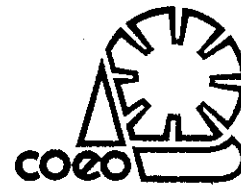


# Pathways



THE ONTARIO JOURNAL OF OUTDOOR EDUCATION

VOLUME 2, NUMBER 6

OCTOBER, 1990



ISSN: 0840-8114

# Contributing to Pathways



## THE ONTARIO JOURNAL OF OUTDOOR EDUCATION

PATHWAYS welcomes all submissions of articles, pictures, cartoons, puzzles, upcoming events and materials related to Outdoor Education. Active participation from readership with an organized news/journal format is the best guarantee for a quality journal meeting the broad needs of Outdoor Educators. It is hoped that the journal serves as the voice of Outdoor Education in Ontario and will be a major communication vehicle to COEO members and others, furthering knowledge, enthusiasm and vision for Outdoor Education.

*Participation: herein lies the strength and life of a volunteer organization.* You have to know who you are writing for: in the case of a COEO member writing for PATHWAYS, it's easy. Imagine you are writing for someone just like you, a person who is interested or involved or both in some form of outdoor education.

Article submissions should be topical, appreciating the scope of Outdoor Education, which encompasses both an adventure and an environmental focus. To this end, guard against specialized detail and jargon considering that your audience may not be at your technical level. Both theoretical and practical material is important. Subjective non-scholarly sources as well as quantitative and qualitative research works are important as are specific teaching tips, approaches and general Outdoor Education concerns.

Readable natural writing is preferred. Conversational writing styles are easy to read and usually to the point. References as footnotes following the text are important to include in complete fashion where appropriate. Quoting from other sources can strengthen a work but excessive use is best avoided. Better to tell your own tale. There is no formula or mould to fit. The best guide is PATHWAYS itself. Your style is more important. *Think: be creative, have fun, share your ideas.*

Articles should be typed and double-spaced. Please include a short biography and return address. Feature-length articles are 1000 to 2000 words, at approximately 250 words per 8 1/2" x 11" page

Submit to:

Carina van Heyst, 948 Coxwell Avenue, Toronto, Ontario M4C 3G3

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This publication is NOW looking for advertisements which will be of interest to the readership as well as provide a method of defraying publication costs. If you have a product or service which might be of interest to our readership, please contact the Editorial Board Advertising Representative for an Advertising Information Package.

We ask that the product or service be:

1. valuable and useful to COEO members
2. quality people, equipment, resources or programs

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# Pathways



THE ONTARIO JOURNAL OF OUTDOOR EDUCATION

October, 1990

VOLUME 2, NO. 6

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## STATE OF THE ART

The cover this month comes from Catherine Luce who has drawn this and much of this month's inside art for the Waterloo County Board of Education. Lynn Harrison, a regular art contributor, has once again provided inside art for Pathways.

# Editor's Log Book

## Creativity Throughout

"Mono Cliffs?" the supply teacher dispatcher said. "You worked there? I've been there. It's lovely."

"The Environmental Leadership Program was the most important thing I've done," a student told her teacher.

Well, having heard these comments, I just have to feel good about outdoor education.

This summer, I took part in developing and teaching North York's Environmental Leadership program with Skid Crease and Andy McLachlan. With students hand-picked from Middle Schools and Junior Highs, we couldn't have been luckier teachers. These students have returned to their schools where they can help their classmates take environmental action. Our main task

was to empower them to break down what seemed like monumental challenges into "doable" actions.

It was exciting to be involved in a new program, to create and to refine, and to get feedback both immediately and in later reports like the one above. It is equally exciting to know that such creativity is being exercised by outdoor educators across the province. This issue of *Pathways* gives you some fine examples of these creative souls. In the Field has a report from the Boyne River Natural Science School on an Environmental Program that they ran and which they reported on in the November 1989 issue of *Pathways*. Now that it has been run, they offer you their reflections on it.

Creativity in our field is also manifested in the new activities we can present to you, such as the "Home Sweet Hole" simulation game from

Mark Stabb. Perhaps some of you will find opportunities to try it out and let either Mark or *Pathways* know how it went.

I would like to extend an open invitation to all COEO members to share with us the variety of activities they have developed. Such submissions help *Pathways* to be the most useful resource it can be to outdoor educators in the province of Ontario.

\* \* \* \* \*

The *Pathways* Editorial Board would like to extend their thanks and appreciation for the work that Dennis Wendland has done for *Pathways* since its beginning both in soliciting advertising for the magazine and for his insights as a member of the Editorial Board. His energy will be missed.

(Con't. Page 4)

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# Outlook

## Advisory Board Report

A meeting of the COEO Advisory Board was held on Thursday, September 13, 1990 at the North York Board of Education office. The agenda included a number of different items, some of which are highlighted in the following report.

As many of you may know, negotiations between the council and the North American Association of Environmental Educators (NAAEE) to produce a joint, international conference on environmental education meetings between COEO and NAAEE have resulted in the acceptance of a formal agreement between the two organizations to produce such a conference in the fall of 1992. COEO and NAAEE has asked Chuck Hopkins to work as the Conference Chair. The Advisory Board received a full report from Chuck at the meeting on Thursday evening, and the members are pleased with the progress and prospects to date.

John Aikman was pleased to report that membership figures have reached an all-time high - 800! John attributes the membership figure to the quality and regularity of the journal, *Pathways*, and the newsletter, as well as the membership fee and other benefits.

COEO will be co-publishing a paper with the University of Waterloo. A Study of Outdoor Education Centres in Ontario Board of Education, written by Michelle Richardson (a COEO member) and Dr. Paul

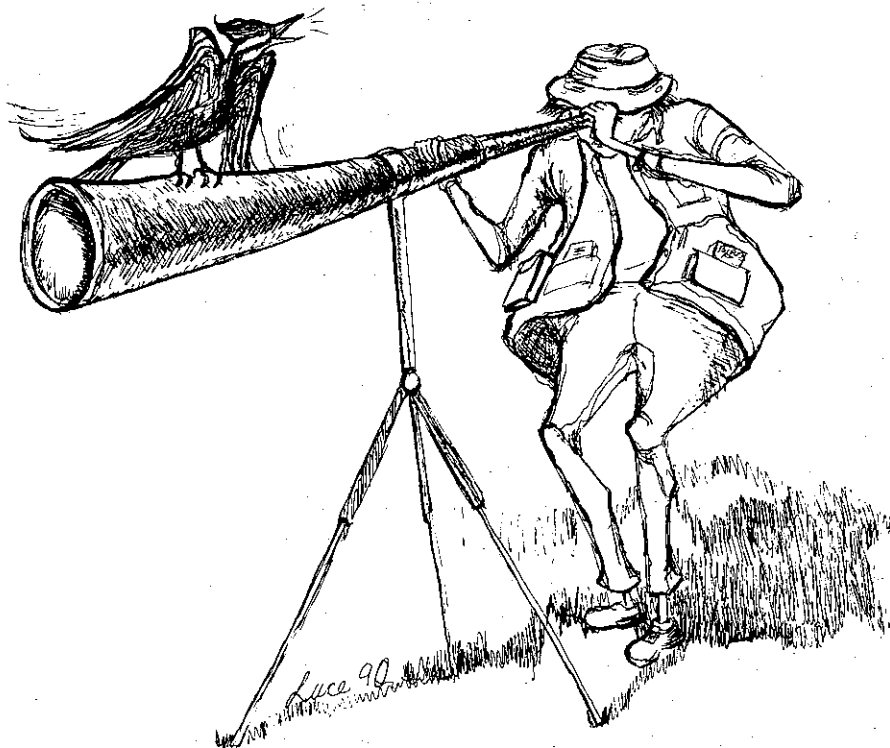
Eagles, will be printed within the next few weeks. It was felt that the paper would prove to be a valuable reference tool.

Earlier this year a new staff position was created in conjunction with the Ontario Ministry of Natural Resources. Allyson Kelly was hired on an Environmental Youth Corps Program as a teacher education technician. Working on behalf of the Ministry and COEO, Allyson's primary responsibilities include assisting in visitor services at the Leslie Frost Natural Resources Centre (from where she is stationed), mainly in the area of education and special

interest groups, including all COEO functions held at the Frost Centre; and working toward the completion of a revised catalogue of programs, personnel, sites and services in outdoor education in the province. Allyson's term with COEO and MNR expires the end of March, 1991.

Upon closing, let me wish everyone a very successful and rewarding school year. I hope to meet with many of you at the Fall '90 Conference!

Kathy Reid  
President



# Editor's Log Book

## Letters to the Editor

### June Issue disappoints

(Con't. Pg. 2)

The EDITOR,

The last issue of *Pathways* (June 1990) was a great disappointment.

Firstly, the advertising for the upcoming Fall Conference took up so much room and displaced much of the reading that readers have come to look forward to. Your subscribers pay a healthy fee (\$35) for the articles not for advertising. It would have been better to make a supplemental brochure with smaller type-face that would be inserted in the regular issue.

Secondly, the fee for the conference is outrageous and prohibiting. Other outdoor/environmental groups provide the same quality of conference for much less. For example, the Midwest Environmental Education Conference is \$126.50 U.S. with meals and lodging. That comes to about \$145.50 Canadian.

Despite these setbacks, I am renewing my membership for the upcoming year. As stated, the reading is something I look forward to. Sincerely,  
Sue Plankis  
Frankfort, Illinois, USA

### *Creativity Throughout*

We are, of course, now looking for someone who would be interested in spending some of their "free" time to take on the job of managing the advertising in the journal. We are also looking for people to help us with some of the collection and production of material. If you are interested, please contact Carina van Heyst, the Editor, at the address on page 2.

### Let the Membership be Heard

The Editor

Your editorial in the June 1990 issue of *Pathways* suggested that "the voice of the membership should be heard" regarding the involvement of COEO in the environmental arena. Mark Whitcombe responded to your invitation in the summer newsletter. His main point was that COEO is not an environmental organization and that COEO should concentrate on its main role which is to show leadership in promoting the use of the outdoors and of experiential education in the curriculum. If this is the will of the membership,

I have no problem with such an objective. However, I do have a problem with another statement Mark made: "Environmental organizations and environmental education organizations exist for those who wish to have a *narrower* outlook" (italics mine). In my view, if COEO divorces itself from environmental issues which do not affect its outdoor mandate, then COEO will be about as narrow as an organization can get. What COEO now does is just a small part of what needs to be done to ensure that the children we teach will have a decent environment in the future.

Bill Andrews

**ATTENTION MEMBERS!**  
*Unless you have renewed your membership, this will be your last issue of Pathways. Members who have not renewed will find their membership number highlighted on their mailing label. Membership forms can be found on the inside back cover.*



# Quest for Cavities: A Hole-istic Simulation Game

By Mark Stabb

*As a biologist, I love to see disorder in the forest. By that I mean natural disorder and biological diversity. Old stumps, trunks, dead trees and tree cavities are structural features that help maintain forest ecosystems.*

*Tree holes, or cavities, are valuable homes for animals, and I'm an unabashed cavity crusader. While studying the nesting sites of the rare southern flying squirrel, I became sensitized to the wildlife community that inhabits tree cavities, and their interrelationships. While working on MNR's Community Wildlife Involvement Program (CWIP) I also became involved in the creation of a few artificial nesting cavities.*

*Thousands of nest boxes for cavity-nesting wildlife adorn the Ontario landscape courtesy of students and other volunteers. Bluebirds, wood ducks and purple martins have had the most attention. Nest box projects are diversifying, while others are expanding to accommodate the entire cavity-nesting wildlife community, rather than single species.*

*With all this interest in "bird houses", I saw the need to help students understand cavity-nesting wildlife — the ecology of dead trees, and the interactions, competition and commensalism of cavity-using wildlife.*

*Being a closet interpretive naturalist (and Project WILD leader to boot), I also saw in tree cavities a microcosm of ecological relationships ripe for interpretation.*

*The popular game Musical Chairs engages children in a mild competition for a limited resource that dwindles over time. This classroom favourite was easily adapted into "Quest for Cavities", with cavities as the limited resource and students taking on the roles of cavity creators or cavity users.*

*The following write-up parallels the outlines of Project WILD activities. Since this activity is still evolving, teachers may find holes in the outline which will have to be patched up. I welcome your comments.*

## Quest for Cavities

### Background

Holes in trees are used by wildlife for nesting, resting, roosting, food storage, raising of young, protections from weather and other purposes. Almost 50 species of wildlife use tree cavities in Ontario (see sidebar).

You will find cavities wherever trees exist. They are formed by decay in



# Home Sweet Hole

## Some Cavity-Using Wildlife of Ontario\*

### Cavity-Nesting Birds

#### Primary Excavators

Pileated woodpecker  
Common flicker  
Red-bellied woodpecker  
Red-headed woodpecker  
Yellow-bellied sapsucker  
Hairy woodpecker  
Downy woodpecker  
Black-backed woodpecker  
Three-toed woodpecker  
Black-capped chickadee  
Boreal chickadee  
Red-breasted nuthatch

#### Secondary cavity-nesters

Wood duck  
Common goldeneye  
Bufflehead  
Common merganser  
Hooded merganser  
American kestrel  
Barn owl  
Eastern screech owl  
Northern hawk owl  
Barred owl  
Boreal owl  
Saw-whet owl  
Chimney swift  
Tree swallow  
Purple martin  
Tufted titmouse  
White-breasted nuthatch  
Brown creeper  
House wren  
Carolina wren  
Eastern bluebird  
European starling  
Prothonotary warbler  
House sparrow

### Cavity-denning Mammals

Fox squirrel  
Eastern grey squirrel  
Red squirrel  
Little brown bat  
Northern flying squirrel  
Southern flying squirrel  
Raccoon  
Marten

\*This is not an exhaustive list and does not include users of downed logs.

trunks and broken branches or created by *primary excavators* such as woodpeckers. Birds may make new holes each year or use the same hole year after year. When holes or habitat become unsuitable they are abandoned; *secondary cavity-nesters* such as bluebirds, tree swallows and squirrels then move in.

Cavity-nesters obtain benefits that open-nesters do not have: protection from inclement weather and predators, and a moderated microclimate for raising young. Populations of cavity-nesters interact and are limited by the number of available and appropriate nest sites.

*Commensalism* describes when secondary cavity-nesters use old woodpecker holes. *Competition* occurs when cavity-nesters seek out similar sites for nesting.

Although trees regularly decay, die and fall in a forest, tree cavities can be scarce in many Ontario habitats. Dead trees are cut down for firewood or safety reasons; live trees with wounds or diseases are culled; or human encroachment limits available habitat. The number of available cavities is reduced, as is the number of cavity-nesters.

Protection of dead stems (also snags or chicots) and other cavity-producing trees is the first priority in conserving cavity-nesters. Nest boxes are another tool.

Nest boxes are used by most secondary cavity-nesters, and even by some woodpeckers. Biologists with architectural instincts have designed boxes for everything from flying squirrels to screech owls.

This activity is designed to introduce commensalism and competition, and the idea of cavities as one limiting factor in wildlife populations. It is an ideal activity if your class is planning or is involved in a nest box building project.

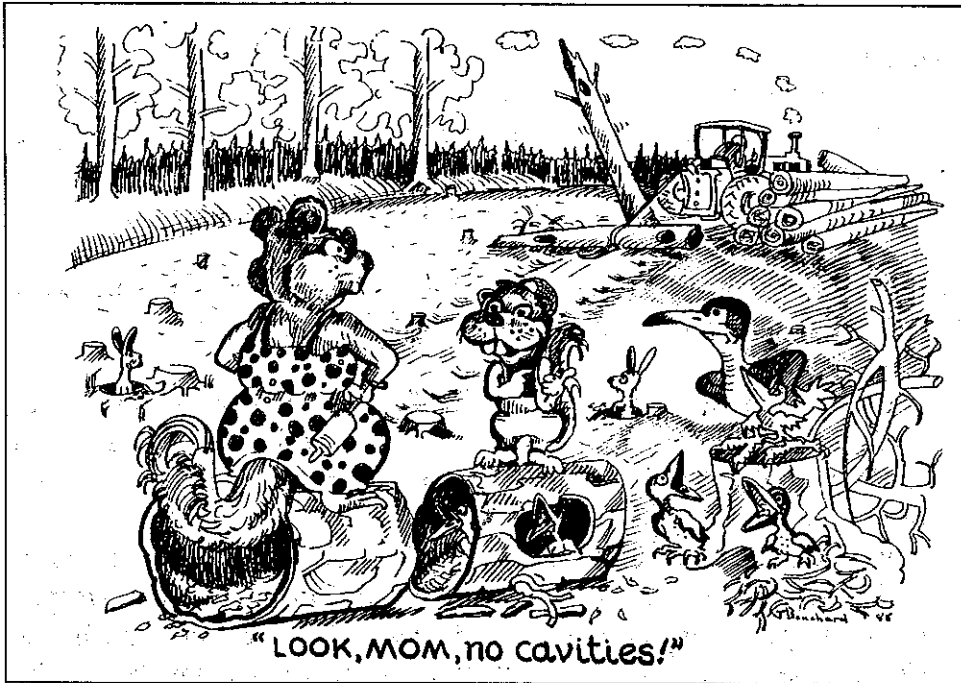
[Note: the Project WILD activity "Good Buddies is a good lead-in to "Quest for Cavities". This activity deals with species relationships, mutualism, commensalism, parasitism, and symbiosis. Unfortunately, competition as a concept is barely discussed by Project WILD. Wildlife shelter is also covered in "Everybody needs a home" and "My kingdom for a shelter".]

### Objectives

Students will be able to

1. Identify wildlife species that nest in tree cavities and describe how they interact in their quest for nest sites.
2. Distinguish between primary excavators and secondary users of cavities.
3. Describe commensalism and competition.
4. Identify how nest boxes contribute to the cavity-nesting community.





## Method

In an adaptation of musical chairs, students become cavity-nesting wildlife species which interact and compete for nesting sites.

Age Grades 4 - 8

Group Size 15 or more

Setting Indoors

## Vocabulary

Cavity-nesters, primary excavators, secondary users, commensalism, competition, limiting factor, nest box, conservation, interaction.

## Materials

Chair for each student

Area large enough for class to play musical chairs

Nest boxes or nest box models (e.g. shoe or tissue boxes)

Tape player or other source of music (e.g. vocal chords)

Yellow sticky note pads (I recommend these because this game is a reusable outlet for these environmentally-unsavoury items)

Cardboard to create wildlife cards

## Hole Sizes

Entrance hole diameters for some Ontario cavity-nesters. Some figures represent minimum hole sizes. Measurements are in centimeters with inches in parentheses.

House wren	2.5 (1)
Black-capped chickadee	3.1 (1.25)
Nuthatch	3.1 (1.25)
Downy woodpecker	3.1 (1.25)
Eastern bluebird	3.8 (1.5)
Tree swallow	3.8 (1.5)
House sparrow	3.8 (1.5)
Yellow-bellied sapsucker	3.8 (1.5)
Southern flying squirrel	3.8 (1.5)
Red-headed woodpecker	4.4 (1.75)
Northern flying squirrel	4.4 (1.75)
Hairy woodpecker	5.0 (2.0)
Great crested flycatcher	5.0 (2.0)
Starling	5.0 (2.0)
Purple martin	5.0 (2.0)
Common flicker	6.3 (2.5)
Bufflehead	6.3 (2.5)
Saw-whet owl	6.2 (2.5)
Screech owl	7.5 (3.0)
Kestrel	7.5 (3.0)
Gray squirrel	7.5 (3.0)
Wood duck	7.5 x 10 (oval) (3x4)
Hooded merganser	7.5 x 10 (oval) (3x4)
Common goldeneye	7.5 x 10 (oval) (3x4)
Pileated woodpecker	8.9 (3.5)

# Home Sweet Hole



## Duck Nesting Box Survey

*Nesting boxes have been used, in recent years, to provide sites to animals that have been the victims of habitat loss. Animals that use nesting boxes would, in natural situations, nest in snags that have had cavities develop as a result of decay and/or excavation by other animals.*

*A present study being done by the Long Point Bird Observatory and the Ontario Ministry of Natural Resources is looking to find out the degree to which cavity-nesting ducks benefit. A survey is being sent out to all of MNR's Community Wildlife Involvement Program (CWIP) participants and to as many naturalist groups, hunting clubs, and groups such as Ducks Unlimited to get as much information on duck nest box usage as possible.*

*If you would like to participate in the survey or simply would like to have more information on the Duck Nesting Box Survey project, then contact Rosa Riihimaki at: Wildlife Branch, Room 4620, Whitney Block, Queen's Park, Toronto, Ontario, M7A 1W3, or phone (416) 965-4252. Everyone is welcome to participate.*

## Procedure

1. Introduce students to wildlife habitat and to wildlife use of trees. Have students research animals which use tree cavities. Photos or a hike may be used to study forests, trees and cavities.
2. Arrange chairs in two rows, back to back.
3. *Round 1*  
Have students do a rectangular round of "musical chairs". Discuss what happens in the initial competition (first one there gets the chair, mild aggression).
4. Students become cavity-nesting wildlife and the chairs become trees (chairy trees?). Each student receives a circular card with the name of a wildlife species and its requirements for a nest-hole opening (e.g. blue-bird, 3.8 cm).  
Ideally, the students can create the cards themselves. Use different colours to distinguish between excavators and secondary-users. Use diameters that correspond with the general hole sizes preferred by the animals (see sidebar). Keep the ratio of excavators to secondary users low (e.g. 1:10).  
The teacher places a few natural cavity "holes" on the chairs. These represent cavities caused by decay or injury to the tree.
5. *Round 2*  
Conduct another round, this time of "Quest for Cavities". Woodpeckers and any other cavity excavators (e.g. black-capped chickadees) may sit on any chair as they can make their own hole.  
Secondary users must find a chair with a suitable hole. To sit down, the hole card on the chair must be of equal or greater diameter than the required size on their wildlife card.
6. After the round as students to raise hands to indicate successful excavators or secondary users. Note that some players will not find a suitable hole, because of the scarcity of nest sites or a lack of suitable hole sizes. All woodpeckers should "survive".  
Discuss strategies and interactions (e.g. first-come, first-served, knowing location of available holes, guarding holes, aggression). Note that most aggression in cavity-nesters is bluff rather than outright attacks. Note that most secondary users *need* woodpeckers and other primary excavators to create holes for them.  
Place hole cards which match diameters of excavators on their chairs. These holes are now available to secondary users in the next round.
7. *Round 3*  
Include all students as if it were another breeding season. Additional holes may be created by the teacher to simulate natural cavities. Note that more

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## Home Sweet Hole

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secondary users can be accommodated at the end of this round, due to woodpecker hole from the previous round.

### 8. Round 4

Eliminate some chair-trees to represent losses to windstorms, firewood cutting or clear cutting. Some hole cards can be removed from other chairs to represent decayed cavities or holes filling with water.

### 9. Round 5

Holes and trees can be removed again, but "nest boxes" may be added to some chairs. As before, hole sizes must match the diameter of the wildlife card.

### 10. Follow-up

- a. Have students read their cards and explain if they are excavators or secondary users.
- b. Describe or summarize dependencies or competitive interactions between species.
- c. Discuss what happens in the wild when a small animal uses a cavity suitable for a larger animal. In nature, aggression can occur, with larger animals excluding smaller from their cavities.
- d. Discuss the other variables that may affect the use of a tree hole (or nest box). These factors include territoriality, habitat, cavity characteristics such as depth, cavity area and state of decay.

### Extensions

1. Try a sophisticated version of "Quest for Cavities" involving detailed life history information. Some woodpeckers (e.g. yellow-bellied sapsuckers) will create a new hole but in the same tree year after year. House wrens may peck the eggs of other birds within their territories. Pileated woodpeckers favour interior forest sites, while red-headed woodpeckers prefer more open, edge-type habitats.
2. Try the activity using only those species found in your geographical area.
3. Try using a tape recording of woodpeckers as the musical chairs tune.
4. Throw in twists. Predators like weasels and raccoons attack cavities. Give one student the name of an open-nesting bird on a nest-shaped card larger than all cavity sizes. This will emphasize that not all species are adapted to hole-nesting. Discuss obligate relationships by keeping larger excavators (e.g. pileated woodpeckers) out of the activity and then monitoring the success of large ducks. Bring in starlings and house sparrows late in the game and describe them as introduced species with aggressive behaviour.
5. Integrate reproduction into the activity by giving some students initial species-roles to play, with the remainder becoming the offspring of suc-

*Note: I wrote a board game version of "Quest for Cavities" for Home Sweet Hole, a family supplement to the Federation of Ontario Naturalists' Seasons magazine. Copies are available from the Extension Development Section of Wildlife Branch of the Ministry of Natural Resources, Room 4620, Whitney Block, Queen's Park, 99 Wellestley Street West, Toronto, M7A*

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## Home Sweet Hole

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successful nesters in the next round. This provides a good opportunity to observe the direct impact of limited resources — many “offspring” will not survive.

6. Take a hike in a nearby forest or to an existing nest box project to examine closely the trees and cavities.
7. Tackle a nest box project of your own.

### Conclusion

A simulation game is inherently simplistic. It is hoped that this activity will at least encourage interest in the ecology of cavity-nesters in the classroom. My thanks to Dave Hawke, Frank Glew and others who helped review or test drive this activity. These include teachers and MNR staff at COEO, Project WILD and National Wildlife Week workshops, assorted school classes, and members of the Ontario Eastern Bluebird Society.

If you wish to critique this activity, I would be pleased to hear from you. Write me directly c/o MNR Maple District, Box 7400, 10401 Dufferin Street, Maple, Ontario, M6A 1S9.



### Report on the Boyne Week Environmental Action Conference, May 11, 1990

By Bill Celhoffer and John Fallis

In the November, 1989 issue of *Pathways*, we reported on a new one-week program at the Boyne River Natural Science School focusing on "student action on environmental issues". At the conclusion of that program, last October, it was understood that a student conference would be held in Toronto in the spring and the goals of the conference would be:

1. to give the students who participated last fall an opportunity to report on their environmental action program to their peers from other schools;
2. to provide feedback to the Boyne staff on the success of the fall program in meeting its objective of teaching environmental action skills;
3. to provide the conference-goers with a preliminary indication of what kinds of programs are successful;
4. to give students an opportunity to provide input on the planning of the revised Boyne Week program next fall.

The one-day conference did occur on May 11, 1990 at Wilkinson Public School (vacant that

day because of a P.D. Day). Of the original 80 students from Boyne in October, about 50 returned in May for the conference. In addition, there were about 100 conference participants from ten "new" high schools.

We feel it is necessary to stress that we are involved in a pilot program which is open to revision at all stages. After all, learning to plan and organize environmental action programs is a new "subject" for high school students...and for high school teachers too!

The conference planning process was centred in a Steering Committee consisting of a Boyne staff member and two or three students from each of the five high school involved. The Boyne staff member maintained contact with Toronto Board consultants and Boyne administration. Through a series of meetings between October 1989 and April 1990, it was decided that the staff would take care of the logistics, and that the conference itself would be primarily student-led.

#### So, What Happened on Conference Day?

8:00 - 9:00 a.m. Boyne staff, consultants and student facilitators rushed around posting direction signs on exterior and interior doors so that attendees could find us within the complex halls of the vacant elementary school, and

organized the snack food, including doughnuts from the corner shop delivered on foot without packaging.

9:00 - 11:00 a.m. The students were welcomed to their conference and after brief introductions, they immediately started a rotation, visiting four school presentations in order to learn what each had done since October. School 1 had improved its school recycling, and expanded awareness in the local community. School 2 had produced a video on pollution, completed a study on a local creek, and improved their school's recycling. School 3 had representatives go to Temagami to demonstrate, and described ongoing fundraising for environmental causes. School 4 had started a "Future of the Earth" Club, they planned and were involved in Earth Day activities, and they were selling "Planet in Every Classroom: posters.

All groups gave reasons for their successes and their failures. Overall, the presentations were very good.

11:00 - 11:45 a.m. "Litter-free" lunch and then an after-dinner speaker, Mr. Marty Smith from Greenpeace, who spoke eloquently both on practical matters like getting media attention for your environmental action, and on the

*(Continued Page 17)*

# Tracking

## Workshops, Conferences and Other Events

### New York Outdoor Educators' Conference

October 11 - 14, 1990 finds members of the New York State Outdoor Education Association at their annual conference, this year entitled: "A New Environmental Decade: The Outdoor Education Connection". The conference is held in the Catskill Mountains and will focus on the following: environmental education curriculum challenges in New York State, model environmental curriculum programs and activities, the education of an environmentally literate and aware citizenry, exploration of the professional role in meeting the diverse outdoor education demands in the upcoming decade, and enhancement of the skills of interpreters, environmental educators, and administrators of outdoor organizations. For information about the fall conference, write to:

The New York State Outdoor Education Association, Inc.  
P.O. Box 71  
Raquette Lake, New York  
13436  
U.S.A.

### Protecting the Environment — Preparing for Tomorrow:

### World Environment Energy and Economic Conference

With a theme of "Sustainable development strategies...the New

12 *Pathways*

World agenda", the conference of the Science Teachers Association of Manitoba hopes to provide participants with over 200 sessions from which to choose. Here is the opportunity to examine and discuss the links that must be made to integrate environmental concerns with continued development on the energy, resource, and economic fronts of Canada and the world. A special attempt is being made to address the role that curriculum, teachers, and schools play in helping students understand the environmental realities at the base of sustainable development. With a pre-conference "International Symposium of Sustainable Development" (Oct. 15 - 17, 1990), the conference itself (Oct. 17 - 20), and then a post-conference Youth Program including an International Science Olympics (Oct., 19 - 21), the week promises to be a busy and informative one in Winnipeg. For details, write:

Mr. Evhan Uzwyshyn  
Conference Executive Officer  
Manitoba Education and Training  
Rm. 409 - 1181 Portage Avenue  
Winnipeg, Manitoba  
R3G 0T3

### Up-date on "Enviro-dial"

As mentioned in the summer newsletter, the Enviro-dial costs \$2.00 and is available from:

Ontario Waste Management  
Corporation  
2 Bloor Street West, 11th Floor  
Toronto, Ontario  
M4W 3E2

### Canadian Crossroads International

Canadian Crossroads International, a charitable organization promoting international development and education in Canada and overseas, is seeking 170 Canadian volunteers for placement lengths varying from four months to one year. Volunteers could be placed in one of thirty-six Third World countries. Applicants require cultural sensitivity, adaptability and commitment to promoting international awareness. The minimum age is 19, and their oldest volunteer is 73. Specialized skills are not essential as volunteers receive extensive training. A living allowance, airfare and accommodation are provided. Each participant must raise \$2000 as part of the program costs. The deadline for applications in most areas is September 25, 1990. For more information, contact

National Office  
Canadian Crossroads International  
31 Madison Avenue  
Toronto, Ontario  
M5R 2S2  
(416) 967-0801  
FAX (416) 967-9078

## The Sixth International Earth Education Conference

The Institute for Earth Education is holding its Sixth International Conference at Star Lake in the Adirondack Mountains of north New York. The conference will bring together people from around the world to experience earth education programs, learn how to create their own earth education programs, and be a part of this innovative educational strategy for helping people live more harmoniously and joyously with the natural world. This conference will provide an opportunity to experience first-hand the earth education programs Earthkeepers, Earth Caretakers and the new junior high program, Sunship III. For registration and program information, write to:

The Institute for Earth Education  
Box 288  
Warrenville, Illinois  
60555  
U.S.A.

### Connections...

Those of you who would like your program or site included in COEO's new 1991 Catalogue of Sites, Services, Programs and Personnel, please contact Allyson Kelly at the Leslie M. Frost Natural Resources Centre.

We would appreciate the name of your site, address, tele-

October, 1990

phone number and fax, the contact person, a description of the facilities and site of program and specific activities are offered as well as the languages in which your program is available.

Any new ideas or suggestions for improvement are welcome as well. To discuss the details of your program please call Allyson at the

Leslie M. Frost Centre,  
Dorset, Ontario, P0A 1E0.  
Telephone: (705) 766-245,  
Fax: (705) 766-96877.

### Position Available:

Scientist/Science Instructor required to design and co-teach a summer field studies program for 12 high school students.

Curriculum will include environmental science, issues and ethics, as well as language arts and outdoor living. Canoe tripping experience is essential.

The program will be based in southern Ontario and the Temagami area. Good Salary.

Send letter of application and resumé or call Mary Jeanne Barrett for further information: R.R. 1, Orangeville, Ontario L9W 2Y8 (519) 942-0075 (evenings).

### Recycling Week 90

November 19 - 25 is Recycling Week '90. The recycling council of Ontario is hoping that local

groups will help communities across Ontario to teach the three Rs (Reduce, Reuse, Recycle). Many activities are scheduled across the province. Find out what is happening in your community. If you would like more information, contact the Recycling Council of Ontario at:

489 College Street,  
Suite 504  
Toronto, Ontario  
M6G 1A5  
(416) 960-1025  
1-800-263-2849



# On The Land

## Environmental Update

W.A. Andrews

Environmental Consultant/Writer

The first two items in this column were contributed by Dennis Hitchmough.

### Groundwater Contamination

Much of the earth's surface is covered by water. Unfortunately, most of this water is in a form that we cannot drink. Less than 0.02% of the water available for life processes is fresh. Considering the vital role water plays in our lives, why do we continue to use it as a waste disposal system?

The amount and type of materials we knowingly place in our drinking water is staggering. Most of these contaminants can be identified and we certainly have read a great deal about the sources.

A geology professor at the University of Toronto's Scarborough College has begun to formally investigate the potential problems of road de-icing chemicals. Professor Ken Howard suspects that a large portion of the chemicals used each year is being stored in the ground and is not finding its way to our lakes and streams. He feels that these chemicals will slowly move into our drinking water over the next 30 to 50 years and cause widespread pollution of water sources. The reservoir effect played by the ground will make it difficult, if not

possible, to clean this water.

### Air Quality Control

Many of the items we use in our everyday lives give off chemicals that are hazardous to our health. Presswood has always been known as a source of formaldehyde. Many people these days are being treated for a host of new ailments caused by airborne contaminants from common household possessions.

Recent research has proven what our grandparents have known for years. Plants make you feel better. Spider plants (*Chlorophytum* sp.) remove formaldehyde from the air while *Peperomia* and English Ivy (*Hedera* sp.) act as universal air filters dealing with a variety of gases. Finding "natural" solutions to today's problems can usually give more complete answers, answers that are aesthetically, spiritually, and physically better.

**Tip:** Plants, although useful, can also become sick. When your household plants become infested with mites or other insects, don't spray them with chemicals. Blend 200 ml of water with half a large onion. To this mixture, add a tablespoon of Tabasco sauce. Filter the resulting mixture and use a sprayer to coat your infected plants with the filter once a week for four weeks. No more pests!

### Smoking Causes Cancer of the Land

Producers of tobacco in Third World countries use the wood from a hectare of forest to cure the tobacco they harvest from a hectare of land. (A football field is about half a hectare in area.) Stated another way, an entire mature tree must be burned to cure the tobacco that is used to make 300 cigarettes. At this rate, a two-pack a day smoker is responsible for the destruction of about one tree a week! One billion smokers (assuming that one in five people on earth smoke) would destroy over 50 billion trees a year! It is easy to understand why foresters are concerned about the accelerating deforestation caused by tobacco growers. Even in heavily forested countries like Brazil, tobacco growers are rapidly exhausting accessible firewood supplies.

Though many industrialized countries use fossil fuels to provide the heat for curing, Third World producers have no readily available and economically feasible energy supply other than wood. Hence deforestation will continue as long as the demand for tobacco exists. With this in mind, one forestry expert in Nigeria suggests that warning notices on cigarette packages should be changed to read: "Smoking causes cancer of the lungs - and of the land."



### How Green are "Green" Products?

Volume 20, 1990, of *Canadian Consumer* contains an excellent article that you should read regarding the sudden profusion of so-called "green" or "environmentally friendly" products. The central message of the article is that, before you buy a "green" product, you think carefully about where it came from, what was used to make it, what will happen to it after you use it, and what alternatives exist.

Terms like "phosphate-free", "ozone friendly", and "green" provide very little information. Quite frankly, big business is out there to make money, and labels like these sell products today. But the label "green" on a battery may simply mean that it does not contain the usual contaminant, mercury. However, in the place of mercury the battery may contain other hazardous substances like cadmium or chromium.

Experts quoted in the article suggest that there is no such thing as an environmentally friendly consumer. Every product you buy has an environmental cost. Therefore, before you buy "green", buy less and think carefully about your purchase. Chlorine-free coffee filters are labelled "green", and they may well be better for the environment than those which are bleached with chlorine. However, a reusable filter produces no waste

and is likely a much better choice.

"Green" products are capturing an ever-increasing share of the market. The reason for this is that the purchasing of these products enables consumers to take a step toward environmental protection without making dramatic changes in their lifestyles. However, the steps taken are too small to make

much of a difference in the overall picture. If we want to make a long term difference, we have to question interim steps such as the recycling of disposable diapers, the use of throwaway plastic pouches to refill detergent bottles, and the use of "green" fertilizers on lawns.

## MAKE PEACE WITH WINTER

Adult Conference

**FEBRUARY 1 - 3, 1991**

**LESLIE M. FROST NATURAL RESOURCES CENTRE**

Dorset, Ontario

**\$150.<sup>00</sup>**

*Sessions may Include:*

Skiing Sports Recycling Sketching Natural Science  
Conservation Language Arts Curriculum Music  
Drama Resources Orienteering Photography Trapping  
Equipment Animal Habitat Astronomy

The cost includes accommodation, meals, snacks, entertainment,  
wine and cheese, and conference sessions



*Watch for registration forms in the next Pathways!*

# Explorations

## Reflections on Current Research

### Motion and Emotion in Environmental Education

By Bert Horwood

It always struck me that motion, emotion and motive were so similar as words yet treated so differently in teaching. Motion, or action, is the desired response of pupils to teachers' instructions. Motive, or more commonly motivation, is what teachers must provide to get students into motion. And emotion is pretty much a no-no, at least as far as the curriculum is concerned. Therefore, a research report by Louis A. Iozzi connecting the affective domain to environmental education deserves attention.

The words "affective domain" signal that Benjamin Bloom's model of curriculum objectives is in use. In some respects the model is stale, but for our purposes we can take it that emotions, feelings, attitudes, values and the like are involved. It is also assumed that these mental events are learned separately from physical skills (psychomotor domain) and from knowledge such as facts, concepts and relationships (cognitive domain). Iozzi's contribution, based on this three-part separation of learning and teaching, ironically argues that integration is necessary.

Iozzi and his colleagues reviewed the research in environmental education over the period 1971 to 1981 and found that over half the investigations dealt with the affective domain. By contrast, in other subjects most research dealt with the cognitive domain.

In examining those research reports, as well as more recent ones, Iozzi found that the separation of education into three domains was artificial, yet a needed convenience to make complex problems manageable. The failure to deal with problems as wholes, plus the tendency for research design to not support valid interpretations, yields a body of research of questionable value.

With a critical point of view then, Iozzi reports eight major ideas emerging from the research literature:

1. Environmental education can teach positive environmental values, but it is not easy and stringent conditions must be met. Those conditions include things like deliberate and sustained work with students' feelings. Conventionally difficult topics like values must be discussed among students in real contexts and over significant time periods.
2. The relationship between environmental knowledge and positive environmental attitudes is not clear. The research is mixed. Some work shows that people feel better toward the

environment after gaining more knowledge. And other work shows that attitudes are stubbornly resistant to change even under seemingly ideal conditions. In such investigations, increasing knowledge was not related to more positive attitudes.

3. Positive environmental feelings are long-lasting. Long-term investigations are rare. The few that have been done suggest that once positive feelings about the environment are learned, they stick.
4. Successful development of positive environmental values begins in pre-school and is reinforced and continued throughout formal schooling. The research showed the ability of young children to form values and to tend to retain them. It also showed that the attitudes of grade eight pupils were not much different from those of adults.
5. There is conflicting and inconclusive information relating environmental attitudes and social factors like age, sex and social status. You can find a study to support almost any position you might choose. For example, there are findings to show that females are more environmentally-oriented than males and other findings to show that there is no difference. These are not very useful lines of inquiry, I think.

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## Reflections on Current Research

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6. Outdoor education is an effective way to develop positive environmental attitudes. Various outdoor activities including camping and acclimatization experiences develop improved feelings.
7. A variety of teaching methods can be effective in promoting affective aspects of environmental education. Effectiveness was found with methods like "inquiry", "guided discovery", peer-teaching, simulations and integrated programs.
8. The media are powerful influences on environmental values. Film, television and books have been specifically identified as important.

Iozzi's summary of research has some interesting and encouraging ideas for outdoor educators with environmental goals. The lack of certainty in the body of research indicates that better investigations are needed, including entirely different approaches to the complex and difficult questions involved. He makes a number of teaching suggestions to promote learning in the affective domain, but these are based largely on discredited models, and are already well-known to Ontario teachers. It is clear that we need more motion and emotion to make a difference.

### Source

Iozzi, L., 1989. What research says to the educator. Environmental education and the affective domain. Parts one and two. Journal of Environmental Education 20

(3 and 4) 3 - 9, 6 - 13.

*Bert Horwood teaches graduate courses in Outdoor and Experiential Education at Queen's University.*

### In The Field (continued from Page 11)

personal philosophical and spiritual motivation underlying long-term commitment to environmental protection and restoration.

1:00 - 3:00 p.m. Students chose one of the six focus groups, each led by student facilitators, and participated in brainstorming and discussions with the goal of generating recommendations to the group as a whole on their topic.

3:00 - 3:30 p.m. Student representatives from each group reported their recommendations to the assembled conference-goers. Closing remarks focused on the need to recognize the ability and knowledge within us all to go ahead with the kinds of environment-restoring efforts we know are needed.

### Prognosis for the Boyne Environmental Action Program

The fundamental question is: "Can environmental activism be taught in school?" The answer is definitely YES, but we at the Boyne have learned much through the first year of piloting the Envi-

ronmental Action Week and the follow-up conference. We are now cognizant of the need for more emphasis on cooperation-building activities which all groups need in order to effectively define and pursue their goals in a democratic way. We have gained experience in dealing with the difficulties that arise when attempting to effect change in indifferent or even hostile institutions. And we recognize the need for committed and organized "mentors", teachers to whom the students can go with their technical problems, or just for support when their frustrations are looming too large.

We are very confident that this program, with its built-in cycle of revision, with experienced students coming back to share their knowledge and their leadership abilities, and with committed mentors to back them up, will generate the kind of self-starting environmental activists that our planet needs.

*John Fallis is Vice-Principal at the Boyne River Natural Science School and Bill Celhoffer is a teacher there.*



PROFESSIONAL DEVELOPMENT  
GRADUATE COURSE IN OUTDOOR EDUCATION

CIOE 500:

PRINCIPLES AND CONCEPTS OF OUTDOOR EDUCATION

INSTRUCTOR - Dr. Bud Wiener

Saturday and Sunday,	September 22-23, 1990,	9:00 - 4:00
Saturday and Sunday,	October 13-14,	9:00 - 4:00
Saturday and Sunday,	October 27-28	9:00 - 4:00
Saturday and Sunday,	November 17-18	9:00 - 4:00

Location: Toronto area (location to be announced) Fee: \$325.00

The course goals include:

1. Developing an understanding of the social, historical and psychological foundations of outdoor education.
2. Becoming familiar with the scope of present day outdoor education programmes, in Toronto and beyond.
3. Discovering resources and opportunities for teaching in various outdoor settings.
4. Developing competence in teaching outside the classroom.

The following content will be included:

1. History, meaning and scope of outdoor education.
2. Key terms and concepts and their interrelationships.
3. Organization and patterns of contemporary outdoor education programmes.
4. Teaching techniques and resources for teaching.
5. Principles of learning, and teaching processes relevant to outdoor education.
6. Trends and directions.

The course format includes discussion, lecture/presentations, individual and group projects and activities, reading and reporting, viewing media materials, (i.e., films, slides) and assignments.

In order to receive graduate credit, students must have been accepted by the Graduate School as either graduate students or students-at-large.

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Please enroll me in COURSE CIOE 500, PRINCIPLES AND CONCEPTS OF OUTDOOR EDUCATION, I enclose a deposit of \$50. (made out to COEO) to reserve a place.

NAME: \_\_\_\_\_ TELE.: h \_\_\_\_\_ w \_\_\_\_\_

ADDRESS: \_\_\_\_\_ POSTAL CODE: \_\_\_\_\_

Please return to: Mark Whitcombe, 34 Blind Line, Orangeville, L9W 3A5  
h.(519) 941-9966 messages (416) 465-4631

Plan to attend all sessions. Please be sure the weekend dates are open and that you have no conflicts before you register.

"The Ministry of Colleges and Universities does not endorse this programme of studies or certify that it meets Ontario University standards. The programme of study being offered in Ontario is equivalent to the programme being offered by the institution in its home jurisdiction. In addition, the Ministry of Colleges and Universities cannot guarantee that the degree will be recognized by Ontario Universities and employers." You are advised that the NIU programme is deemed "an approved Master's Degree in Education" for QECO Evaluation Programmes 3 and 4, and it is evaluated by QECO as "no less favourable but no more favourable than degrees taken from recognized Ontario Universities." Further you are advised that students from this programme have found Ontario Universities willing to accept equivalency when credits are being transferred to the Ontario University. Some Ontario Universities will only accept credits which they consider appropriate for the programme of studies undertaken at the Ontario University."

# Reading The Trail

## Contrapuntal Journeying

### **Summer North of Sixty** By Paddle and Portage across the Barrenlands

**James Raffan (1990)**  
Key Porter Books, Toronto  
\$25.00 (approx.)

I was fascinated to read this book written by a fellow COEO member. Jim Raffan relates events of a 1980 summer journey of six weeks and 700 km over two heights of land along the Burnside River in the Northwest Territories. Raffan travelled with five others, including various COEO members (see the accompanying reactions from Norm Frost and John Fallis.) In his preface, Raffan describes his account as the "transmutation of the physical journey into a journey of the imagination." Perhaps the heart of the book, the presentation of the primary theme, comes when they arrive at the confluence of the Burnside and the Mara Rivers. They had originally intended to use the Mara as a shortcut to the Burnside, but had had to abandon that choice when it became clear that the route might not be passable. Upon finally reaching the Mara, via the Burnside, they hiked into the hills surrounding the confluence. From this vantage point, many thoughts and ideas emerge as Raffan leads up to his concept of "nativity" — "belonging derived of the land."

"It is exciting to think that there might be a set of understandings derived from sustained encounter with the land ... a set of understandings that may well control behaviour with respect to the environment." (p187)

Raffan includes many beautifully written passages, powerfully conveying images — descriptions of sights, sounds and smells, as well as the attendant reactions and feelings. The characterizations of his fellow journeyers are tastefully done — treading that fine line of providing enough personal detail to flesh out what is really an introspective essay, and yet honouring valued friendships of those who have shared this experience. The theme of music pervades the whole book — which I gather was tentatively entitled "A Journey in Six-Eight Time" during the writing process. For Raffan, the influence of rhythm dominates — the "transcendental monotony of 32 strokes per minute that bonds us to this place and lifts into imagination the essence of these experiences", the rhythm of the heart and step during portaging, the daily rhythms of "camp, sleep, get up and repeat the cycle", and the many rhythms of nature — including caribou migrations, of the river and of time itself. I also see the musical metaphors of variation, counterpoint and fugue in the structure of the book, and moreover, in the experiences of the journey. Raffan interweaves related ideas to provide the sense of counterpoint —

different themes played alongside, providing harmony to each other. Themes I see include wilderness journeys as journeys of discovery; attachment to the land engendered by wilderness travel; acquaintance to place; belonging to various things, including to self, to each other, to group, to society and to the land; relationships — personal, social, and those with the land; and Raffan's theme of myth set to music. Raffan relates these themes to each other, harmonizing their close interconnections, variations and reiterations, just as the themes in a fugue are woven together and played with, gaining new strength in counterpoint. It is tempting to make more of these musical metaphors than really is there or was perhaps intended. They are, after all, only metaphors in my mind — relationships that tie the book and hence the journey together, giving it structure and integrity. Raffan strikes responsive chords by helping me to recall and interpret my own journeys in the wilderness. A momentary experience becomes filled with profound meanings. Quoting Glenn Gould (perhaps not incidentally one of the masters of contrapuntal music) Jim Raffan says by journeying he is striving "to encompass the universal within the particular." Raffan succeeds, putting down on paper experiences and thoughts which vicariously helped me to hear the harmonies of the land. Can we hear these too often? (Reviewed by Mark Whitcombe)

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## Arctic Album

( from the collection of Norm Frost )

I am most aware of civilization when  
immersed in tundra wilderness.

Wool hatted Inukshuk and nylon igloo  
silhouetted against a dark-clouded sky;  
The interface of cold and warm  
that coexist in the visual frame.

Eclectic mix are we who  
seek solace and refrain from  
hectic human places.

Baggage:  
Plastic and party hats;  
bean sprouts and rice;  
freeze-dried and gortex are  
Foreigners in this Land.

Disintegrating vapour trails in the sky  
mark a brief journey across this Land;  
That ship follows the jet stream  
As our canoe welcomes the river's current.

How abruptly the Hercules appears  
from an endless horizon;  
Bearing gold from Contwoyto Lake  
to furnish southern dividends.

But are we to complain who  
paddle oil drums from Beaufort's Sea;  
Who hire pontooned planes to get  
"in" or "out" of this once foreign land.

Pyramid of concrete so erect  
amid fireweed and uncommon furrows  
in The Land that has never seen the plow.  
And on the Plaque:

A Declaration to the commitment  
of the Combined Forces to overcome  
the unleashed fury of Nature and  
Recover the remnants of Cosmos 954.

Scattered like pepper across The Land.  
Lost in background radiation;  
it's parent Uranium to be mined again.

By now surrounding shrubs will obscure  
This Monument from all to see;  
Save feathered flyers who may drop  
remnants of another kind.

Holiday or get away, faces old and new;  
Like visitors in a foreign land,  
there are new languages to learn.

Some travellers Do the Arctic  
Like they might Do lunch;  
Can a photo capture fear, admiration,  
Or the smell of resting musk oxen;  
And waiting for a change in wind?

Inner conflict gives way  
When shared hardship endure;  
Individual response to collective needs  
And humour, the most effective release.

Journal journeys from ten years past;  
So clear in my mind these photos last.

*Norm Frost was with Jim Raffan on the trip described in the book.*

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## November's Book

by John Fallis

For me, "Summer North of Sixty" is a good November book. By November, the freedom and enjoyment of the summer are just soft-focus memories and next summer's travels are at the germination stage. I don't know where I am going next summer, but the next exploit is in my mind. I'm not ready to buy maps but I allow myself to spin the globe, both literally and figuratively. As a summer canoeist, the cycle for me starts and ends in November.

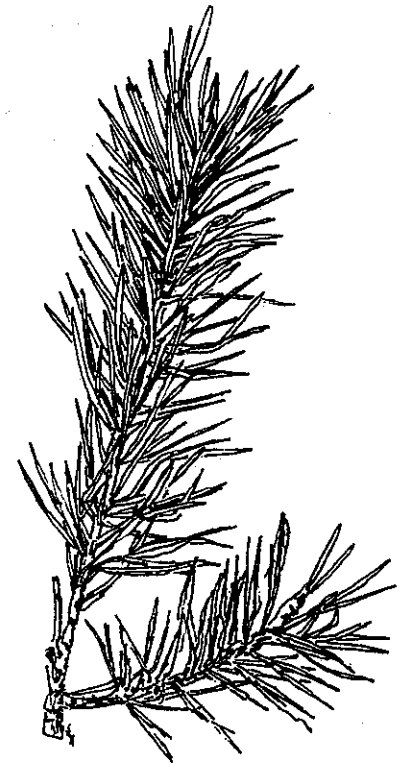
This book is a November book. (That's when it was signed in Seeley's Bay, 1989.) Who know's if the content is true, and who really cares? I have known James Raffan to lie and cheat a bit — just try playing cards with him, and whatever you do, don't lend him a paddle — you'll never see it again! The vehicle, the medium, the trip is non-fiction but the book is powerful musing. As a November book it completes the trip, but far more importantly it awakens the importance and relevance of many Novembers to come. For me, ten years after being on this trip with Raffan and others, this book is both a faded home-movie on jerky washed-out "super-8" as well as a catalyst for future journeys. The quotation from Harold Harwood's "White Eskimo" as noted in the preface of this book defines journey for me. "How can I tell you why I'm going? I could never tell you why. I suppose this new journey that I want to make is what the Eskimos call a journey in pursuit of itself — one that has no purpose, other in pursuit of it's own accomplishment. My whole life in some degree, has been such a journey."

The book wanders, but so did this canoe trip. At times Raffan goes into scientific detail about some biological community and at times we were into mindless work. At times he writes of a person's relationship to the land and at times we were on a lengthy directionless barrenland wandering. I never felt the prose was disjointed because that was the nature of this canoe trip. We never really knew what we would come to on our route and therefore I felt comfortable drifting off on some cerebral tangent as well.

To adventurers, this book may not have enough adventure. To people who wonder what this land was like 400 years ago and what it will be like in another 400 years, there is plenty of action.

I will read this book over and over again and I feel lucky to have a chronicle of our adventures and thoughts. To others it may not have the same impact but I doubt it. Humanity's relationship to the land transcends any six-week canoe trip and therein lies the relevance.

*John Fallis describes himself as a sometimes paddler who is still better at a cross-draw than an extended metaphor. He was with Jim Raffan on the trip described in the book.*





PROFESSIONAL DEVELOPMENT  
GRADUATE COURSE IN OUTDOOR EDUCATION

CIOE 524: TEACHING ENVIRONMENTAL ETHICS

INSTRUCTOR - Dr. CLIFF KNAPP

Saturday and Sunday,	OCTOBER 13-14, 1990,	9:00 - 4:00
Saturday and Sunday,	OCTOBER 27-28,	9:00 - 4:00
Saturday and Sunday,	NOVEMBER 17-18,	9:00 - 4:00
Saturday and Sunday,	DECEMBER 1-2,	9:00 - 4:00
Location: Ottawa area		Fee: \$325.00

Do you want to help your students think globally and act locally in dealing with environmental issues and values? This course is designed to provide teachers and other youth leaders with strategies for approaching the teaching of environmental ethics both indoors and outdoors. The course goals include the development of attitudes, skills, and knowledge necessary for implementing this important topic into camp, nature centre and school programme.

The following content will be included:

1. Defining key terms such as ethics, values, attitudes and moral education.
2. Various approaches to environmental values education.
3. Research findings in environmental ethics and values.
4. Teaching resources and model curricular programmes.
5. Environmental issues analysis and decision-making processes.
6. Developing activities and lessons for indoor and outdoor settings.
7. Expanding a personal environmental code of ethics.
8. Problems in implementing environmental ethics lessons.

Course activities include lectures, discussions, debates, role playing, films, slides, audio and video tapes, demonstrations, and large and small group projects. On the weekend of June 8-10, we will meet at Sheldon Centre for Outdoor Education near Alliston. There will be no formal programme on Friday night, but people are welcome to arrive after supper and stay over. We will begin promptly at 9:00 a.m. on Saturday and extend into the evening. Everyone is encouraged to be in residence. There will be a modest additional charge for room and board.

In order to receive graduate credit, students must have been accepted by the Graduate School as either graduate students or students-at-large.

Please enroll me in COURSE CIOE 524, TEACHING ENVIRONMENTAL ETHICS I enclose a deposit of \$50. (made out to COEO) to reserve a place.

NAME: \_\_\_\_\_ TELE.: h \_\_\_\_\_ w \_\_\_\_\_

ADDRESS: \_\_\_\_\_ POSTAL CODE: \_\_\_\_\_

Please return to: MacSkimming Science School, R.R. 2, 3635 Hwy. 17, Cumberland, Ontario K0A 1S0  
Attention: Rod Ferguson Phone: (613) 833-2080

Plan to attend all sessions. Please be sure the weekend dates are open and that you have no conflicts before you register. The "The Ministry of Colleges and Universities does not endorse this programme of studies or certify that it meets Ontario University standards. The programme of study being offered in Ontario is equivalent to the programme being offered by the institution in its home jurisdiction. In addition, the Ministry of Colleges and Universities cannot guarantee that the degree will be recognized by Ontario Universities and employers." You are advised that the NIU programme is deemed "an approved Master's Degree in Education" for QECO Evaluation Programmes 3 and 4, and it is evaluated by QECO as "no less favourable but no more favourable than degrees taken from recognized Ontario Universities." Further you are advised that students from this programme have found Ontario Universities willing to accept equivalency when credits are being transferred to the Ontario University. Some Ontario Universities will only accept credits which they consider appropriate for the programme of studies undertaken at the Ontario University."



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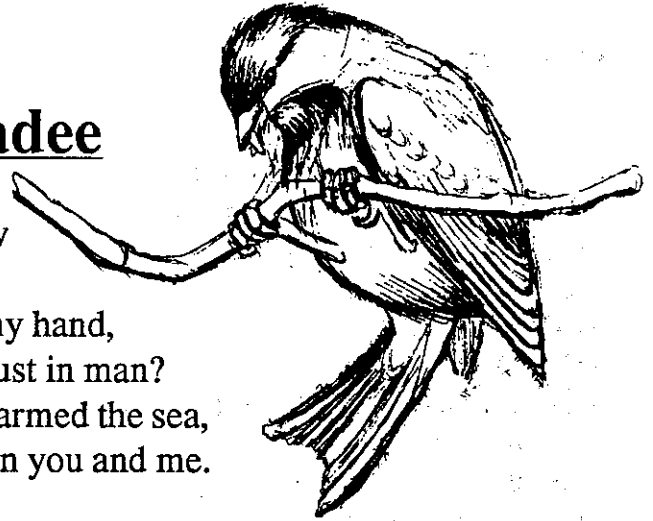
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# Prospect Point

Opinions, Letters, Reflections

## The Chickadee

by Frank Glew



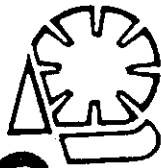
Little Chickadee in my hand,  
Why put you so much trust in man?  
We changed your air, we warmed the sea,  
Great distance grew between you and me.

It took a seed and looked for another,  
As if to say "Thank you brother,  
No matter if our time should fail.  
Gaia most surely will prevail"

She made you strong, she made you wise.  
But love and care you sacrificed.  
You took her crust, you prize her gold,  
But your own life, you bought and sold.

My trust in man is for the few,  
Who live by heart and true value.  
Oneness with earth must grow and thrive,  
Or the species man will not survive.

*Frank Glew enjoys the chickadees at Waterloo County Board of Education's outdoor education facilities.*



**COEO** COUNCIL OF OUTDOOR EDUCATORS OF ONTARIO

# Membership Application Form

Please print and send with remittance to the address below:

Name(Mr., Mrs. Ms) \_\_\_\_\_  
 Address (Street or R.R.) \_\_\_\_\_  
 City \_\_\_\_\_ Postal Code \_\_\_\_\_  
 Telephone (H) \_\_\_\_\_ (B) \_\_\_\_\_  
 Position \_\_\_\_\_ Employers \_\_\_\_\_

If applying for family membership, list persons who will be using the membership

\_\_\_\_\_

University/college if full time student \_\_\_\_\_

I am in the \_\_\_\_\_ Region of COEO

COEO membership is from September 1 to August 31. Any membership applications received after May 1 will be applied to the following year.

Please check:

New \_\_\_\_\_ Renewal \_\_\_\_\_ Mem# \_\_\_\_\_

Fees (circle)

regular: \$35, student: \$20; family: \$45  
 subscriptions:

(available to library / resource centres only) \$30

Make your cheque or money order payable to The Council of Outdoor Educators of Ontario and mail, with this form to:

**John Aikman**  
**Membership Secretary**  
 47 Rama Court  
 Hamilton, Ontario L8W 2B3

Far North:	Patricia, Kenora, Thunder Bay, Algoma, Cochrane, Sudbury, Rainy River, Timiskaming
Northern:	Parry Sound, Nipissing, Muskoka, Haliburton, North Bay, Simcoe County
Western:	Essex, Kent, Elgin, Lambton, Middlesex, Huron, Bruce, Grey, Dufferin, Wellington, Waterloo, Perth, Oxford, Brant, Haldimand-Norfolk
Central:	Niagara South, Lincoln, Hamilton - Wentworth, Halton, Peel, York, Ontario, Metro Toronto
Eastern:	Victoria, Durham, Peterborough, Northumberland, Hastings, Prince Edward, Lennox and Addington, Renfrew, Frontenac, Leeds, Grenville, Ottawa-Carleton, Lanark, Prescott, Russell, Stormont, Dundas, Glengarry
Out of Province	Any area in Canada except Ontario
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Please allow four weeks for processing or change of address.

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We ask that the product or service be:

1. valuable and useful to COEO members
2. quality people, equipment, resources or programs

SIZE	INSERTIONS				ISSUE	CLOSING	PUBLICATION
	1	2	3	4		DATE	DATE
full page	\$300	\$500	\$700	\$800	Sept/Oct.	Aug. 15	Sept. 30
1/2 page	200	300	400	500	Nov./Dec.	Oct. 15	Nov. 30
1/3 page	150	250	350	400	Jan/Feb	Dec. 15	Jan. 30
1/4 page	125	200	275	350	Mar./Apr.	Feb. 15	Mar. 30
					May/Jun	Apr. 15	May 30
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<b>COVERS</b>							
Front (inside)	400	700	900	1000			
Back (inside)	500	900	1200	1400			



Return to:

John Alkman  
Membership Secretary  
47 Rama Court  
HAMILTON, Ontario  
L8W 2B3

