald Davis, Geoff Lepper, Tim Myles, Alexander Cappell, Helen Juhola, Shirley Lee, Richard Aaron and our speaker, Wayne Gall.

The total attendance was 40 people - a record for a T.E.A. meeting!!

1. Guests were asked to introduce themselves and were welcomed. It was good to see so many members present. Three guests joined the TEA after the meeting.
2. Minutes of the last meeting were approved.
3. The President reviewed some recent findings of rare and stray butterflies in Ontario. Included were the Dainty Sulphur at Kettle Point (June 14, 1988) reported by Allan L. Patterson and his slide was shown. This is the second known record for Ontario, the first being at Bridgenorth near Peterborough in 1947 (specimen in ROM collection). Sid Daniels was then invited to review some of the outstanding field records that he, Bob Curry, Al Wormington and others made in September at Hamilton and Point Pelee. These included 38 Fiery Skippers (*H. phyleus*), 9 Sachem Skippers (*A. campestris*), 2 Ocola Skippers (*P. ocola*) and 1 fresh Brazilian Skipper (*C. ethlius*). Also of note were unusual second broods for Duke's Skipper, the Dun Skipper and Delaware Skipper. A full report will be included in the 1991 Seasonal Summary and contributors are asked to forward their input as soon as possible. The 1991 Monarch population and migration was then discussed.
4. Ontario Butterfly Atlas: The status of the publication was reviewed by Al Hanks. It is now in the hands of the printer, D.W. Friesen of Manitoba and proofs should be forthcoming soon. It will have 184 pages, 150 occurrence maps and 13 colour plates. It is hoped that copies will be in our hands by Christmas. Some work is still required by the four member committee. The President pointed out that the publication of this atlas will be the major TEA project marking a quarter-century of dedicated effort by TEA members which will be celebrated in 1992.
5. New T.E.A. Publicity Brochure: Phil Schappert advised that five copies of the brochure have been sent to each of 18 Ontario naturalist clubs so far. Further distribution will continue. The copies sent to members with the September minutes should be used to recruit new members. Additional copies are available on request.

6. Endangered Butterflies in Ontario: The President reviewed the known status of the Karner Blue at the Port Franks and St. Williams localities. The West Virginia White status was also reviewed and we are awaiting receipt of the Landplan Report of the 1990/91 study to determine the situation in Ontario. Also, it was noted that there were no reports on the Frosted Elfin in 1991.
7. New Business:
  - a) Bert Wigg forwarded a copy of a brochure describing a new insectarium (Eastwood Butterfly Kingdom) located near Glasgow, Scotland.
  - b) The President reviewed material from the FON on hearings for the "Class Environmental Assessment on Timber Management on Crown Lands in Ontario", which will continue until the end of 1992. Also reviewed was "Forests for Tomorrow", which is an intervention during which Coalition and Native groups will present their evidence to the hearings.
  - c) The Lepidopterists' Society annual conference will be held in East Lansing, Michigan in 1992. Mo Nielsen of the Michigan group has requested that the TEA provide someone to sit in a panel discussion on "Endangered/Threatened Species Programs".
  - d) George Bryant, who is the TEA representative to the FON, reviewed recent happenings, including the appointment of John Lounds as Executive Director.
8. Treasurer's Report: Al Hanks noted that 60 members have renewed, leaving 25 who have not done so as yet. Please send in your dues as soon as possible. The amount on hand at the bank is currently \$1063.42.
9. Publication Reviews:
  - a) The Treasurer had on hand copies of "Wilderness Strategy for Ontario" and flyers for the Association of Tropical Lepidoptera (c/o Florida State Coll. of Arthropods, P.O. Box 147100, Gainesville, FL 32614-7100).
  - b) Dr. John Eberlie reviewed a new publication from England - "Habitat Conservation for Insects" by Reg. Fry, price £12. Also a flyer from the British Butterfly Conservation Society.

The main speaker was Wayne Gall, Assistant Curator of Invertebrate Zoology at the Buffalo Museum of Science. He gave a very interesting and educational talk with slides on aquatic insects and their life histories, including all the orders. He also included numerous poems and writings from famous people which made the presentation more interesting. A good many questions were asked at the conclusion.

The next meeting will be held in the same location on Saturday, November 23rd. The speaker (on videotape) will be Dr. J. M. Scriber of Michigan State University, who will speak on "Plant Ecotones and Butterfly Hybrid Zones in the Great Lakes Region".

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Meeting No. 3 - 91/92 Season

The third meeting of the 91/92 season was held on Nov. 23rd in the Planetarium Lecture Room, starting at 1 p.m. Members present were Alan Hanks, Quimby Hess, Duncan Robertson, Phil & Pat Schappert, Carolyn King, Paul McGaw, John Eberlie, John Prideaux, Bill Edmonds, Nancy & Michael van der Poorten, Jim Spottiswood, Terry Corbett, David Hislop, Tony Holmes, Margaret Liubavicius, Miriam Webster, Siglinde Mackay, Tim Sabo, David Gaskin and one guest - David Orenstein.

1. Professor David Gaskin was the speaker for the meeting and he gave a very interesting illustrated talk on New Zealand Grass Moths, with many slides of the environment in which they are found. There are only about 12 species of butterfly in New Zealand, but moths are much more numerous. The settlers in New Zealand have created an ecological disaster, which it is thought will take 20,000 years to repair, if such is ever commenced!
2. Minutes of the last meeting were approved.
3. Ontario Butterfly Atlas: The initial set of proofs supplied by the printer have been corrected and returned and an additional set for positioning maps and colour plates will be available soon. After that, a set of blue-line proofs will be the final step before printing and publication. Al Hanks advised that 1000 copies of the colour cover will be printed as a brochure for advertising purposes. Details of the atlas such as contents, price etc.. will be printed on the back. Details of the Atlas will be sent for inclusion in an upcoming issue of "Seasons".
4. 1991 Summary: Al Hanks already has a number of member's reports on hand, and requests that any member wishing to submit material try to get it in before the end of the year (occurrence data). Special reports may be delayed somewhat longer, but the end of January is the cut-off date.
5. Membership: There are currently 88 members listed, with 24 unpaid as yet. Please send a cheque or money order for your dues to the treasurer as soon as possible. The membership is growing, and we are nearing the magic number of 100! Quimby Hess will donate a butterfly book to whoever signs up member number 100! An updated membership list was requested, and will be included with an upcoming set of minutes.
6. Endangered Butterflies: Two TEA members will attend the June 25-28, 1992 meeting of the Lepidopterists' Society in East Lansing, Michigan. They will participate in a symposium or panel discussion on Endangered/Threatened species programs.
7. Publication Reviews: Dr. Eberlie reviewed two new Australian publications dealing with "Butterfly Conservation World Wide" by Prof. T.R. New, University of Melbourne. He also directed attention to the Fall, 1991 edition of "Nature Canada" page 14, dealing with ant/caterpillar relationships.

8. New Business:

a) Duncan Robertson has a proposal for a "Continuous Cyclical Summary of Moths in Ontario" to appear in the TEA Summaries. He would be grateful to receive reports of moths of any sort noted in Ontario between 1986 and the present. The segment of this summary proposed for the 1991 TEA Summary would deal with the families Hepialidae to Drepanidae (as in Covell's 'Guide to the Moths' pp. 341-43 and 389 to the end, but in the order shown in the table on pp. 28-30). In that order, and through repeated cycles, other families or groups of families will be dealt with in successive publications. Entries in any segment would have to be concise, but, for reference, there will be a cumulative database containing more information if available: the specific place in a county, how the specimen was attracted (light, uv, pheromone, bait, kind of flower, or, if an egg or larva, foodplant). A 'C' to indicate that a specimen was collected, or 'P' for a photograph, might also prove useful. The order of families in Covell's table is taken from a 'Checklist of the Lepidoptera of America North of Mexico' by Ronald W. Hodges, which is extremely useful in a number of ways for anyone interested in moths. Copies may be had for U.S. \$23 (\$20 + \$3 shipping) from The Wedge Entomological Research Foundation, c/o National Museum of Natural History, MRC-127, Washington, DC 20560, U.S.A. If you are interested in this project and have any reports, please contact Duncan at 52 Florence St., Kingston, Ont. K7M 1Y6.

b) Quimby Hess reviewed some aspects of "Quest Nature Tours", a brochure with details appearing inside the front cover of "Seasons" for August. Special reference was made to a possible tour site for Lepidopterists as "La Selva" in the Amazonian region. He showed slides of the lodge in this virgin rain forest preserve on the Napo River in Ecuador. They also have a butterfly rearing facility.

c) Phil Schappert advised of an Ottawa supplier of insect Christmas cards: Barry C. Flahey, 32 Coleway Street, Nepean, Ontario K2G 0K9.

d) Tony Holmes brought in some northern Ontario specimens, including a fem. Palaeno Sulphur from near Lukinto Lake east of Longlac. This extends the known range southerly about 80 miles. Also some Purplish Coppers from near Killarney (August 23, 1991).

e) Phil Schappert advised that Prof. Laurence Packer of York University had received a report of Karner Blue population survey results for Wisconsin (70 localities with up to 1000 adults per colony) and Minnesota (1 locality).

The next meeting will be held in the Planetarium lecture room on January 25th, 1992, starting at 1 p.m. Program not set yet, but copies of the Atlas should be available for sale by then.

In the meantime, the Executive wishes all of our members a Merry Christmas and a Happy New Year.

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**SPECIAL ANNOUNCEMENT**

The speaker for the January 25th meeting at the Planetarium is Irene Bowman, who will give a talk on the following subject:

**"AN OVERVIEW OF ONTARIO'S PROGRAMME FOR RARE,  
THREATENED AND ENDANGERED SPECIES".**

Ms. Bowman is a Senior Biologist at the Wildlife Policy Branch of the Ministry of Natural Resources. Everyone is urged to come out and participate in this programme on a subject which is of concern to all lovers of natural history in Ontario.

In addition, it is possible that copies of "The Ontario Butterfly Atlas" will be available by the date of the meeting. If not, at the very least, a colour brochure should be on hand.

**LET'S HAVE A REAL GOOD TURNOUT FOR THE FIRST MEETING OF 1992!**



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Meeting No. 4 - 91/92 Season

The fourth meeting of the 91/92 season was held on Jan. 25th in the Planetarium Lecture Room, starting at 1 p.m. Members present were Alan Hanks, Quimby Hess, Duncan Robertson, Carolyn King, Paul McGaw, John Eberlie, John Prideaux, Bill Edmonds, Nancy & Michael van der Poorten, Jim Spottiswood, Terry Corbett, Tony Holmes, David Hislop, Bob Curry, Tom Toyomi Ikeda, Chris Rickard, Jim Hunter, Joan Harper, Merne Powers, Greg Daniels, Miriam Webster, Siglinde Mackay, Carol Sellers, Ron Tasker, Bud Ridley, David Orenstein and Steve Donald. Also present were many visitors; Mike Dennison, Russ Styles, Merrylynn Allison, Alexander Cappell, Don Jackson, Geoff Hirst, Trina Ghauri, Lesley Glazer, Don Davis, Erin Bailey, Brian Roche, Sheila McKay-Kieja, Michael White, Louise Fabiani, Henry Frania, Catherine Ukas, Anne-Marie Papas and E. Fowler & Family. The visitors were asked to introduce themselves and were from various organizations such as Now Magazine, York University, the FON, TFN and Friends of the Don. All were welcomed!

1. President Quimby Hess then introduced Irene Bowman, senior biologist with the Wildlife Policy Research Branch - Ministry of Natural Resources. Ms. Bowman gave a comprehensive overview, illustrated with many slides, of the current position on the protection of rare, threatened and endangered species in Ontario. The applicable laws and regulations were outlined, together with data on the advisory organizations who direct protection programs. For example, it was interesting to learn what took place and the groups involved in the delisting of the West Virginia White butterfly. Ms. Bowman's talk was well received by the audience and was followed by a lengthy question period. She was thanked by Tony Holmes, after which President Hess added his thanks for her assistance in obtaining the necessary funding for the printing of The Ontario Butterfly Atlas and presented her with a copy. After a short interval to allow those present to examine copies of the Atlas, the business session commenced.
2. Minutes of the last meeting were approved.
3. TEA Organization Status: President Hess noted that the TEA was now involved in business practice with the sale of the Atlas, and considerable funds in need of control. He recommended that a Board of Directors was needed and should be appointed on a volunteer basis to start with. The members present indicated their agreement and a Board was approved, made up from the membership as follows:

Dr. W.J.D. Eberlie (Past President)  
P. Schappert (Vice-President)  
A.M. Holmes (TEA Member)  
D. Robertson (TEA Member)

Q.F. Hess (Current President)  
A.J. Hanks (Treasurer)  
Carolyn King (TEA Member)

The main responsibility of the Board will be to meet as required to discuss TEA policy and procedures and decide on strategy until the fall of this year, when elections will be held for all offices. A quorum for decisions was set at any four members of the Board.

4. Ontario Butterfly Atlas: This publication, the fruit of a great deal of hard work by Tony Holmes and the rest of the Atlas Committee, is now printed and the fifty copies required by the MNR have already been delivered. Ads. have been or will be placed in various publications. It has been decided that the price will be \$20, with a 15% discount to TEA members, plus the appropriate taxes and shipping charges. A colour brochure is enclosed with details. There may be a slight delay in delivery to those members wanting a copy, since arrangements for shipping containers and a lower 'book rate' from Canada Post are still under way. Early reports from those seeing the Atlas are very favourable.
5. 1991 Summary: This is well under way, and some members data is still being entered. It is hoped that publication will be possible in March or April. In addition, the possibility of including colour plates is being investigated.
6. Membership: There are currently 92 members listed, with 8 unpaid, some of whom will probably be dropped from the membership list. Setting the membership dues at \$20 has considerably eased the financial burden, and there should be no problem in covering all costs for the season.
6. Correspondence:
  - a) President Hess reviewed a letter from the MNR dated December 18, 1991, regarding some prescribed burns to eliminate certain pine plantations in the Turkey Point and St. Williams Crown Forests. The purpose is to re-establish and enhance the habitat and increase its diversity in the selected areas. Those present agreed that these burns would assist in preserving butterfly habitats now under threat from severe shading by the conifers. A letter will be sent to the MNR.
  - b) Two letters were received from collectors looking to exchange specimens.
7. Publication Reviews: Dr. Eberlie reviewed two new publications, one from England and the other from Australia.

The meeting was then adjourned and open for socializing, sale of the Atlas and memberships etc... Atlas sales were brisk, with over 30 copies being sold!

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The next meeting will be held in the Planetarium lecture room on February 22nd, 1992, starting at 1 p.m. The speaker will be Dr. Richard Tanner of Bradford, who will give an illustrated talk on his visits to Costa Rica, including the habitat and some of the species he has encountered.

Plan on coming out for another good meeting.

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Meeting No. 5 - 91/92 Season

The fifth meeting of the 91/92 season was held on Feb. 22nd in the Planetarium Lecture Room, starting at 1 p.m. Members present were Alan Hanks, Phil and Pat Schappert, Duncan Robertson, Carolyn King, Paul McGaw, John Prideaux, Nancy & Michael van der Poorten, Jim Spottiswood, Tony Holmes, David Hislop, Chris Rickard, Jim Hunter, Joan Harper, Merne Powers, Sid Daniels, Miriam Webster, Siglinde Mackay, Carol Sellers, Ron Tasker, Steve Donald, Al Wormington, Doug & Barbara Scovell and Miriam Richards. Also present were many visitors; Sheila McKay-Kuja, Robert Nisbet, D. Ottho, Howard Daugherty, Beverley Coburn, Jean-Marc Guillemette and Dimitri Skardalis (age 6). President Quimby Hess was in South America, so Vice-President Phil Schappert was in the chair.

1. Alan Hanks then introduced our speaker, Dr. Richard Tanner, from Bradford. Richard has had an interest in butterflies and butterfly photography for many years, and had spent a number of holidays in Costa Rica. He gave a fascinating and well illustrated talk on Costa Rica and some of the butterflies that he had been able to photograph. The talk was very well received, and there were a number of questions following the presentation. The speaker was then presented with a copy of our Butterfly Atlas.
2. Minutes of the last meeting were approved.
3. Ontario Butterfly Atlas: Al Hanks reported that sales of the Atlas had been brisk, and shipments were now being made since the cardboard mailers had arrived. Permission has also been obtained from Canada Post to send them out using Publisher's Book Rate. An apology is due to those members that had sent in \$22 for the Atlas + taxes, shipping and handling. Canada Post had originally advised that the rate for mailing would be in the order of \$2 + GST. However, it turned out that the rate was actually 89 cents! Therefore, some members have overpaid by a small amount. This will be placed in the TEA 'Publication Fund' to cover the cost of a colour plate for the Summary. The Treasurer hopes that no-one will be upset. Interestingly, an enquiry was received from a natural history book seller in England, and negotiations are currently under way with the company.
4. 1991 Summary: This is almost completed, and the photos are currently being juggled around for insertion. Publication will be possible in late March or early April, if all goes well.
5. Moth Cyclical Summary: The first part of this will be included in the 1991 Summary, and will cover the Eriocraniidae to Drepanidae. Duncan Robertson is to be complimented for his efforts on this valuable addition to the Summary.
6. Membership: There are currently 88 members listed, the unpaid members having been dropped from the membership list.
6. Correspondence:
  - a) A letter has been sent to the MNR agreeing in principal with the prescribed burns to eliminate certain pine plantations in the Turkey Point and St. Williams Crown Forests.

7. New Business:

a) Sheila McKay gave a report on 'The Conservation Data Centres'. This is an inventory of significant natural 'elements' (rare and endangered species and natural communities) run by the Nature Conservancy of Canada. A data sheet is enclosed on this, together with a listing of some of our butterflies and their current status and a copy of a reporting sheet. Sheila asked if the members would report any occurrences of rare/threatened species to the Data Centre. It should be noted that there are differences in this listing when compared to the species status in "The Ontario Butterfly Atlas". However, the listing is from that currently maintained by the Conservation Data Centre, and reports should be made to them based on the list. There may be changes in the list as more data is made available, so reporting of these species becomes very important. Members are urged to co-operate. Al Hanks will have the reporting sheet on the computer, so if you need more copies, please contact him.

b) Rob Nisbet brought copies of some Royal Canadian Institute publications of interest to entomologists. These include lists of Odonata and reports on Stoneflies and Blackflies etc.. They are for sale cheap and if not sold will be destroyed. Contact Rob at (416) 427-7427.

c) The 43rd Annual Meeting of the Lepidopterists' Society will be held June 25-28 on the campus of Michigan State University in East Lansing. Also, the Michigan Entomological Society will hold its 38th Annual Meeting on June 25 in the Natural Science building on the University Campus.

d) Phil Schappert asked for ideas on possible areas for 1992 field trips, so bring your thoughts to the next two meetings. Also, if any members have some suggestions for speakers or programs, please contact him.

e) Phil has also received requests from two nature clubs for programs on the insects or butterflies of Ontario. It would be a good idea if the TEA could organize one or two set talks or presentations, utilizing members slides, to make available to any local clubs. Any volunteers for a sub-committee to handle this? It would certainly aid in publicizing the TEA and also probably assist in Atlas sales!

f) In case any members missed it, the Five Year Supplement to "The Butterflies of Point Pelee National Park" by Alan Wormington is still available for \$2.50 + postage. Please contact Al Hanks if you are interested.

g) Quimby Hess has a number of butterfly and beetle collections (exotic) available, both in groups or by single specimen. Also books, pinning boxes etc.. Prices from \$0.50 - 99.00. Telephone him at (416) 482-1637 if you are interested in further details.

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The next meeting will be held in the Planetarium lecture room on March 28th, 1992, starting at 1 p.m. The speaker will be Daryl Coulson of the MNR, from Cambridge, who will give an illustrated talk on the results of the West Virginia White Monitoring Study.

Plan on coming out for another good meeting.

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**CONSERVATION DATA CENTRES**  
**1990**

A Conservation Data Centre (CDC) is an ongoing, computer-assisted ecological inventory operated in cooperation with a provincial, state, or national government. In the U.S., CDC's are referred to as Natural Heritage Programs. Each program exists to clearly identify significant natural "elements" (rare and endangered species and natural communities) and to help establish protection priorities. Altogether, these programs cover 50 U.S. states, 11 Latin American nations and 1 Canadian province, and form a hemispheric Conservation Data Centre network, a centralized repository of information about rare species and natural ecosystems.

**DESCRIPTION**

Introduced by The Nature Conservancy U.S. in 1974, the "heritage" concept is described by its originator, Dr. Robert Jenkins, Vice-President for Science Programs, as a permanent and dynamic atlas and data bank on the existence, characteristics, numbers, condition, status, location and distribution of the elements of natural biological and ecological diversity.

In Canada, a typical CDC is established under a contractual agreement between the Nature Conservancy of Canada and an arm of provincial government. Initial funding is usually shared between private sources (foundation, corporations, and individual donors) and provincial agencies.

**METHODOLOGY**

Information about the status and distribution of rare or endangered species, many common species, natural communities, and other special ecological features in the province is collected and stored in a centralized data management system. Map, manual, and computer files keep the information organized and easily accessible. Records are indexed by many parameters, including standardized name, location, endangerment status, watershed, administrative districts, and land ownership. All CDCs, whether in Canada, the U.S. or Latin America, employ standardized methods and identical terminology to process information about natural elements. This enables sharing and exchange of data, as well as summarizing rangewide information on species.

**Data Centre Characteristics**

**\* It is "Element" oriented.**

The Data Centre focuses on inventorying individual components or elements of the province's natural diversity. These include distinct biotic communities, plant and animal species, and other natural features that are rare and endangered at the provincial or national level. Critical elements are identified and compared to ensure that conservation efforts focus on the most threatened.

CONSERVATION FOR LIFE

794A Broadview Avenue, Toronto, Ontario M4K 2P7 Tel: (416) 469-1701 Fax: (416) 469-1493

Executive Director John H. Eisenhauer Directeur général

CONSERVATION POUR LA VIE

**Honorary Patron**  
Her Excellency  
The Right Honourable

Jeanne Sauvé  
P.C., C.C., C.M.A., C.D.  
Governor General  
of Canada

**Patron d'honneur**  
Son Excellence  
la très honorable

Jeanne Sauvé  
C.P., C.C., C.M.A., C.D.  
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**\* It is a centralized repository.**

Information previously scattered among provincial and federal agencies, public conservation programs, academic institutions, private conservation groups, individual citizens, and in published and unpublished reports is gathered into a single data base. By consolidating existing sources, the inventory serves as a clearinghouse for ecological information in the province.

**\* It is ongoing.**

The inventory is a cumulative process through which information is continuously updated and refined. Old records are checked in the field; new areas are surveyed; known "element occurrences" are monitored, and changes in land conservation status are recorded. As a result, the assessment of the province's ecological resources is current and increasingly accurate.

### **INVENTORY APPLICATIONS**

**Land Protection:** Limited conservation dollars and volunteer contributions must be allocated carefully. Information from the Data Centre helps focus attention on a province's most critically threatened natural features. Landowners and land managers may also be informed of the presence and importance of critical species so that they can voluntarily help protect them.

**Environmental Impact Assessment:** Before these Data Centres were established in the U.S., land use decisions were often made without sufficient information. As a result, many important biological resources were destroyed inadvertently. A professionally staffed, centralized data base is readily accessible to facilitate informed decision-making before costly planning investments are made.

**Resource Management:** Wise stewardship of a province's natural areas requires knowledge of sensitive biological features. Information maintained on parks, preserves, wildlife areas, and private conservation areas may be used to improve existing management policies and practices.

**Endangered Species Review:** Information collected and analyzed by the Data Centres is valuable in the establishment and review of provincial and federal lists of endangered species.

**Research and Education:** As the data base matures, gaps in our current knowledge will become evident. Results from the inventory guide new research and the data base itself provides a long-term educational resource.

### **RESULTS**

Fifty states, one Canadian province and eleven Latin American nations are now covered by the Conservation Data Centre network. Discussions are underway to establish CDC's in seven other Canadian provinces, additional Latin American nations, and in the Eastern Hemisphere.

LISTING OF BUTTERFLY SPECIES WITH S1 OR S2 STATUS

|                                   |                        |        |
|-----------------------------------|------------------------|--------|
| <i>Atrytonopsis hianna</i>        | Dusted Skipper         | S1     |
| <i>Erynnis horatius</i>           | Horace's Dusky Wing    | S1-S2  |
| <i>Erynnis baptisiae</i>          | Wild Indigo Dusky Wing | S1-S2  |
| <i>Erynnis persius</i>            | Persius Dusky Wing     | S1     |
| <i>Oarisma garita</i>             | Garita Skipper         | S1     |
| <i>Achalarus lyciades</i>         | Hoary Edge Skipper     | S1-SA? |
| <i>Eurytides marcellus</i>        | Zebra Swallowtail      | S1     |
| <i>Zerene cesonia</i>             | The Dogface            | S1-SA  |
| <i>Eurema nicippe</i>             | Sleepy Orange          | S1-SA  |
| <i>Incisalia irus</i>             | Frosted Elfin          | S1     |
| <i>Incisalia lanoraieensis</i>    | Bog Elfin              | S1     |
| <i>Lycaeides melissa samuelis</i> | Karner Blue            | S1-SX? |
| <i>Gaeides xanthoides</i>         | Great Copper           | S1     |
| <i>Euristrymon ontario</i>        | Northern Hairstreak    | S1-SX? |
| <i>Parrhasius m-album</i>         | White M Hairstreak     | S1-SA? |
| <i>Speyeria idalia</i>            | Regal Fritillary       | S1     |
| <i>Charidryas gorgone</i>         | Gorgone Checkerspot    | S1-SH  |
| <i>Phyciodes campestris</i>       | Meadow Crescent        | S1?    |
| <i>Oeneis melissa</i>             | Melissa Arctic         | S1-S2  |
| <br>                              |                        |        |
| <i>Thorybes bathyllus</i>         | Southern Cloudy Wing   | S2     |
| <i>Staphylus hayhurstii</i>       | Southern Sooty Wing    | S2     |
| <i>Erynnis martialis</i>          | Mottled Dusky Wing     | S2     |
| <i>Poanes massasoit</i>           | Mulberry Wing          | S2-S3  |
| <i>Euphyes dukesi</i>             | Duke's Skipper         | S2     |
| <i>Papilio machaon</i>            | Old World Swallowtail  | S2-S3  |
| <i>Heraclides crespontes</i>      | Giant Swallowtail      | S2-S3  |
| <i>Colias gigantea</i>            | Giant Sulphur          | S2     |
| <i>Colias pelidne</i>             | Pelidne Sulphur        | S2     |
| <i>Mitoura grynea</i>             | Olive Hairstreak       | S2     |
| <i>Erora laeta</i>                | Early Hairstreak       | S2     |
| <i>Agriades rustica</i>           | Arctic Blue            | S2     |
| <i>Asterocampa celtis</i>         | Hackberry Butterfly    | S2     |
| <i>Asterocampa clyton</i>         | Tawny Emperor          | S2     |
| <i>Oeneis taygete</i>             | White Veined Arctic    | S2     |

---

EOR (Element Occurrence Record) for S1, S2, S3 species.

SPECIES NAME: \_\_\_\_\_

SITE NAME: \_\_\_\_\_ COUNTY: \_\_\_\_\_

NTS MAP NAME: \_\_\_\_\_ NTS CODE: \_\_\_\_\_

NTS UTM's: \_\_\_\_\_ TOWNSHIP: \_\_\_\_\_

LOT: \_\_\_\_\_ CONC: \_\_\_\_\_

LAT: \_\_\_\_\_ LONG: \_\_\_\_\_

Directions to Locality: \_\_\_\_\_

Survey Date: \_\_\_\_\_ Weather: \_\_\_\_\_

EO DATA: \_\_\_\_\_

(# present - \_\_\_\_\_

M or F) \_\_\_\_\_

HABITAT: \_\_\_\_\_

Size or Area of Colony: \_\_\_\_\_

Threat of Development?: \_\_\_\_\_

MGMTCOM: \_\_\_\_\_

PROTCOM: \_\_\_\_\_

OWNER: \_\_\_\_\_

OWNERCOM: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

Record Type (e.g. sight) \_\_\_\_\_ Collection? \_\_\_\_\_

Dep. where? \_\_\_\_\_

Your Name, Address, 'Phone #: \_\_\_\_\_

Return to: Conservation Data Centre, c/o Information Branch, MNR, 4th Floor,  
ICI Bldg., 90 Sheppard Ave. East, North York, Ontario M2N 3A1.



# TORONTO ENTOMOLOGISTS' ASSOCIATION

PRESIDENT: Quil / F. Hess (482-1637)  
VICE-PRESIDENT: Phil Schappert (832-6206)  
TREASURER Alan J. Hanks (727-6993)

Meeting No. 6 - 91/92 Season

The sixth meeting of the 91/92 season was held on March 28th in the Planetarium Lecture Room, starting at 1 p.m. Members present were Quimby Hess, Phil and Pat Schappert, Duncan Robertson, Carolyn King, Paul McGaw, John Prideaux, Miriam Webster, Jim Spottiswood, John Eberlie, Tony Holmes, Jim Hunter, Merne Powers, George Bryant, Terry Corbett, Don Davis, Nick Escott and Bob Curry. Also present were many visitors; Laurence Packer, Helen Juhola, Victor Cayabyab, Diana Banville, Heather Mathieson, Mark Teach and Darryl Coulson.

1. The President welcomed all those present and asked visitors and guests to introduce themselves and state their interests. It was particularly nice to have Professor Packer (York University), Dr. Nick Escott (Thunder Bay) as well as members of the Toronto Field Naturalists, i.e. Helen Juhola and Diana Banfield.

2. Minutes of the last meeting were approved.

3. The speaker, Darryl Coulson, Biologist with the Ontario Ministry of Natural Resources, Cambridge District, was then introduced by the President. Mr. Coulson has been Project Manager for the MNR/Landplan Consultants two year monitoring study of the West Virginia White Butterfly (Final Report dated September 1991). The report has 32 pages plus 29 pages of tables and appendices. We include an excerpt from page 13 below to indicate some of the aspects discussed at the meeting. The slides shown covered life history stages as well as habitat in various WVW localities including St. Joseph and Manitoulin Islands.

*"On average, gains outweighed losses of WVW on Manitoulin between 1990 and 1991. Five sites experienced increases in the numbers of WVW while numbers were found to have decreased in five others. In Halton Co. many more sites experienced a loss rather than a gain in the numbers during the same period and the average loss was slightly greater than the average gain. Sample sizes were not large enough in other areas to enable meaningful difference comparisons."*

Tony Holmes thanked the speaker and there was a lengthy question period, followed by a social break.

4. Ontario Butterfly Atlas: According to Treasurer Al Hanks (who was unable to be present) sales of the Atlas were as follows:

|                       |             |
|-----------------------|-------------|
| Members purchases     | - 105       |
| Non-members purchases | - 68        |
| Sales to bookstores   | - <u>26</u> |
| Total                 | - 199       |

Further sales outlets are being contacted as time permits and reviews of the Atlas will appear in Seasons and the Lep. Soc. News.

5. Finances: The Treasurer indicates that we currently have \$1288 in the normal TEA fund and \$3735 in the "Atlas" fund.

6. 1991 Summary: This is completed except for an additional contribution from Al Wormington and publication will be implemented as soon as possible.

7. Membership: There are now 89 paid-up members and one of the visitors indicated his desire to join!
8. Membership List: It was decided by those present that the membership list would be supplied only to Directors and Officers unless a copy was specifically requested by any member. If a member does not wish to have his address or 'phone number listed for general circulation, please let Al Hanks know.
9. FON Representative: George Bryant, who has been acting as the FON Rep. for TEA, asked to be relieved and Phil Schappert said he would volunteer to be the new rep. The necessary paperwork will be forwarded in due course.
10. Field Trips: The first field trip will be in the spring to Rod Parrot's butterfly rearing facility at Port Hope in the morning - then on to a field locality to be chosen. Dr. Eberlie agreed to contact Rod, select a field locality and report back for finalization at the April meeting.  
A second field trip, possibly to SW Ontario will also be discussed at the April meeting.
11. Karner Blue Symposium: This is being organized by the Minnesota DNR, Non-game Wildlife Program. It will be held in Zanesville, Ohio, April 21, 1992.
12. The Xerces Society: The 19th Annual Meeting will be held June 27 - July 1, 1992 at the Virginia Polytechnic Institute & State University, Blacksburg, Virginia.
13. Other Business:
  - a) Duncan Robertson advised that Father J.C.E. Riotte sends his greetings and best wishes to the TEA membership.
  - b) Donald Davis reports that a male Monarch that was tagged and released at Presqu'ile on August 19, 1991, was recaptured on February 1, 1992 at the El Rosario Sanctuary, near Angangueo, State of Michoacan, Mexico. A new 350 m<sup>2</sup> exhibit, cost about \$1M, titled "Monarca...Butterflies without Boundaries", is being developed by the Canadian Museum of Nature in Ottawa, in collaboration with Monarca A.C., the Mexican Embassy and the Canadian Nature Federation. It will premier in 1993 and begin a continental tour of major museums in 1993. Prof. Lincoln Brower of the University of Florida is the Scientific Advisor. Also, Fred Urquhart has terminated all alar tagging in Canada. He feels there is sufficient data already. Tagging will continue in areas where little information has been obtained to date.

The next meeting will be held in the Planetarium lecture room on April 25th, 1992, starting at 1 p.m. The speaker will be Ms. Jane Yack of Erindale Coll. Toronto. Her illustrated topic will be "What is an Insect Ear?".

\* \* \* \* \*  
 \* IN MEMORIAM \*  
 \* \* \* \* \*  
 \* A long-time TEA member, A.F. (Bert) Wigg passed away on April 2nd, 1992. \*  
 \* Bert had been ill for some time, but his death was a shock nonetheless. \*  
 \* In his prime, Bert was a well-known Toronto athlete and for many years \*  
 \* one of his main hobbies was rearing tropical fish. He exhibited at shows \*  
 \* in Canada and the U.S.A. and was well-known in tropical fish circles. In \*  
 \* later years he developed an interest in butterflies and was a staunch \*  
 \* supporter of the TEA. He will be sorely missed. \*  
 \* \* \* \* \*



# TORONTO ENTOMOLOGISTS' ASSOCIATION

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VICE-PRESIDENT: Phil Schappert (832-6206)  
TREASURER Alan J. Hanks (727-6993)

Meeting No. 7 - 91/92 Season

The seventh meeting of the 91/92 season was held on March 28th in the Planetarium Lecture Room, starting at 1 p.m. Members present were Quimby Hess, Phil and Pat Schappert, Viola Lang, Miriam Webster, Jim Spottiswood, John Eberlie, Tony Holmes, Jim Hunter, Joan Harper, Merne Powers, George Bryant, Don Davis, David Orenstein, Michael & Nancy van der Poorten, Bill Edmonds, Carol Sellers, Bob Curry and new member Victor Cayabyab. Also present were Larisa Zviedris and Ellis Fowler from the T.F.N. and Jane Yack from the University of Toronto.

1. The President welcomed all those present and asked visitors and guests to introduce themselves and indicate their interests.
2. Vice-President Phil Schappert then introduced the speaker, Ms. Jane Yack, whose topic was "What is an Insect Ear?" with appropriate slides to serve as illustrations. The speaker covered subjects as diverse as insect larvae which sense the presence of ovipositing parasites and take evasive action such as dropping to the leaf litter below and moths hearing the approach of bat predators and taking avoidance measures. The audience was fascinated and a lengthy question period followed. The speaker was thanked by the President and presented with a copy of the Ontario Butterfly Atlas.

It is also of interest to note that a session on the use of the biological control agent Bt and the effect of its use on lepidoptera other than the Gypsy Moth and Spruce Budworm ensued during the social break. Ms. Yack is of the opinion, based on field experience, that Bt is very detrimental to all lepidoptera whose life history timing coincides with the former two species. We noted that the Ontario Government has cancelled the 1992 Bt spray program (see attached appendix 1).

3. 1991 Summary: During the break, those members present received a copy of the Summary (TEA # 24-92). The other copies will be shipped out when Al Hanks returns from the U.K.
4. Minutes of the last meeting were approved.
5. New Business:
  - a) Prescribed Burns: Due to wet weather, the MNR has had to delay the burns at the Pinery and Turkey Point Parks. A burn was carried out in the Ojibway Park in April. These burns are designed to rehabilitate oak savannah areas.
  - b) Finch Ave. widening: There was no follow-up by the TEA on A letter from Marshall, Macklin, Monahan re the environmental assessment of road widening of Finch Ave. from Brock Rd. and its possible effect on a local colony of the American Copper.
  - c) WWF Endangered Spaces Campaign: A submission dated April 9th, 1992 dealt with availability of the Endangered Spaces Local Action Fund. The WWF is seeking applications for grants of \$2500 or less for projects to protect endangered spaces, especially for representative natural sites in each ecological region. Applicants must be non-governmental organizations who are willing to match the fund approved. Deadline for receipt of applications is June 15th, 1992 and completion date of all projects is Oct. 31st, 1992. To apply, a form must be completed and forwarded to WWF, 90 Eglinton Ave. East, Suite 504, Toronto M4P 2Z7, 'phone (416) 489-8800.

d) Monarch Butterfly Notes: Member Donald A. Davis of Downsview gave the audience an up-date on 91/92 Monarch happenings, especially tagging results. He advised that about 600 fall Monarch migrants were tagged at Presqu'ile Park and that he has been advised by the Mexicans that 10 recoveries were made at the wintering grounds. Also, the Mexicans are tagging 10,000 females at the wintering grounds in an effort to discover how far north they get this spring.

6. Field Trips: John Eberlie and Rod Parrot have set up one field trip on June 20th, starting between 10 and 11 a.m. at 69 Frances St., Port Hope (see map attached);
- a) Visiting Rod Parrot's lepidoptera rearing facility - butterflies & moths
  - b) Lunch - (bring your own).
  - c) Maps for the p.m. field trip will be provided to those present. It will include selected areas near Port Hope, mostly in the Ganaraska Forest and near-by areas.
- A second field trip, possibly to Ojibway Park and Essex County is being worked on by Phil Schappert - details will follow.

7. Michigan Endangered Species: Lepidoptera have been listed by the Michigan Dept. of Natural Resources and include the following:

|              |   |
|--------------|---|
| Endangered - | Regal Fritillary<br>Mitchell's Satyr  |
| Threatened - | Persius Dusky Wing<br>Duke's Skipper<br>Dusted Skipper<br>Pipevine Swallowtail<br>Frosted Elfin<br>Northern Blue<br>Karner Blue |

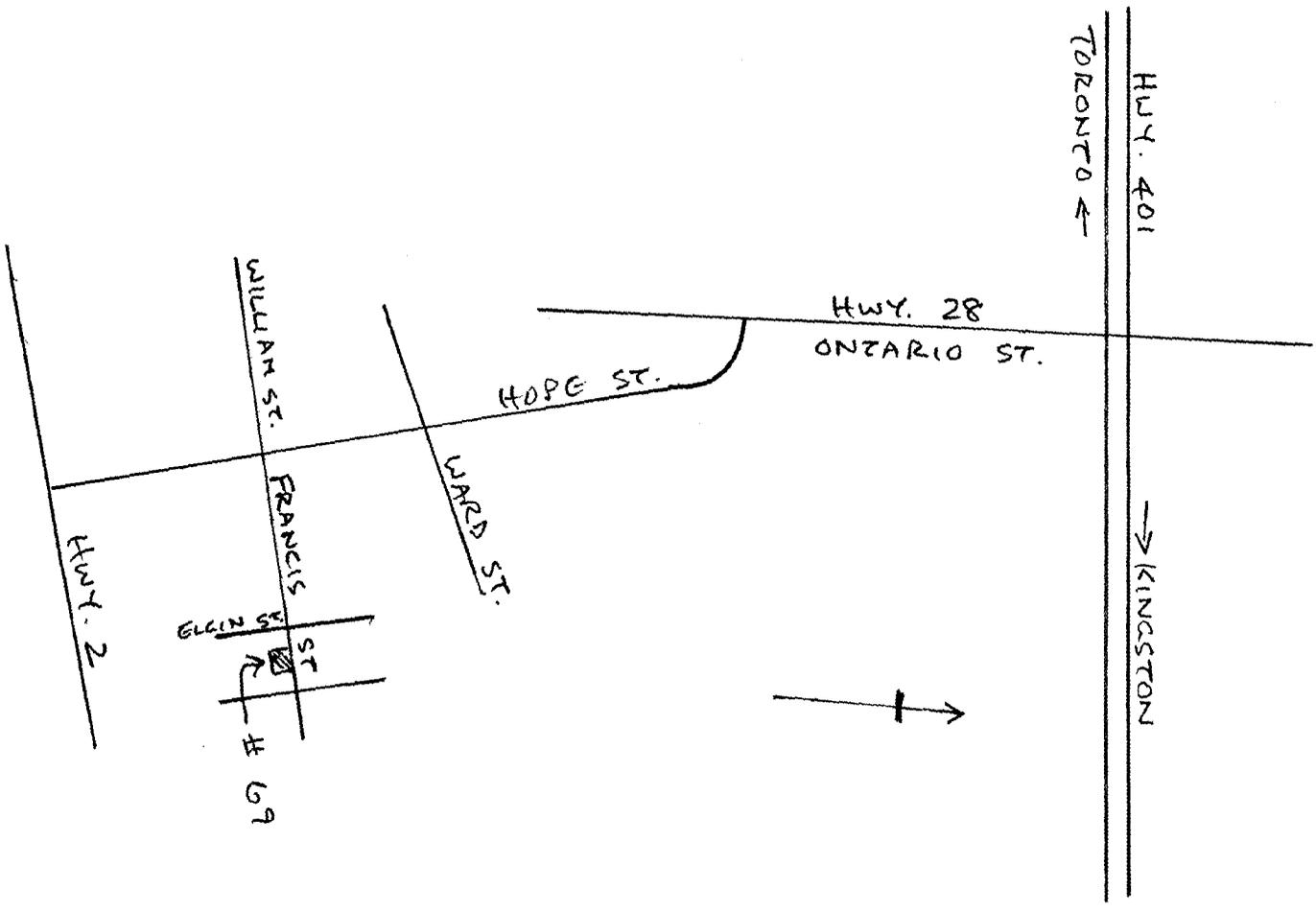
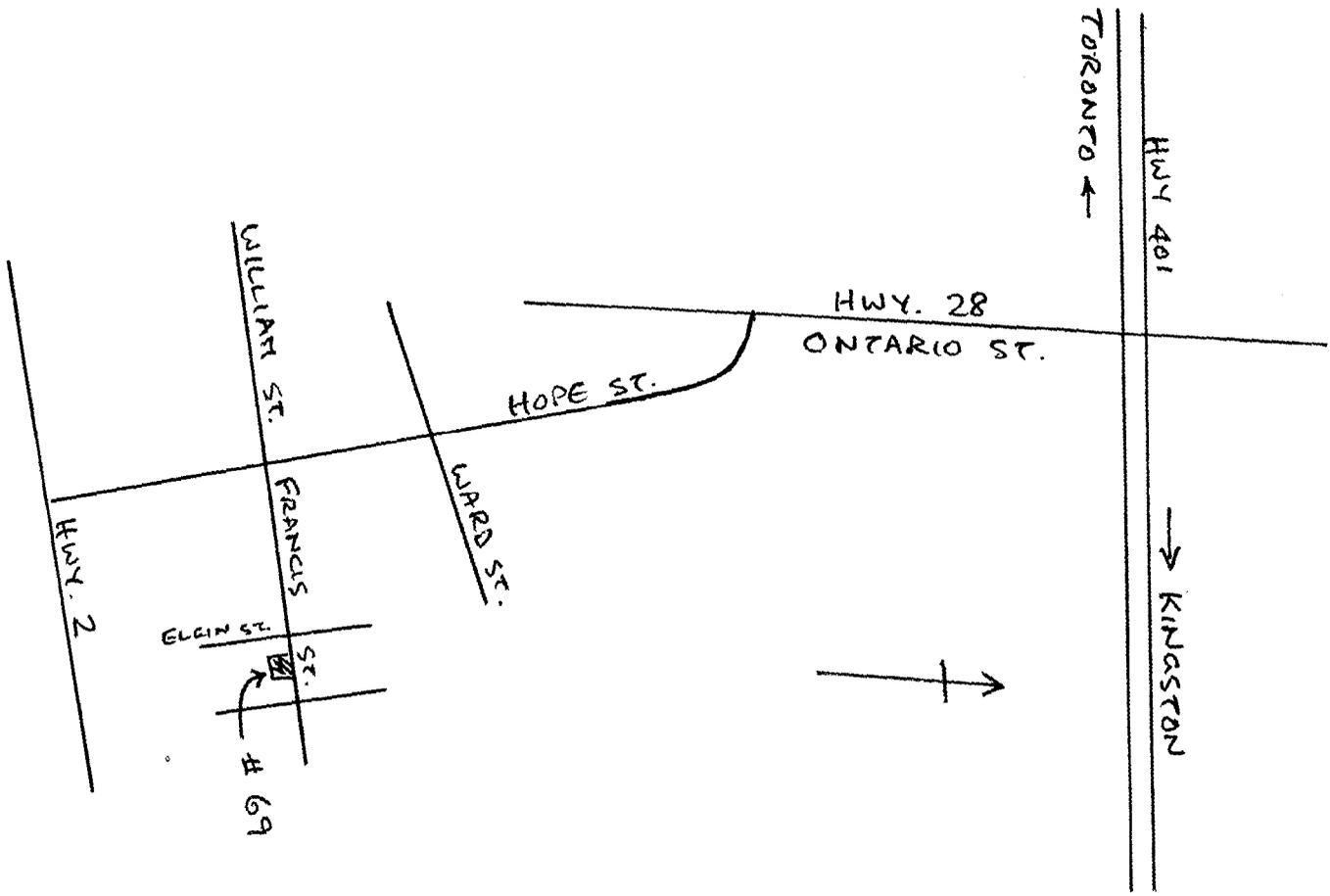
The next meeting will be held in September and the dates of all meetings for the next season will be included with the dues notice. The format for the first meeting will be as follows:

- a) Election of Officers
- b) Members Day - showing slides, specimens etc... Talking about the past season. Having items for sale or exchange.

### **Millions of monarchs die**

MEXICO CITY — Millions of monarch butterflies that migrated to Mexico from Canada last winter died because of climatic changes brought about by logging of their natural habitat. "It was a massive death. The ground was carpeted with butterflies," said Homero Aridjis, leader of the Group of 100, Mexico's best-known environmental organization. He said perhaps tens of millions — at least 70 per cent — of the black-and-orange butterflies died in December and January after flying 5,000 kilometres from Ontario to the pine forests of the Sierra Madre in Michoacan. He said the agriculture ministry authorized much of the logging in violation of a 1986 presidential decree. — *Reuter*

From Globe & Mail, May 13, 1992.



APPENDIX 1



Ministry of  
Natural  
Resources

Minister

Ministère des  
Richesses  
naturelles

Ministre

Queen's Park  
Toronto, Ontario  
M7A 1W3  
416 / 965-1301

Apr 23 1992

92-01098-MIN

Dr. R.R. Tasker  
The Toronto Hospital, Western Division  
Division of Neurosurgery  
Suite 2-431, McLaughlin Pavilion  
399 Bathurst Street  
Toronto, Ontario M5T 2S8

Dear Dr. Tasker:

Thank you for your letter of February 18, 1992, about the use of "Bacillus thuringiensis" or B.t. to control gypsy moth defoliation in Ontario.

I appreciate your interest in the effects that B.t. may have on other insects. The Ministry no longer conducts a private land spray program for gypsy moth. However, the Ministry does encourage landowners to choose B.t. as their insecticide due to its high specificity and low environmental impact.

The objective of spraying for gypsy moth is to reduce defoliation of trees in selected areas until natural control mechanisms, such as predators, parasites and disease, bring about the collapse of an endemic population. Spray areas are often small, widely dispersed woodlots and cottage lots which comprise only a small portion of the severely defoliated area. This area, in turn, represents a small fraction of the whole of southern Ontario which now constitutes the known range of gypsy moth. Spraying B.t. to reduce defoliation on such a small portion of the infested area will not delay the population collapse of the pest.

The effects of B.t. on insect-eating animals should also not be significant. When ingested by insects of the "Lepidoptera" order, in other words those insects that change from caterpillars to moths or butterflies during their life cycle, B.t. causes gut paralysis and the caterpillar stops eating and dies. This effect is unique to this order of insects because of the alkaline condition in their stomach, which is unlike other insects, mammals or birds. In addition, as most of the private land owners spray small cottage lots, the effects on insect-eating animals is minimal as insects and predators migrate to and from the sprayed area.

Once sprayed, B.t. is effective for only a few days, and must be ingested to have any effect on the insect. There are very few species of caterpillars in the "Lepidoptera" order that are actively feeding on the types of tree foliage that are being treated during the time that B.t. is applied for gypsy moth. This greatly limits the effect that B.t. spraying has on non-target lepidopterous insects.

1

The effects on other "Lepidoptera" is also limited to only the small spray areas. Although B.t. is generally toxic to "Lepidoptera", not all species are equally susceptible and some show considerable resistance to it. The Karner Blue and Rainbow Elfin mentioned in your letter are not likely to be adversely affected by spraying B.t. for gypsy moth. The Karner Blue inhabits areas of pine and sand barrens, which are much different from the deciduous forests sprayed for gypsy moth. Similarly, the Rainbow Elfin inhabits field areas, not deciduous forests. Its larvae, which would have to ingest B.t. for the insect to be affected, feed by boring into the flowers of the host plant, and would not be exposed to B.t. In addition, when B.t. is sprayed, Rainbow Elfin is usually at the adult or egg stage and, therefore, not susceptible to B.t.

2

3  
4

5

I trust that this information is of assistance to you. Again, thank you for writing.

Yours sincerely,



C. J. (Bud) Wildman  
Minister

Comments on the above from QFH:

- 1) There is some truth to this.
- 2) ???
- 3) For "Rainbow Elfin" read "Frosted Elfin".
- 4) Actually oak savannah, and oak is a favourite food of gypsy moth.
- 5) This is correct.
- 6) Bt spraying in early spring should not affect either the Karner Blue or Frosted Elfin, but certain other Lepidoptera are definitely affected.