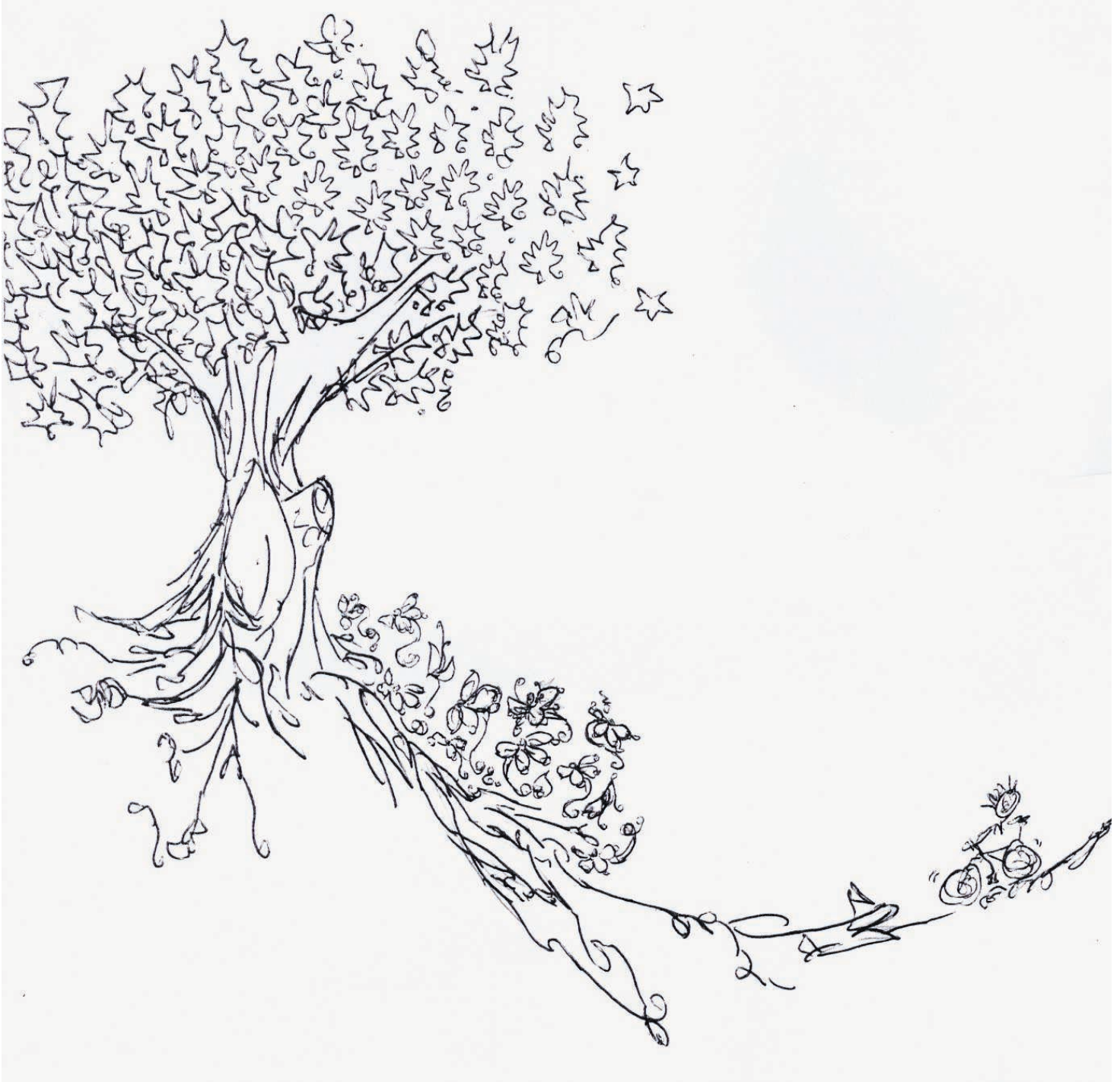
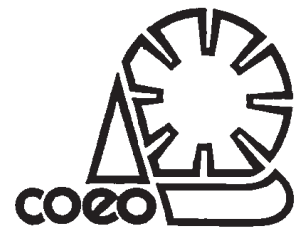


# Pathways

THE ONTARIO JOURNAL OF OUTDOOR EDUCATION  
Spring 2008, 20(3)



# Pathways

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## COEO

Formed in 1972, The Council of Outdoor Educators of Ontario (COEO) is a non-profit, volunteer-based organization that promotes safe, quality outdoor education experiences for people of all ages. This is achieved through publishing the *Pathways* journal, running an annual conference and regional workshops, maintaining a website, and working with kindred organizations as well as government agencies.

## Contributions Welcome

*Pathways* is always looking for contributions. If you are interested in making a submission, of either a written or illustrative nature, please refer to page 36 for the submission guidelines.

If you are interested in being a guest editor, or if you have any questions regarding *Pathways*, please direct them to Kathy Haras, Chair of the *Pathways* Editorial Board.

If you'd like more information about COEO and joining the organization, please refer to the inside back cover of this issue or contact a Board of Directors member.

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THE ONTARIO JOURNAL OF  
Spring 2008, 20(3)

OUTDOOR EDUCATION



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*Pathways* is published four times a year for The Council of Outdoor Educators of Ontario (COEO) and distributed to COEO members. Membership fees include a subscription to *Pathways*, as well as admittance to workshops, courses and conferences. A membership application form is included on the inside back cover of this issue of *Pathways*.

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ISSN: 0840-8114

*Pathways* is printed on recycled paper.

It's time to gear up for spring! There may still be snow on the ground and great skiing to be had but the ever-increasing daylight is proof that warmer weather, birds, bugs and green leaves are on their way.

This spring issue marks my fourth as *Pathways'* editor. During this last year I hope I have managed to provide a journal that has a little something for everyone — regardless of where or how you are connected to outdoor education. I have continued to learn from the ideas put forth by our featured authors. Surprisingly, I continue to field questions about how to get a copy of articles that have been published in *Pathways*. I am still waiting to hear from ERIC about our “digital indexing” status and will let you know as soon as I can.

For me, the best thing about being *Pathways'* editor has been the opportunity to work with the writers, editorial board members, editors and layout folks. You might not expect that e-mail conversations about word counts, deadlines and referencing style would be a great way to get to know people. And you'd be wrong — this interaction is now my favourite part of *Pathways'* production. I want to thank this issue's authors for their contributions, but even more their humour and enthusiasm.

Finally, as always, I encourage you to write an article, submit a sketch, review a book or movie, contribute a lesson plan, or share a memorable experience. To that end, I have included a call for articles from Scott Caspell and Greg Lowan who will be the guest editors of the fall 2008 edition of *Pathways*.

## **Cultural Considerations in Outdoor Education**

Have you had a powerful outdoor education experience in another country or cultural context? Perhaps you've gained insight into the multicultural implications of leading expeditions with urban youth? Maybe you've

facilitated cross-cultural learning in an outdoor setting? If so, we'd like to hear from you! Interpreting “cultural considerations” in a broad sense, these types of topics will be focus of the fall 2008 issue of *Pathways*.

Please submit articles and artwork that focus on one of the following areas of educational thought and practice, or other ideas of relevance to the theme of Cultural Considerations in Outdoor Education:

- Culturally relevant curricular ideas: activities, lesson plans, teaching ideas and so on
- News about an outdoor education program providing exceptional cultural learning experiences in Ontario, Canada or abroad
- Recent research pertaining to cultural considerations in outdoor education
- The benefits and challenges of, or effective teaching approaches for, working with diverse populations in outdoor education
- Strategies for transferring cultural learning experiences to life after the outdoor education program
- The meaning of cultural learning experiences to participants, guides/leaders, educators and so on
- Ways culture continues to shape outdoor education in Canada, North America and other areas of the world

Students, practitioners, teachers and researchers are encouraged to contribute. Please use APA formatting in Microsoft Word and send electronic copies to the addresses listed below. As page lengths for *Pathways* are about 500 words, the recommended lengths for manuscript submissions are approximately 500, 1,000, 1,500 or 2,000 words. Please include your name and a one- or two-sentence biography.

Please send submissions by May 31st, 2008 directly to the guest editors: Scott Caspell ([scottcaspell@hotmail.com](mailto:scottcaspell@hotmail.com)) and Greg Lowan ([greglowan@yahoo.com](mailto:greglowan@yahoo.com)).

*Kathy Haras*



It seems that once a year or so the President's View column deals with the issue of volunteerism in our organization. But before you go "Ugh! That old horse again!" and skip off to the next column please bear with me for a bit because volunteers are what this organization thrives on and is an issue that we need to address. We've had quite a bit of success with some of our volunteer opportunities and I want to applaud them.

First off, I want to thank Kathy Haras and the *Pathways* editorial board for the work they have done with our flagship publication over the past year. Kathy has done an excellent job in taking up the helm of the *Pathways* board and shepherding it into new territories. The journal has been keeping enough of the traditional aspects of the publication to satisfy longtime readers while injecting new ideas, themes and columns that are reflecting a diverse range of topics. I believe every COEO member can find at least something in each issue to meet their needs or interests. Thank you to those contributors who have taken the time to put "pen to paper" (or more realistically "fingers to keyboard") and submitted some really interesting articles that straddle all the aspects of outdoor experiential education. While on the topic of *Pathways*, I can't thank Kathy and the rest of the board and contributors without also thanking Randee Holmes for all the work she puts into the publication of each issue. Her participation goes far beyond the work she gets paid for.

I am hearing wonderful things about Conference 2008 and it seems a sizeable committee has stepped up to help bring this event together. Linda Leckie and Bob

Henderson are organizing another weekend that will be filled with the sessions, interaction and fun that make for another excellent conference. We look forward to hearing more over the coming months. It is hoped that the other events we are planning for this year will also see similar involvement and support from the membership. Keep your eye out for where you can participate!

I recently heard some interesting viewpoints on the issue of volunteering in Canada in the present times. I was on the long drive back up to Ottawa over the Christmas holidays and "Cross Country Check-up" on CBC Radio was focusing on this issue. The statistics presented on the show stated that general trends showed that volunteers are doing a substantial amount of work in this country. However, most volunteerism is being driven by short term or "one-shot" events with a limited duration and commitment of time by the volunteer. A challenge many organizations are facing is filling vacancies and finding individuals who will focus on the top end of their efforts, in the key roles around leadership, vision and the logistics of an organization's operations. COEO will be facing similar challenges very soon.

As I have stated previously, this will be my last year as COEO President. The constitution does not allow a person to hold the Presidency for more than three consecutive years and notwithstanding that I feel it's in my best interests, and in COEO's, for a new leader to step forward. Other key roles on the Board of Directors will also be opening up in the fall. We will need a new treasurer and potentially other key roles in the board executive filled as well. Without committed

**Sketch Pad** — Art for this issue of *Pathways* was generously provided by Sarah Horsley. Sarah believes that art is a hopeful way for people to express themselves and share their creativity. She loves music, being outside, animals, people, creativity and country music. She recently graduated from Lakehead University with a degree in Outdoor Recreation.

people in these roles the rest of the excellent work our organization does can't happen. We have seen COEO make some tremendous strides forward since I joined the board five years ago and I am incredibly proud of the efforts of those who have contributed to their happening. We have evolved our web presence not just with our own website but with Grant Linney's E-Newsletter and the recent creation of the COEO Facebook group spearheaded by David Spencer and Kate Humphries, which at present stands at over 100 members. I hope these tools will continue to develop and give value to our members. We, of course, successfully used our Trillium grant to produce our incredibly well-received research summary. We have created the COEO Amethyst Award in memory of Brent Dysart to recognize and celebrate young professionals in our field. We have lobbied for outdoor education to rate higher on the radar screens of the provincial government and the general public and have seen some successes from our efforts. We continue to partner with kindred organizations on these and other issues. We have the ongoing

successes of conferences and *Pathways* to celebrate.

None of this will mean very much though if that work is unable to continue. It will take strong leadership to ensure that this occurs. If we have no one in the key roles on the Board of Directors, COEO can not go on. So what do we do? We need to encourage leaders to step forward and not necessarily the leaders who have always stepped forward. New visions require new eyes to see with. Do you know someone who could take on one of these key roles? Are you that person? We need to know you're out there soon because it won't be long before we're at that AGM where names will have to be put forward. I hope someone won't step up just because s/he felt they had to, and I hope that we don't face a situation where there won't be anyone at all. I hope someone will be there because s/he wants to be. This will be the leadership we need. Outdoor educators are leaders in the work they do on a daily basis. Now, who will lead COEO?

Shane Kramer



Art credit: Sarah Horsley

## Reality Television: Altering Participants' Expectations of Adventure Programs

by Kevin Lindner

Have you ever felt that when explaining adventure programming to people they have a different understanding and expectations than the context you are trying to convey? Over the past few years, there has been a growing appreciation of group dynamics programs within schools and companies – a fantastic opportunity for the adventure programming field. When people come to us, however, their expectations may be quite different from ours: their expectations may be based on what they have seen on television, perhaps informed by their favourite program, such as *Survivor*.

After working in many adventure programs where I heard comments such as “We’re not going to be doing that stuff they do on *Survivor* or *Fear Factor*, are we?” or “Who is going to be the first one kicked off the island today?” or “This is nothing compared to the stuff on *The Amazing Race*. When do we get to do that stuff?”, I decided to try to find out why people have these thoughts and images and how it effects what we do with groups when they come for an adventure education program.

I learned that reality television has been around for many years; it was first in the form of pageants or game shows (Anderson, 2007). Then in 2000, a show by the name of *Survivor* was introduced: this show brought 16 individuals to a deserted island where they were divided into two teams. Teams and then individuals competed against each other in hopes of winning the grand prize of \$1 million. Each week someone was voted off the island. I found out that the show’s premiere had 15 million viewers and grew to 51.7 million viewers for the finale (Anderson, 2007). *Survivor* became a cultural event that provided a way for viewers to experience

adventure through others. The show produced activities that people watched, activities in which groups had to work together to survive. Those images stand out for many individuals when they hear they are going to participate in an adventure-based learning program.

Due to the wide popularity of *Survivor*, television companies quickly developed other reality shows like *The Amazing Race* and *Fear Factor* that use “ordinary” people to show how groups can work towards a common goal. With the growing popularity of these competitive challenge reality shows, companies, classroom teachers, and community and youth group leaders have seen the types of activities these shows produce and feel that this is the way to bring their group together. When individuals hear they are going to participate in an adventure program, their expectations of our programs may be based on the various reality television programs that they may have watched or heard about.

For some individuals, the chance to participate in an adventure program focused on group building is exciting. Participants have seen challenging activities on some of the reality shows, feel exhilarated and excited by the opportunity to participate in these tasks and expect to ultimately find them thrilling. From my experience, I have found that when these types of individuals arrive at the adventure education program, they are the ones who are extremely excited, who are ready for anything, and who want to get right into things without any context-setting, framing or reflection. They tend to be the ones who want to be the first people to participate in an activity or to take the lead in an initiative task. Unfortunately for

some adventure program leaders, many of these participants become bored with the activities as they are not meeting the expectations that these excited participants had when they arrived. They were hoping to have more “thrilling” experiences instead of taking part in a program designed to foster an understanding of the process taking place within a group. The reality television shows have affected this type of individual who tends to be (and remains) disinterested in reflecting on the group process and wants to focus solely on the accomplishment of numerous exciting tasks instead.

On the other hand, some individuals may be reluctant to come to the adventure program as they have watched these different activities on television and have developed a sense of nervousness or anxiety before even reaching the program site or seeing the actual activities planned for their adventure-based learning experience. I have found that these individuals want to know what is happening before coming to the adventure education program and want to have a very clear idea of the program’s activities. They have seen what happens on the television shows and don’t want to let their team down if they cannot perform a certain task. All of these thoughts run through their heads before and sometimes even during an activity. Many of them have seen the results of not being able to perform a task or voicing a concern on television – it usually equates to being eliminated from the group or group members being disappointed in you. I have found these participants have a tendency to be quiet and not want to actively engage in the challenge either physically or verbally since they don’t want to be known as “that” person.

As you can see, there are two extremes on a continuum of how reality television can affect a person’s expectations and perception of adventure programming before even arriving and participating in an activity. I have found that different reality shows have different goals in mind for the participants.

For instance, a show like *Fear Factor* focuses on personal growth and motivation, as participants try to conquer fears by taking risks they avoid in their daily lives. The show *The Amazing Race* tries to focus on partners and their relationships together. The pairs participate in challenging activities that they would never have the opportunity to engage in under other circumstances. Many of these activities are culturally based due to the travel that happens on the show. Lastly, the show *Survivor* aims to teach participants to work with new people in novel and challenging environments and to leverage the strength of each member within the group to achieve success.

Within these reality television themes, participants learn many things about each other and each show ends the same way: with the award of a monetary prize. Each show gives the viewer a different perspective regarding what is considered successful and how to apply successful behaviours to reach an ultimate goal. I have found that using these shows in designing adventure programs is an intriguing way to develop group behaviours. At the same time, it is important to make sure that the participants understand the expectations of adventure-based learning programs, which are not just about winning a prize. I have utilized some of the themes that reality television shows have provided, but change the activities to stress cooperation and growth instead of competition and negative group responses. I found that it was important for me to apply these themes in some adventure program settings to create that sense of excitement for the individuals who need it, while at the same time try to ensure that everyone would feel comfortable participating in the activities.

Ultimately, reality television has demonstrated many ways in which people can grow as individuals and groups in unique situations. When using these reality show themes in adventure programming, I have found that at the end of the day it is truly



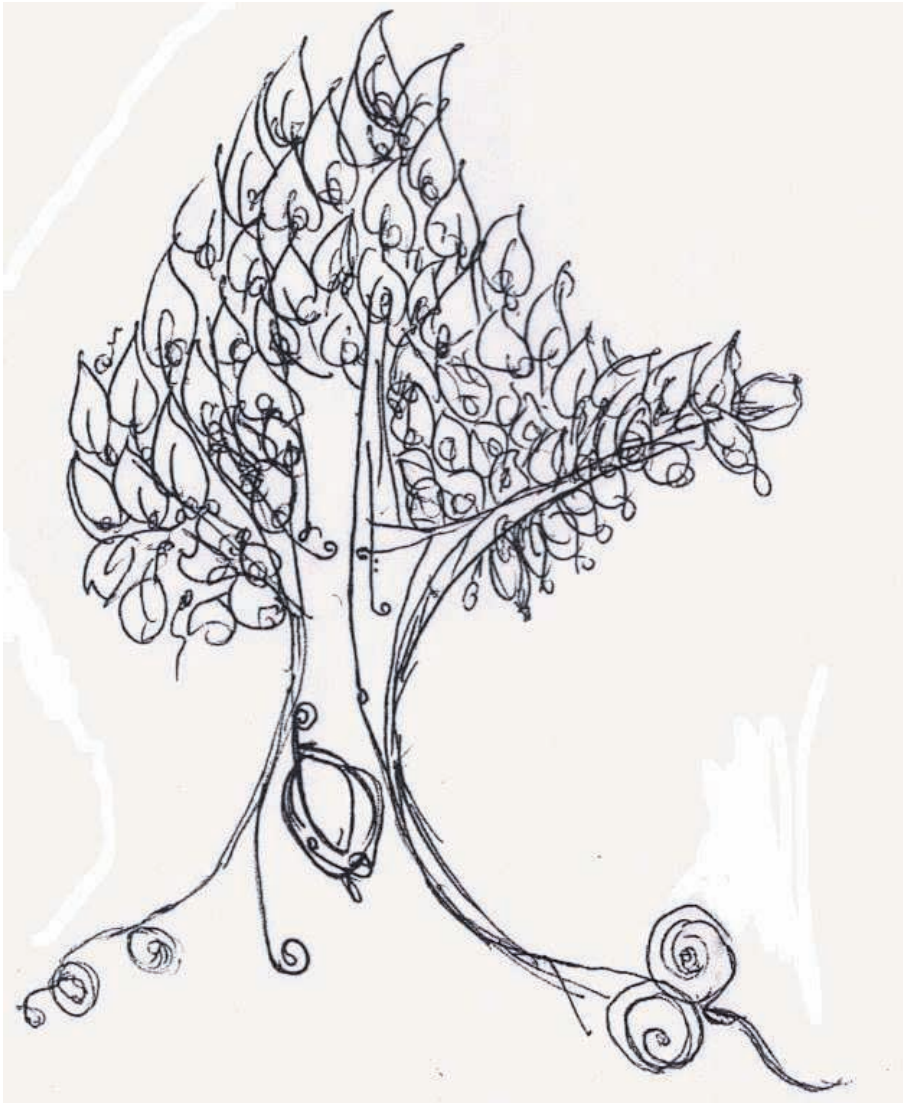
important that all participants have a clear understanding of the expectations of each individual in our programs through our common language and explanations of the programs. Reality shows have become a form of television programming that will be around for many years. In addition, reality television will probably take on different forms in the years to come. Consequently, we must make sure that every participant has a clear understanding of what will be happening in an adventure education program, so that their reality television-based expectations do not overtake the outcomes that we ultimately want to achieve: the development of groups and the personal growth of every individual.

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Anderson, K. (2007, December 1). Has reality TV finally run its course? Realscreen Magazine. Retrieved December 15, 2007, from [www.realscreen.com/articles/magazine/20071201/page13.html](http://www.realscreen.com/articles/magazine/20071201/page13.html)

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*Kevin Lindner worked as an Outdoor Education Program Director in Ontario for five years. He is currently working as a Senior Consultant with Adventureworks! Associates Inc. and teaches a course in Small Group Communications at Conestoga College.*



## Four Season Programming for Ecological Stewardship

by Katie Krelove

The calm exterior of the little white building on the edge of the park belies the bluster of activity underway inside. It is 9:30 on a Saturday morning in December, and boys and girls aged 8 to 10 are finding tasks with which to busy themselves: updating nature journals, flipping through new books, feeding Houdini (our red-eared slider turtle) or simply chatting with each other. One boy is eagerly recounting the various birds he's spotted in the last two weeks.

Jon, the group's leader, calls the Nature Centre's familiar "chick-a-dee-dee-dee" attention-getter, and soon everyone is seated on the floor. First order of business: trivia! The topic of the day is squirrels and the children have come prepared with questions to test their peers. The respect and attention these young nature enthusiasts give one another is impressive. Everyone listens intently, waits their turn and offers kudos for a right answer or an especially interesting question.

Once quizzed out, topographic maps are consulted to plan a hiking route. Suggestions for sites to visit are put forth — among them, notably, one of the park's big hills. It is, after all, the first snow of the year, and at least some sliding between squirrel observations is a must. With excitement mounting and winter gear applied, the group starts out on the trails, "nature voices" dialled to low, clutching scavenger hunt sheets.

Welcome to a typical session of the Ramblers Hiking Club for Kids, run out of the High Park Nature Centre in Toronto's west end. Most members are seasoned veterans of the Nature Centre's programs, and well acquainted with both the park's many nature trails and each other. They have participated in clubs, camps, family events

and school trips, and have become caretakers, explorers and admirers of the park's natural beauty throughout the seasons. As a nature interpreter who has had the pleasure to teach, learn from and explore with many people of all ages, it is clear to me that these young people represent among the best hope for the future of a valuable natural place in the heart of the City of Toronto that is constantly threatened — High Park.

### Starting in Place!

*"High Park sometimes reminds me of Algonquin Park, one of my other favourite places. Sometimes the pine trees smell and you forget you're in the city."* — Jack, age 8½

While many children travel far from the city to experience nature, the green spaces in our own cities are often overlooked as places with educational or recreational value — particularly when it comes to nature study! But there is much to gain by introducing kids to the outdoors in their own neighbourhood. Because it is close by, the local environment provides far greater opportunities for long-term involvement and attachment than do more far-away places. In addition, not all children have the same opportunities for travel, so starting in the place where they live helps to level the playing (and exploring) field.

High Park, at nearly 160 hectares, is the largest park in the Greater Toronto Area. Its history as a public park goes back over 130 years — and as a centre of human activity, even longer. The park is multi-use: you can visit the historical home of the original landowners, fish or picnic by a 14-hectare pond, use sports facilities, walk dogs or saunter along trails once used by the Iroquois

people. It is also a centre for ecological study; in fact, one-third of High Park's terrestrial system is considered to be ecologically significant, and approximately 23 hectares has been provincially designated since 1989 as an Area of Natural and Scientific Interest (ANSI).

The park's most famous plant communities are the black oak savannahs, remnants of the sand prairies that once covered much of southern Ontario's landscape. By some estimates, less than 1% of the original coverage of this ecosystem remains, and High Park shelters the fourth largest remnant (City of Toronto, 2002). The park is a corridor for migrating birds and home to over 50 species of regionally rare plants. Overall, it is an urban treasure, providing a rare opportunity to connect with nature and our natural heritage in our own city, to glimpse and preserve the biodiversity that thrived here pre-settlement.

The ecological integrity of the park is constantly threatened by a myriad of urban pressures. In response to scientific studies and community interest, the City of Toronto implemented a management plan to emphasize the protection and restoration of the park's woodland and savannah ecosystems, including a mandate to foster sustainable use.

The High Park Nature Centre was established in 1999 to aid in reaching these goals. Programs were initially offered in summer only and were designed to highlight the diversity of life in the park, to demonstrate the degradation of High Park's natural areas and to provide opportunities for community participation in remediation efforts. Through the years, the Centre's program offerings continued to expand. By 2005 the Centre had become a year-round outdoor environmental education facility, offering programs for elementary schools and local families, highlighting stewardship and ecological themes specific to the season.

Participants get their hands dirty in restoration activities — planting savannah plants in the spring, removing invasive species in the summer, collecting seeds in the fall and feeding birds in the winter. These are coupled with naturalist themes attuned to the time of year, among them wildflowers, butterflies, migration, winter birds, tracking, snowshoeing, trees, soil science and pond study.

The sustainable use of High Park depends on people understanding the significance of its natural areas, supporting the City's restoration efforts, and learning what they can do to help (or at least not hurt) the treasured ecology. Whenever possible, the Nature Centre strives to offer opportunities for long-term educational programs instead of one-off visits, as we believe that building ecological values and changing behaviours toward the environment takes time and comes only through the creation of feelings of respect, understanding and appreciation for a place. This can only truly be achieved by reaching people year-round, throughout the four seasons.

### **The Benefits of Four-Season Programming**

#### ***Environmental Stewardship***

*"We helped protect the natural places in High Park with our litterless lunch contest and by pulling garlic mustard leaves." — Avery, age 8*

Stewardship, by definition, is something that happens over time. A key lesson for the environmentally literate is that there are no quick fixes for the ecological problems we face. Whether it is conservation or restoration, care-taking is something that requires hard work, perseverance and learning from our mistakes. Potential stewards need the chance to become actively involved over time in caring for ecosystems; a variety of seasonal actions give a fuller picture of the vigilance required.

Perhaps more importantly, seasonal programming allows people to see and learn from the fruits of their work over time, the successes, failures and somewhere in-betweens! In the children and families enrolled in four-season programming at the Nature Centre we are beginning to see their sense of accomplishment and connection to High Park. As they continue to grow with us, we hope to instil in them a sense that their efforts make a difference to the long term well-being of the park, and to the city in general.

### Understanding

*"We got to get more involved with nature." — Eve, age 9*

*"What do you think High Park looked like when dinosaurs were alive? I hope our seed balls grow into awesome tall grass."  
— Martin, age 8*

Responsible stewardship also depends on knowledge of ecological processes. Only by experiencing nature throughout the seasonal changes can the intricacies of interdependence be realized. Four-season programming allows students to make larger connections and to think of nature as a living, dynamic reality. In a time of uncertainty around the effects of climate change, greater emphasis in environmental education is being placed on monitoring. At the Nature Centre, we engage people in keeping records of such things as migration, bird populations, budding, flowering and spread of invasive species. This not only allows participants to observe the flora and fauna in the park more closely, it also allows us to recognize and evaluate subtle changes over time.



### Community Building

*"I like the hikes, learning about nature and being with the other kids. I'd never gotten to spend so much time in the park before. I tell my family, friends and classmates about what I did at Ramblers." — Jack, age 8½*

A big part of being a responsible steward is passing on knowledge and information to others in the community. Four-season programming gives participants the chance to come to the park in ever-widening roles: as student, family member, club member, camper, naturalist and friend. Children, parents, teachers and staff who visit the Nature Centre are then able to expand their roles in their communities, and share their interest in nature with others.



At the Nature Centre, we have been able to create a unique “family of families” who spend a great deal of time in the park in all weather and seasons, appreciating the natural environment, picking up garbage and trying to educate others about how to be responsible park users.

### **Making It Happen! Some Tips for Four-Season Programming**

#### ***Offer a Variety of Doors to Nature***

At the Nature Centre, we aim to offer many different program options for people to get involved at their comfort level. In addition to school field trips we have naturalist clubs for kids, family walks and workshops, volunteer opportunities, summer camps and programs for daycares, Guides and Scouts, ESL groups, and youth from at-risk environments. Offering a variety of themes also helps; ecological learning and stewardship can often be effectively paired with games, the arts, or even fantasy (our “Fairy Friends and Gnome Homes” program is very popular!).

In addition, we have found it beneficial to market ourselves as four season. In 2005 we introduced “High Park through the Seasons,” which gave school groups a discount when they booked a program in each of fall, winter and spring. Since then the number of “Through the Seasons” classes has risen from 5 to 17.

#### ***Dedicated Staff/Volunteers***

The greatest asset to four-season outdoor environmental education is the people who know the place. Guides, interpreters and volunteers need time to explore and fall in love with a particular environment, whether it is a public park, garden, river or overgrown field. Make sure plenty of training is allotted in the form of long rambles armed with guidebooks. Recruit the help of local naturalists who know the area. It is especially inspiring if guides, teachers and volunteers

can share personal stories relating to place with others.

#### ***Offer Opportunities for Stewardship***

No matter what kind of green space you are working with, there are always things people can do to take care of it: picking up litter, planting native species, weeding, feeding birds, watering and sharing information are just a few suggestions. There are many great monitoring programs in place to help you get started with information gathering, such as PlantWatch and FrogWatch. You can also consult your local government to find out if and how your green space is being managed.

#### ***Let Nature Guide Your Programming!***

Four-season programming should emphasize natural seasonal occurrences. Again, this is where people who know the place are invaluable. Whether it is squirrel, frog or cricket mating, trilliums blooming, acorn harvesting or monarchs migrating, there is a time for everything in nature. When you get to know these rhythms, are able to recognize them and are familiar with the locations where to observe them, programming is easy!

For more information about the four-season programming offered by the High Park Nature Centre, please visit [www.highpark.org](http://www.highpark.org).

#### **References**

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*Katie Krelove has worked as a Nature Interpreter at the High Park Nature Centre for the past two years. She has a Bachelor of Education and was a presenter at the 2007 COEO conference. Katie extends thanks to Diana Teal, Kim Steel, Jack Groombridge, Shonagh Nell Lyden-Elleray, Avery and Owen Fisher, Eve Baker and all the other High Park Ramblers.*

## Addressing Barriers to Ecological Literacy

by Kim Monaghan and Lesley Curthoys

In the midst of the current environmental crisis, many scientists, academics, authors and leaders are urging us to create sustainable communities “designed in such a way that [their] ways of life, businesses, economy, physical structures, and technologies do not interfere with nature’s inherent ability to sustain life” (Capra, 1999, p. 1). As Orr sees it, however, there is “no prospect whatsoever for building a sustainable society without an active, engaged, informed and competent society” (1992, p. 84). Orr further states that addressing the current ecological crisis will require more than just ecologically knowledgeable citizens; it will require people in all sectors of society who are *ecologically literate* (1992). The process of fostering an ecologically literate citizenry is not straightforward, but it is undoubtedly a process to which outdoor education, with its focus on the natural world and experiential learning, can make a significant contribution.

Capra defines ecological literacy as “understanding the basic principles of ecology and being able to embody them in daily life” (1999, p. 2). Roth describes ecological literacy as “the capacity to perceive and interpret the relative health of environmental systems and to take appropriate action to maintain, restore, or improve the health of those systems” (1992, p. 8). It is clear from these definitions that ecological literacy is more than just a measure of one’s ecological knowledge; it is also a measure of one’s ability and willingness to use that knowledge to live a more sustainable lifestyle. Furthermore, bioregionalists remind us that there is a dynamic interplay between ecology and culture that brings vibrancy to home-place; both must be restored together (Andruss, Plant, Plant, & Wright, 1990). Accordingly, advocates of place-based learning suggest ecological literacy is best developed through meaningful participation and action-oriented learning in our local

communities with their inherent ecological, social, political and economic realities (Sobel, 2004). A review of the literature suggests ecological literacy involves six competencies (Bell, 1997; Berkowitz, Ford, & Brewer, 2005; Capra, 1999; Curthoys, 2007; Curthoys & Cuthbertson, 2002; Golley, 1998; Orr, 1992, 1994; Puk & Behm, 2003; Roth, 1992; Sandell, Ohman, & Ostman, 2003; Stables, 1998).

### Ecological Literacy Competencies

1. Natural history skills that foster familiarity with community members and life-sustaining processes of one’s own bioregion, as well as the ability to interpret ecosystem health.
2. Awareness, sensitivity and compassion toward other life forms that engenders kinship with natural systems.
3. Knowledge of ecological laws and patterns that inform how actions might affect natural systems.
4. Critical thinking skills that illuminate connections between actions, the health of natural systems and community well-being.
5. A sense of responsibility, willingness and practical skills that enable engagement in creative and socially just actions addressing sustainability issues.
6. Understanding of cultural values and worldviews that affect human perceptions of and relationships with nature.

Examining this list of competencies, it is easy to see that outdoor and ecological education have central roles to play in both the development of ecological literacy and sustainable communities. Yet despite the growing support for sustainability education (Coyle, 2005; Government of Canada, 2002), and increased knowledge of gateways to effective environmental action (see Chawla, 1998, 1999; and Tanner, 1980), fostering

ecological literacy through education has proven more difficult than anticipated.

### **Western Culture and Barriers to Ecological Literacy**

Why is ecological literacy so difficult to achieve? Bowers (1996) suggests that the answer

can be found in how early Western . . . narratives represented humans as separate from nature — as being in control of their own destiny regardless of how their actions degraded the environment. Another part of the answer can be found in the modern practice of nearly every aspect of the human/natural world. (para. 9)

Bowers is alluding to the presence of serious barriers within current Western values and institutions that interfere with education aimed at creating sustainable communities. These barriers include ecologically unsustainable assumptions, which, unfortunately, are deeply engrained in the prevailing consumer-technological mainstream culture. These assumptions were characterized by Pirages and Ehrlich (1974) and used to explain the Dominant Social Paradigm. These authors and McElroy (1997) indicated that the assumptions driving current Western societal values are actually falsehoods; McElroy refers to them as *myths* based on the idea that, like traditional myths, they are passed down from generation to generation and are used to teach values and guide behaviours. McElroy described four modern myths:

**Dominance Myth** — assumes that humans are the dominant species, the materials of the natural world are for our use, and destruction of natural habitat is a regrettable, but acceptable, consequence of human affairs.

**Civilization Myth** — proposes that Western culture is enlightened and civilized, and that our technologies, socio-economic values and

ways of life would be good for less developed countries to adopt.

**Growth Myth** — claims that there are no limits in industry or economics, nor should there be. This myth equates economic growth with success and lack of growth with failure.

**Omnipotence Myth** — asserts that our ability to solve problems is boundless and that the natural world can be understood and managed with technology, intelligence, ingenuity and the scientific method.

Chapman (2004) maintains these modern myths must be exposed as faulty and damaging if we are to foster values for ecological sustainability. Bowers (1996) suggests we must go beyond unmasking these faulty assumptions by reclaiming the traditional cultural role myths once played.

Campbell (1988) defines myth as “metaphorical of spiritual potentiality in the human being, and the same powers that animate our life animate the life of the world” (p. 28). For thousands of years, these metaphorical stories functioned as the primary vehicle to transmit inter-generational knowledge about the way the world works and how to live in accord with both each other and the more-than-human community. More recently, Knudston and Suzuki (1992) demonstrated that ecological wisdoms embedded in myths of indigenous peoples from around the world show striking similarities to scientific findings. Modern myths passed down from generation to generation in Western society, however, have little to do with teachings linked to local ecologies and how to create sustainable communities. Unfortunately, our socio-cultural institutions — specifically scientific, educational, media, economic and political institutions — are rife with means to perpetuate modern myths. The actions of these institutions can thus create significant barriers to the development of an ecologically literate citizenry (Monaghan, 2003). For

example, media organizations inhibit the development of ecological literacy by not providing people with enough information to critically evaluate their environmental actions, while science, by prizing objectivity, perpetuates the belief that humans can be separated from the natural world (Monaghan, 2003).

### Ecological Wisdoms and New Cultural Practices

Perhaps traditional myths are a thing of the past in terms of communicating ecological wisdoms, yet we certainly need something to counteract the influence of mainstream thinking, which typically devalues nature. So how do we make the transition from faulty assumptions about the way the world works to more life-sustaining patterns of thought? How can we counteract barriers to ecological literacy created by institutions that are built upon and perpetuate faulty assumptions? Providing sustainable alternatives to current worldviews and behaviours through environmental and outdoor education initiatives is one important way. The good news is that functioning ecosystems provide round-the-clock evidence of successful sustainable communities in action. According to Capra (2007),

we can model human communities after nature's ecosystems, which are sustainable communities of plants, animals, and microorganisms. The outstanding characteristic of the biosphere is its inherent ability to sustain life. To be sustainable, a human community must be designed so that its ways of life, technologies and social institutions honour, support, and cooperate with nature's ability to sustain life (p. 10).

Recognizing the inherent wisdom of nature will likely require *daily ecologically centered cultural practices*. These practices should acknowledge the interdependence of humans with other life forms, instruct us on

sustainable ways of being, reward ecological intelligence, and celebrate the wonder of life. In this way we can replace the damaging myths of modernity with narratives that enable us to live well in our places. Listed below are some possibilities (that range from simply talking about nature to rethinking building designs) that need to become the cultural norm rather than special events if barriers to ecological literacy are to be removed.

### Ecological Literacy Practices

- Pay attention to the natural world every day and share observations in daily conversations to foster a kinship with nature.
- Initiate reminders of life-sustaining processes provided by our bioregions and create culturally appropriate ways to encourage gratitude for these free ecological services. Such reminders can foster an appreciation for the interconnectedness of humans with other elements of the natural world.
- Incorporate bioregional foods into events as a tasty way to experience and celebrate the dynamic interplay between culture and nature.
- Regularly provide time to experience and share stories grounded in place-based discoveries. Ask people to reflect upon lessons learned directly from nature.
- Encourage "bioregional gossip" through a wildlife happenings board, websites and other public communication spaces. Build upon these first-hand observations as a way to increase relevancy of abstract ecological laws.
- Facilitate action-oriented projects that enable people to apply laws of sustainability (see Capra). Such learning can supplement knowledge gained from media sources and can help inform environmental behaviours. For example, knowing that matter (such as toxins found in pesticides) is continually recycled and incorporated into all living systems





(including our bodies) could stimulate steps to ban the use of harmful chemicals.

- Promote sun-powered ways of getting to and from school/work/camp.
- Re-imagine indoor learning spaces in ways that bring the outdoors inside. Ways include murals, photographs, community maps, indoor gardens, worm-composting bins, living machines and building designs that work with the laws of nature.
- Re-imagine outdoor learning spaces in ways that honour local flora and fauna, and the ecological processes that sustain them. Naturalized schoolyards, butterfly gardens, bat houses, murals, planting native trees, wildlife monitoring and stream restoration are just a few examples.

It is important to note that the purpose of these cultural practices and their links to ecological wisdoms *need to be explicitly communicated* rather than assumed to be common knowledge. Explicit communication is needed to dispel current myths of unsustainability and replace them with life-affirming messages. Educators must play a key role in helping students identify

and overcome prevailing barriers to the development of ecological literacy.

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## OB/OOCH Upstream 2007: Reflections on an Upstream Journey

by Laura Edmonstone

“Louder, Daddy! Louder!”

My first taste of Camp Oochigeas came amid shouts and songs from a swarm of people gathered around a shiny coach bus, with the voice of one young fireball ringing through above the rest, rousing her waiting father to join in the songs. “C’mon, Daddy! Louder!”

We arrived at Camp Oochigeas on the morning of the last day of the session, just in time to ride the wave of adrenalin and fatigue that comes at the end of an intense camp experience. With the back of the bus disappearing around the corner onto Highway 141, the few remaining campers and their families scattered for home (including the formidable set of lungs mentioned previously), and the team of dedicated volunteers pulled together to tidy up and prepare for the next team of volunteers and campers who would arrive the following day. Whoosh! I was caught in the whirlpool, riding the eddy upstream, unaware of what was to come when I got caught in the next rush of current!

Foolishly, I thought I was close to having seen it all in the outdoor world — and then I arrived at Ooch. I was there as part of a team, privileged to work a program that partnered three strong organizations with a wealth of knowledge and experience in working with kids. Camp Oochigeas operates a volunteer-based program for kids with and affected by childhood cancer, and partners with the Hospital for Sick Children (SickKids) to provide an enriching experience onsite at SickKids, at Oochigeas and around Toronto. As instructors for Outward Bound Canada, our role at Ooch was to facilitate a wilderness experience for senior campers called “Upstream.” The goal of Upstream

was to build confidence, independence and outdoor and leadership skills and to challenge participants to metaphorically widen their circle by stepping outside of their comfort zones.

Our participants were between the ages of 16 and 19 and came from a wide range of backgrounds, with diverse expectations, skills and goals. Some of the campers had shared in the Ooch experience before, while others were new. Most of the campers knew each other so the one or two new faces added its own challenge in terms of inclusion and group development. Participants in the Upstream program were at different stages of their cancer experience, but all were finished with active treatment and able to participate in a challenging two-week wilderness canoe trip.

While there are many specific details that I could share about the Upstream program, what I’m really excited about sharing is the pleasure I found in working together as part of a team of professionals from broad backgrounds, and some reflections on our experience of Ooch culture.

### Welcome to Ooch — Jump Right In!

As anyone who has met an Outward Bound (OB) instructor probably knows, OB is steeped in a rich culture and grounded in strong philosophical roots. Much value is placed on experiential learning and the conscious use of metaphor and reflection as tools for both teaching and learning. So, it was with much delight that my co-instructor, a recent import from OB Australia, and I headed off for a week of traditional camp experience, working as counsellors, prior to meeting with our Upstream students. I spent the week with a gaggle of six- to seven-year old boys,



catching frogs, swimming, boating, farting, and generally playing hard and sleeping even harder. I also had the privilege of working with a team of six Ooch volunteers, a moxie group of professionals from all walks of life who wanted to spend their days off making a difference in somebody else's life. What a fabulous experience!

As the Upstream start approached, we struggled to drift away from our young superheroes and to put our teenage ballcaps back in place. Meeting the full complement of our team helped put it in perspective; we would be a team of four — two OB instructors and two nurses from SickKids who would work together to facilitate the Upstream experience for seven eager participants.

Now, in my experience, it is one thing to lead a trip with a co-instructor and it's entirely another thing to lead a trip solo. How was this going to work with four of us at the helm?

### **Who's Sterning This Boat?**

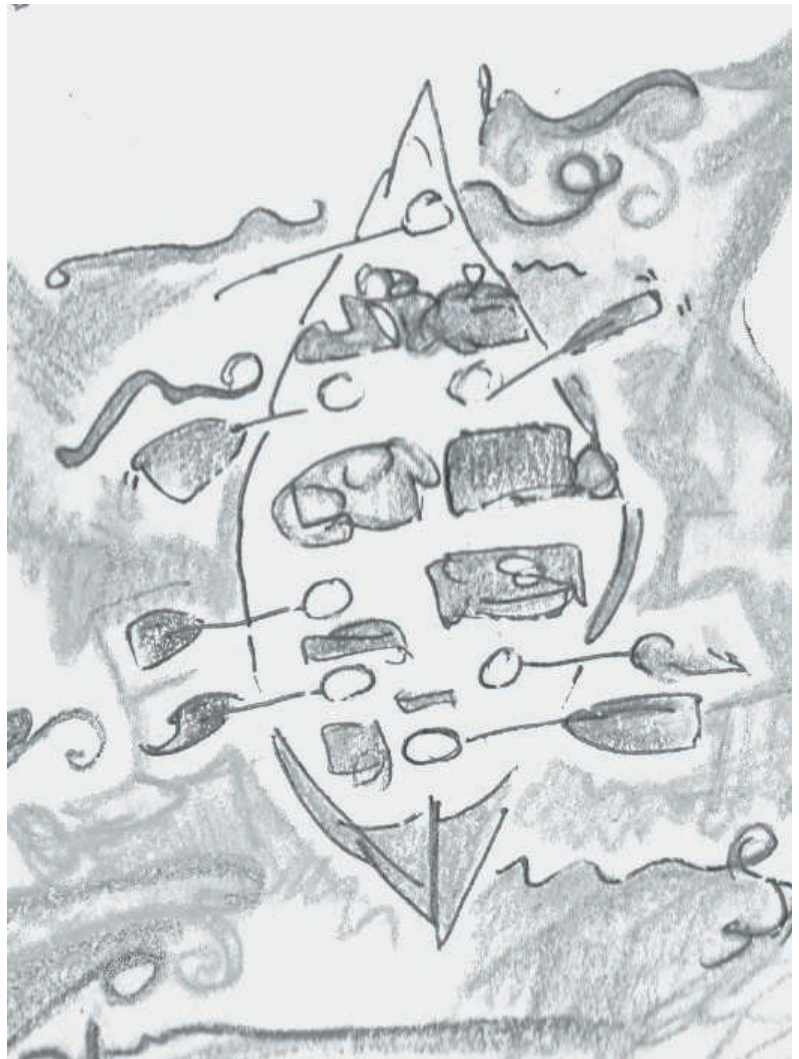
It worked beautifully. Working in a team of four, we were able to take the time to get to know each of the students, to get to know each other, and to share perspectives and experiences in an open way. It provided us all with the opportunity to view the trip from a different shore than we may have if there were just two of us.

Both nurses had strong backgrounds in tripping, and while the skills and environment weren't new to them, the flow and

philosophy of an OB course were. Given that we work for different OB schools, my co-instructor and I also carried varied interpretations of the OB philosophy in our packs, so it was rewarding to share and build the experience for the students together in a deliberate and thoughtful way. Splash in a dose of Ooch culture, supplied unselfconsciously by the participants and we had a team that was ready to paddle up any stream!

### **What Are We Out Here for Anyway?**

One of my most remarkable learning moments came when I realized how little cancer was the focus of our trip. This was in stark contrast to my experiences leading trips



Art credit: Sarah Horsley



for adult cancer survivors, for whom much camaraderie and rapport was built through sharing personal triumphs and tragedies with cancer.

At Oochigeas, cancer is not the focus; sure, there were campers with overt signs of the disease, but the focus was camp, allowing kids to be kids and have fun outdoors. Out on the water it was a similar story; while some Upstream participants took medications and sported scars and other impacts from months or years of medications, cancer was not something that entered our group consciousness in the way that I thought it might. The focus of our trip was on the standard pillars and milestones of an OB course — compassion, teamwork, craft, self-reliance, physical challenge and service to others.

It wasn't until the last night of the course that the floodgates opened and our kids started talking in detail about their feelings and experiences with cancer. That said, it was a very mature, insightful reflection and a coming together through a sharing of similar experiences. Thoughts were shared matter-of-factly, and I was struck by the air of calm and confidence that came through in their stories. I didn't hear self-pity or anger at alienation from friends, or disappointment they had missed out on certain activities in school. They had certainly experienced alienation, but for the most part, they had worked through it and felt stronger because of it.

This natural conversation arose because of the positive rapport participants had developed with each other and with the staff team. Everyone had had time to relax and reflect on how they had widened their circle through the Upstream experience. It was one of those magic moments when all the hard work comes together in a way you hadn't imagined it would.

It was also a significant and cathartic discussion between the students and nurses — they each had the opportunity to ask questions that time at the hospital just does not allow. As an outsider to the SickKids experience, it was remarkable to listen. The nurses asked what treatments feel like, shared what it feels like to know a kid isn't going to make it, and shared how heartbreaking and breathtaking it can be to work in that environment. The students shared stories about how they had fooled nurses into visiting their rooms, how thrilled they were by the special events offered at SickKids and how terrified they were to have ports inserted and to lose their hair the first time.

In an environment like a hospital where people are forced to come together because of intense circumstances, they don't always get the opportunity to say thank you or communicate feelings because it is inappropriate or unprofessional or there simply isn't enough time. After paddling upstream with seven incredible young people and three committed colleagues, it was absolutely thrilling to turn our boats into the downstream current that night, and to ride out the wavetrain, bobbing and laughing together in the moonlight.

As we drove away from Oochigeas roughly a month after we first arrived, I thought back to the conviction I had heard in that young girl's voice on our arrival. "Louder, Daddy! Louder!" The Camp Oochigeas motto is "You have failed only when you have failed to try. Act as if it is impossible to fail and it will be." I smiled, confident that Ooch had helped give that young woman, our campers and our staff team just what it takes to paddle upstream.

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*Laura Edmonstone works full time as a high school special education teacher and strives to keep one foot in the outdoor community.*

## “Ouch — I’ve Been Bitten!”

by Mark Whitcombe

Imagine playing Frank Glew’s “Instincts for Survival” and having a fifth of the students come out of the playing area in tears from being “bitten.” When you look at each student, you see angry red welts the students describe as being “on fire.” They’ve been stung by European red ants (not bitten — as knowledgeable outdoor educators, we are obliged to use appropriate and correct terminology). Having your simulation ruined could be amplified by having half of your lunch circles rendered unusable in warm weather by the same ant. These situations are the reality at two Toronto-area outdoor education schools.

In this article, I outline four medical conditions of direct and indirect concern to outdoor education. Blastomycosis has existed in Ontario for almost a century, yet I wager that few of us are aware of it. Lyme disease has existed in Ontario since 1991 yet doesn’t seem to concern outdoor educators in this province. West Nile virus has been present in Ontario since 2002 and causes great concern among parents reluctant to release their children in “bug season.” European red ants are virtually unknown, yet they are spreading quickly and the immediacy and painfulness of their stings limits where programs can be run.

The recurrent theme that emerges is that there is remarkably little awareness of the background ecology and biology of the causative organisms for these conditions. Each of the conditions is vastly under-reported, partly because of lack of public and medical knowledge. Outdoor educators can address both of these shortcomings.

I would suggest that blastomycosis should be of concern to outdoorsy people in northwestern Ontario; outdoor educators in southern Ontario will need to be increasingly aware of Lyme disease over the next decade; we all need to be vigilant against West Nile

virus especially during July and August of favourable years; and we all should fervently hope that European red ants do not spread to our own particular outdoor education sites. Of the four issues, I consider the stinging ants to be the most disruptive for children. We can explain to parents how we will take quite acceptable steps to limit the first three. But it is exceedingly difficult to reason with a child who has been painfully stung half a dozen times while playing what they expect to be a fun game.

I have considered only four risk management situations for outdoor education in Ontario. I could have added the Powassan virus, named for our Ontario town, and transmitted by *Ixodes scapularis*. Or human babesiosis, also transmitted by the same tick. Or I could have reported on rabies. Or cryptosporidiosis. Or giardiasis (where I have personal experience). Or bedbugs, again where I have personal experience.

I have not footnoted the various facts in this article, though I have included a simple resource list. The best starting point for more information is the provincial Ministries of Health and Natural Resources.

### Blastomycosis

Blastomycosis was first described in 1894 in Chicago and has been documented in Canada since at least 1910. Cases in Ontario tend to occur north and west of Lakes Superior and Huron. It is present in contiguous boreal Manitoba, and, rarely, adjacent Saskatchewan. It occurs near the east shore of Lake Huron and the south shore of the St. Lawrence River, especially in Quebec; the Mississippi and Ohio River basins; and the montane areas of the US Southeast.

The disease is caused by *Blastomyces dermatitidis*, a two-phase fungus that grows

in acidic soils in a mycelial form then develops into a resistant yeast-like form in the warmth and moisture of a mammalian body. The fungus looks like white mould and generally grows in an acidic environment with high organic content — not necessarily in soil. It seems to be most common along riverbanks and damp places, in woodpiles, under cottages, and around rotting stumps. In Wisconsin, it is reported to be particularly associated with white cedar. Rainy seasons may produce ideal conditions but since the fungus competes poorly with other fungi, dry years may work in its favour.

Infections occur from June to October with a 1–3 month incubation period. Blastomycosis has a highly variable clinical spectrum and can cause acute pneumonia-like illness or chronic pulmonary disease; in one form it can have skin lesions. Less commonly, it involves the genitourinary tract, bone or even the central nervous system. In rare instances it can lead to death. Blastomycosis can easily be mistaken for pneumonia, tuberculosis and even lung cancer. Only 18% of victims are correctly diagnosed. Blastomycosis also affects dogs.

High numbers have been reported in the Kenora area since the late 1990s, perhaps because of increased emphasis and improved awareness and diagnosis by the regional health unit and medical community. The estimated incidence rate of blastomycosis in the Kenora region is 117 per 100,000 (the highest in North America, some 30–50 cases per year). There is likely considerable under-reporting since blastomycosis is not nationally reportable in Canada or the US (except Wisconsin). A more recent study confirmed 309 cases in Ontario from 1994–2003, including 66 cases in Toronto (an undetermined number may have been contracted outside of the city).

There are no specific prevention strategies. However, activities that bring individuals close to rotting wood or moist soil near water are associated with a greater risk. In endemic areas, wear a dust mask, gloves, boots and coveralls when working in the woods, digging

holes, gardening, cleaning up old woodpiles or working beneath buildings.

A high degree of suspicion in endemic areas with early and appropriate testing is important. Treating blastomycosis requires antifungal medications. Patients with healthy immune systems can expect a full recovery with proper treatment. Immuno-compromised individuals (e.g., those with diabetes or AIDS) have a significantly higher death rate.

## Lyme Disease

The first identified case of Lyme disease dates from 1883 in Poland. It was first recognized in Lyme, Connecticut, in 1975, after a cluster of cases appeared that were initially thought to be juvenile arthritis. Lyme disease is the result of a bacterial infection after a tick bite that leads to a variable syndrome, including such symptoms as a circular “bull’s eye” rash, fever, joint and muscle pains, headache, chills, fatigue and swollen lymph nodes. Lyme disease can lead to arthritic and neurological ailments, including death.

Lyme disease is caused by the bacterium *Borrelia burgdorferi*, which is transmitted through the bite of the black-legged tick, *Ixodes scapularis*. Both adult ticks and nymphs transmit the bacterium to human and non-human hosts such as white-footed deer mice, white tail deer and passerine birds. The *Ixodes* tick has a two-year life cycle, from larva to nymph to adult, feeding only once in each stage. Eggs are laid in spring, with larvae feeding on mice. Adults prefer deer and other large mammals, including humans. The adult *Ixodes* tick is sesame-seed sized and easily seen and removed; the nymphal tick is smaller and harder to see and therefore more likely to transmit infection.

Although a constant flow of infected ticks is brought into southern Canada by spring migratory birds, especially passerines, remarkably few sustained populations have developed in Canada, and almost all of them are close to the US border. Lyme disease-carrying ticks are more common along

the north shore of Lake Erie, particularly in Long Point, Turkey Point and Rondeau Provincial Park. Infected ticks have been found in Mississauga, Etobicoke, Bramalea, Scarborough, Hamilton, Ottawa, the St. Lawrence Islands and Chatham. Lyme disease is found in all provinces except Saskatchewan and Newfoundland. Many Canadian cases of Lyme disease have been acquired during travel to the US, especially in areas along the Atlantic seaboard from Maine to Virginia, and in Minnesota and Wisconsin.

Spreading urbanization, increasing growth of exurban forests, and the reduction of predators of deer and small rodents have led to an increase in the primary reservoirs of the ticks and the bacterium. The increasing numbers of people in these areas have led to increased contact between ticks and humans. Global warming has expanded the range of the tick and hence the disease. This will increasingly affect Ontario.

Ontario had 280 reported human cases of Lyme disease from 1981 to 1998. In 127 of these cases there was no history of out-of-province travel. From 1988 to 1998, the overall mean annual incidence of Lyme disease in Ontario, including cases acquired out of province, was 0.2 per 100,000 people (15–40 cases per year). The highest mean annual incidence of indigenous cases per 100,000 people in Ontario (0.4) was in the northwest, where an outdoor lifestyle may enhance exposure. It is estimated that only 20% of actual Lyme disease cases are reported.

The most cases occur in the summer months when nymphs of the blacklegged tick are active. There were 38 cases of Lyme disease in Ontario in 2006, with two in March, one each in April and May, five in June, 17 in July, five in August, two in September, four in October, and one in November. There is often a lag between the time the disease is contracted and when it is diagnosed. Of these 38 cases, 14 were in people aged 40–49, with none in those under age 10, and none above age 80. Only 11 of the 38 were judged to have been exposed in

Ontario with another four cases of unknown origin. The other 23 — more than half the total — were from outside Ontario. Five of the 11 Ontario onset cases were from bites in July.

Incubation varies from one day to years. In 80% of cases a characteristic “bull’s eye” red rash appears one day to a month after tick bite. Because the nymphal stage of the tick is responsible for most cases, symptoms are most often reported from May through September. Lyme disease may progress to a chronic form with meningoencephalitis, cardiac inflammation and arthritis. A broad range of complex symptoms are possible including neuropsychiatric disturbances. Antibiotics are required after symptoms develop. For early cases, prompt treatment is highly effective. For late diagnosis, effective treatment is more difficult.

The standard advice is to avoid places where ticks are likely, such as woods, bushes, high grass and leaf litter. More reasonable for outdoor education is to wear light-coloured clothing (long pants, long-sleeved shirts and a hat) as this makes it easier to spot ticks, and to use an insect repellent (DEET is by far the most effective with little positive evidence for others). Evidence suggests that reducing the numbers of primary hosts such as rodents, other small mammals and especially deer (to less than 8 to 10 per square mile) also reduces the numbers of ticks.

Checking for ticks and the prompt removal of attached ticks is probably the most important and effective method of preventing infection. Since the tick rarely transmits bacteria until after 24 hours of attachment, prompt removal greatly reduces the rate of infection. A bite from an unengorged tick carries a low risk of infection and does not justify the use of preventive antibiotics. Check all parts of the body (including hair) and clothing for ticks daily. Promptly and carefully remove an attached tick by the head using narrow tweezers. Save the tick and send it to public health laboratory for identification.



## West Nile Virus

West Nile virus (WNV) is named after the West Nile province of Uganda in which it was first isolated in 1936. The first known emergence of WNV in the Americas occurred in New York City in 1999. The first case in Ontario was in 2002; since then, numbers have varied by year, with wet springs and hot summers leading to the population growth of the host mosquito vector. There were 394 reported cases in 2002, 89 cases in 2003, 14 cases in 2004, 101 cases in 2005, 42 cases in 2006 and 15 cases in 2007.

US data indicate that four out of five people who become infected with WNV do not show any symptoms. Approximately 20% of people infected develop a relatively mild illness (WNV Non-Neurological Syndrome) including fever, headache, body ache, nausea, vomiting and a rash on the chest, stomach or back. Approximately 1 of 150 (0.7 %) infections result in severe neurological disease including high fever, severe headache, muscle weakness, stiff neck, confusion, tremors, numbness and sudden sensitivity to light. WNV infections have no particular treatment other than symptomatic care. Prompt and accurate diagnosis is essential. Occasionally the disease can lead to death.

WNV is an arthropod-borne virus (arbovirus) belonging to a family of flaviviruses. Mosquitoes serve as transmission vectors while birds serve as amplifying hosts that increase viral levels and transmit the infection to other mosquitoes, which go on to infect birds and humans. The virus does not multiply readily in mammals.

The major vectors of WNV in Ontario are the mosquito species *Culex pipiens* and *Culex restuans*, which tend to breed in natural or artificial relatively small "containers" of organic-rich standing water. These particular *Culex* species have adapted to quick reproduction in isolated transient water bodies and do not compete well in larger more-complex ecosystems. These characteristics also explain why the preferred

prevention for WNV is residual larvicides in stagnant water areas. Adult *Culex pipiens* over-winter in protected structures and can amplify viral numbers. Other vectors of WNV such as certain species of *Aedes* and *Ochlerotatus* prefer to develop in temporary floodwaters or semi-permanent pools of water, respectively. The preference of the host mosquitoes for organic-rich temporary pools explains why normal marshes, swamps, large ponds, lakes, streams and rivers are not considered significant sources of WNV.

Of the 42 Ontario human cases of WNV in 2006, 17 included neurological signs, five required hospitalization, and there was one attributed death. There were 256 positives among the 972 wild birds tested. At least one positive wild bird was found in each public health unit region, demonstrating WNV activity occurred across the entire province. Over 19,000 pools of mosquitoes were tested and 182 were found to be WNV positive.

Almost all human infections happen from mid-July to late-September, with the majority in late July and through August. WNV isn't much of a problem during the school year except for low risk during September, but is a very real problem for summer camps. Wear protective clothing, including shoes, socks, long pants and a long-sleeved shirt when outdoors for long periods of time, or when mosquitoes are most active, particularly between dusk and dawn. Clothing should be light-coloured and made of tightly woven materials that keep mosquitoes away from the skin. The use of mesh "bug jackets" or "bug hats" is recommended. Consider the use of mosquito repellents and use according to directions when it is necessary to be outdoors. DEET is by far the most effective.

## European Red Ants

European red ants, *Myrmica rubra*, have been found in the US since the early 1900s. In the 1960s an aggressive strain became noticeable in Maine and has since spread more widely. Also called a fire ant, it is not closely related to the true fire ants found in the southern US.

The small aggressive ant is 5 mm long, mainly red with slightly darker pigmentation on the head. Where ants are present, many people may be painfully and repeatedly stung. The sting causes a painful red welt that feels like it is “on fire.”

The ants remain active at temperatures down to mid-single-digits making them troublesome during many months of the year. These ants have more than one queen per colony, often with many colonies close together under stones, fallen trees, and sometimes in the soil. In North America *M. rubra* does not spread through the normal ant process of the winged ant stage. Instead they spread by slow “budding” of colonies hiving off and moving a short distance away. A more significant manner of spreading great distances is direct if there is inadvertent human movement of nursery compost, mulch or soil. Humans are spreading this ant much faster than it spreads naturally. There are currently no effective means of eliminating ant colonies.

European red ants are found in the Toronto area, especially along river valleys. They have been found in the Rouge River Valley for at least six years. They are more widely reported in Muskoka and the Meaford area.

Compared to the protein-based venom of bees, wasps and other ants, European red ants inject a mainly alkaloid venom when they sting. As such, there doesn’t seem to be much known about its toxicity or seriousness. Stings are painful, but reactions vary widely, depending on the individual, and how often they are stung. I personally observed a child with wasp anaphylaxis go into a generalized allergic reaction after being repeatedly stung by European red ants during recess. The symptoms went away with Benadryl. No general treatment is reported. At affected outdoor education schools, we acknowledge the pain and offer cold water to swab the sting site, mainly as a calming effect.

In badly affected areas, either stay out, or walk through the area with minimal stopping, no sitting, and wearing rubber boots and long pants.

### Resources

- The Public Health Agency of Canada’s Lyme Disease fact sheet: [www.phac-aspc.gc.ca/id-mi/lyme-fs\\_e.html](http://www.phac-aspc.gc.ca/id-mi/lyme-fs_e.html)
- Healthy Ontario’s Lyme Disease site: [www.healthyonario.com/ConditionDetails.aspx?disease\\_id=178](http://www.healthyonario.com/ConditionDetails.aspx?disease_id=178)
- Health Canada’s Safety Tips on Using Personal Insect Repellents: [www.pmra-arla.gc.ca/english/consuminsectrepellents-e.html](http://www.pmra-arla.gc.ca/english/consuminsectrepellents-e.html)
- U.S. Centers for Disease Control and Prevention (CDC): [www.cdc.gov/ncidod/dvbid/lyme/ld\\_statistics.htm](http://www.cdc.gov/ncidod/dvbid/lyme/ld_statistics.htm)
- Canadian Lyme Disease Foundation: [www.canlyme.com](http://www.canlyme.com)
- Lyme Borreliosis in Ontario: Determining the Risks: [www.cmaj.ca/cgi/content/full/162/11/15733](http://www.cmaj.ca/cgi/content/full/162/11/15733)
- Canadian Centre for Occupational Health and Safety: [www.ccohs.ca/oshanswers/diseases/lyme.html](http://www.ccohs.ca/oshanswers/diseases/lyme.html)
- Ontario Ministry of Health and Long Term Care West Nile Virus publications: [www.health.gov.on.ca/english/public/pub/pub\\_menus/pub\\_wnv.html](http://www.health.gov.on.ca/english/public/pub/pub_menus/pub_wnv.html)
- European Fire Ant: *Myrmica rubra*: [http://creatures.ifas.ufl.edu/urban/ants/Myrmica\\_ruba.htm](http://creatures.ifas.ufl.edu/urban/ants/Myrmica_ruba.htm)
- European Fire Ant: A New Invasive Species in Maine: [www.umext.maine.edu/onlinepubs/PDFpubs/2550.pdf](http://www.umext.maine.edu/onlinepubs/PDFpubs/2550.pdf)
- An Outbreak of Human Blastomycosis: The Epidemiology of Blastomycosis in the Kenora Catchment Region of Ontario, Canada: [www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00vol26/dr2610eb.html](http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00vol26/dr2610eb.html)
- Blastomycosis: <http://Blastomycosis.ca/>

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*In researching Myrmica rubra, Mark Whitcombe tried repeatedly to get stung, giving up when he realized he wasn’t attractive. His interest in Lyme disease dates back to the late 1980s when he spent a summer in Illinois, then a hot spot for the tick. He wasn’t attractive to the ticks either. Mark recently retired as the Program Co-ordinator for Outdoor Education for the Toronto District School Board.*

## Instructing Outdoor Environmental Programs in French: A Personal Field Guide

by Katie Krelove

I want to start with a caveat: I don't consider myself to be an expert in delivering outdoor environmental education programs in French. Nor is French my first language; in fact, I'm not even sure I would qualify as truly bilingual. My background includes seven years of elementary school French immersion (as a student, not a teacher) and a year or two living in Montreal. When you factor in years of very limited use of the language, you better believe that I'm often at a loss for a word or two in French. However, after a year of co-leading environmental programs in French on a fairly regular basis at Toronto's High Park Nature Centre, I realize now that being an expert is not so important in this case. Not making mistakes is not so important either. When it comes to offering programs in a second language, the effort is enough to make it more than worthwhile.

Of course, I probably wouldn't have said the same thing a year and a half ago! Getting our French programs off the ground certainly required a lot of work in translating, and a good amount of nerves to overcome. But the response from teachers of Extended and Immersion French has been positive. Since we started offering them in spring of 2007, we have had over 20 bookings, and we expect to keep growing them, expanding our offerings in spring of 2008.

With over 98 Immersion and Extended French schools in the Toronto District School Board (TDSB) and Toronto Catholic School Board (TCSB) combined, it should come as no surprise that there is a demand for off-site programming delivered in French. Despite this, testimony from several of our teacher participants, as well as a quick Internet search, reveals that field trips of any kind offered in French in the Toronto area are few and far between, if they exist at all.

In fact, it was a TDSB teacher of French Immersion who first gave us the necessary push to realize the potential we had for French programming. She and her classes had been regular participants in the Nature Centre's programs for years, despite the fact they were offered only in English. During one program, she happened to overhear one of the Centre's new staff take it upon herself to speak some French with her students, realizing they were immersion students. Well, that's all it took — the teacher practically insisted the Nature Centre offer programs in French. She was excited by the possibility, and shocked by the fact that this resource, educators with French-speaking ability, was not being capitalized upon. And she was right: we had two instructors on staff with a background in French, but by underestimating our own abilities we were not only losing out on potential benefits, we were also sending a negative message: that you shouldn't speak a language unless you are perfect at it.

Determined, we set to work translating a few of our most popular programs. This was time-consuming and sometimes frustrating. English-to-French dictionaries and online translation websites were helpful, but not in all cases. We quickly realized that much of the ecological vocabulary was not something we had learned during our French schooling or picked up along the way. In addition, regular dictionaries were not overly useful in translating many of the more specific names of fauna and flora. This was especially true with many types of insects and birds. We had to look for other sources. We began to collect any and all nature books in French we could find, scouring second-hand stores and our own basements. French biology websites helped as well.

With all this vocabulary being new to us, we recognized that it would most likely be brand new to our participants as well. This presented a problem: how to teach vocabulary in addition to ecological content and principles, when we were already severely time constrained (our programs are generally only two hours long). One attempt to mediate this factor was to send the new vocabulary to teachers beforehand, with the hopes that they would introduce it in class in advance. This seems to work some of the time, but teachers being the busy people that they are, we found we still often had to introduce new terms. Experience soon revealed that, during the programs, new vocabulary could most effectively be introduced within the flow of the ecological program, instead of separate from it. Using written words, along with pictures and group repetition, seems to be most conducive to vocabulary learning, and can be accomplished quite quickly, barely missing a beat, with the proper preparation. Frequent repetition of the key vocabulary by the instructors throughout the program, in a variety of contexts, is also something to be conscious of. In the end, the sacrifice of ecological content for vocabulary learning did not become as great a problem as we had thought it might. After all, even during our programs in English, ecological vocabulary is a big part of our teaching, the names of birds, insects and ecological processes often missing from even adult first-language vocabularies.

The trait that I've found to be most important in teaching to second-language learners in a field trip setting is flexibility. We often have no real idea of the level of French comprehension from class to class, even if they are in the same grade level. This also varies from student to student in any particular class. It therefore becomes even more important than usual to vigilantly gauge a class' engagement level and to be able to adjust accordingly. Is no one volunteering to answer your questions, even the easy ones? Are the same two people the only ones answering? Do they understand when you ask them to repeat a word? Asking yourself these questions during instruction can help you determine if you need to adjust

your level of vocabulary, speak slower, or use more pictures or miming. Perhaps you will only be able to talk about one or two types of birds instead of four or five. It is crucial to figure out before starting what your strategies will be. Asking the teacher beforehand to describe the class' level is always helpful. Some teachers allow English to be used at times, while others have very strict all-French policies.

Overcoming my own nervousness at speaking French again was also not as hard as I had thought. Studying beforehand, going over and over my "script" in my head worked even better than I would have guessed. I also certainly benefited from instructing with a partner who also was nervous — we continue to look out for each other. If one of us forgets a word, the other can jump in to help. We also made ourselves handy cheat sheets, which can be taped inconspicuously to the back of photos and vocabulary cards. In the end, although I'm still sometimes tongue-tied and definitely mentally exhausted after a program in French, it is a great benefit to me to have a chance to practice again. And I was surprised how easily it came back to me.

Finally, I think the benefits to students of experiencing field trip programming in French are so great that I couldn't go back to only English now, even if I wanted to. Many new students, who may never otherwise have come to the Nature Centre, have had the chance to learn about their local ecology and natural heritage. In addition, they have the opportunity to see that French is not just a language spoken in the classroom, but also in the wider world around them. And they learn (at least from me) that it's okay to make mistakes when learning and using a new language, that the effort is half the battle, which, as I can testify, is the most important lesson of all in language learning.

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*Katie Krelove has worked as a Nature Interpreter at the High Park Nature Centre for the past two years. She was a presenter at the 2007 COEO conference where she happened to mention her French language programming experiences.*



## Play in Outdoor Experiential Education

by Rebecca Francis

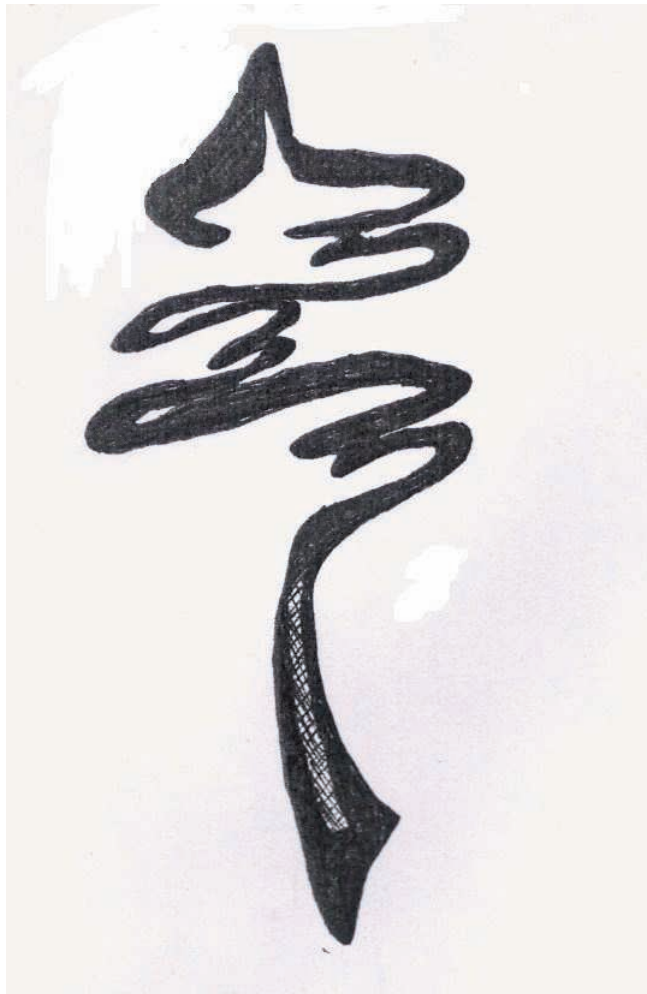
“Children around the world have one thing in common: the yearning to play and the joy of movement” (SDC, 2005, p. 4). The notion of “play” is universal. There are as many forms of play as there are people. Through casual games and recreation or organized sport, play is a worldwide interest. A special type of play called free play has no particular limits for children and thus intensifies their relationship with nature. Livingston describes this as “free flow” where the relationship “between nature and [oneself is] unobstructed and open” (2007, p. 130).

The wild provides “natural elements such as vegetation, water, soil, and wildlife [that] are attractive to children because their biological attributes are not provided by synthetic environments” (Moore, 1997, p. 207). Children need wilderness as an indispensable part of their development. Such contact forges a connection that allows them to better understand the world and its relationships. Unfortunately, children are spending less time simply playing outdoors.

Moore (1997) describes several factors that combine to restrict a child’s access to outdoor play. Increased traffic in cities and its associated dangers limit children’s spatial range and thus their knowledge of the natural environment that surrounds them. The “Bogeyman Syndrome,” coined by Louv (1990), refers to the increasing paranoia of parents and guardians that someone with ill intentions will come into contact with their children. While some fears are well-founded, many are irrational and encouraged by the media. The commercialization of play has capitalized on the paranoia of parents by providing for-profit indoor play spaces.

Lack of play space designed for children’s use is a major contributing factor to children’s restricted access to the outdoors. Many common lands are allocated for sport areas. While this has certain advantages, free play is as an important feature of childhood development. Changing family relations (single parent families, both parents working) mean that children often lack adults to supervise free play outdoors.

Technology has played a role in decreasing the amount of time children spend outdoors and thus interacting with nature. Electronic



media have saturated synthetic environments with television, video, computers and video games. Children are participating in these indoor activities as an alternative to playing outside when adult supervision is not available for outdoor play. To compound the problem, this media is often violent. Air-conditioning in residential dwellings has also encouraged children to spend more time indoors, especially in places where temperature control is combined with electronic media.

In school systems the trend towards the curtailment of children's play is evidenced by decreasing recess times. In addition, Carr (2001) notes a pedagogical impediment to the viewpoint of nature adopted at school: "When discussing the problems of humankind, the teacher may speak of people and their nonliving environment, leaving out interrelationships with the living world. In doing so, this teacher may be helping to destroy the students' connection with nature" (p. 3).

### **An Experiential Response**

In an attempt to help foster a connection with nature among students, teachers may bring classes to outdoor education centres. At Kandalore Outdoor Education Centre, group leaders often ask students what they are looking forward to for their time spent at Kandalore. While many answer with specific activities such as rappelling or cross-country skiing, there is usually one student in each group who is simply in awe of his/her surroundings and just can't wait to be outside all the time. These students often tell me they are looking forward to "just playing in the snow, having fun with friends, and being outside trying new things." The element of free play exists in this answer. Upon follow-up with students who answer along these lines, it is obvious to me that they do not often get time to roam around outside far from home and the vastness of the Kandalore site excites their urge to explore.

Experiences in and with the out-of-doors during childhood is one way to realize the importance of nature. As Moore notes, "If we assume that early childhood experience becomes embedded in the psyche of healthy adults, permanently affecting their behavior, attitudes, and values, then we had better start paying greater attention to the quality of the environments where those dimensions of personality have their experiential roots" (1997, p. 214-215). This article attempts to build a concrete case for making the exploration of nature, the wild and wilderness an important component of childhood development. To this end, I use the typology of experience and place in relation to childhood encounters with nature to discuss the importance of play.

### **Typology of Experience**

All experiences in nature, the wild and wilderness impact how children view natural systems and processes. Kellert (2002) identifies three ways of experiencing nature that have developmental impacts on children: vicarious, indirect and direct.

Vicarious activities take place largely away from the natural environment, mostly indoors. Depictions and representations of nature can be realistic, but are often mostly symbolic and metaphorical. This type of nature experience can be historical (as in indigenous cultures) and can contribute positively to cultural learning, especially when combined with direct experiences with nature. From an indigenous perspective, "[b]y living through vision, young people learn how to reconnect with and honor their own nature; they learn how to live a life in touch with their individual creative sources. They learn to live life purposefully and understand life and education as a process toward becoming complete" (Cajete, 1994, p. 149). More commonly, vicarious experiences take the form of media communication and technology that encourage children to spend leisure time indoors.

This trend culminates in what Robert Michael Pyle (1993) has termed the “extinction of experience.” The extinction of experience implies a cycle of disaffection that can have disastrous consequences. As cities and metastasizing suburbs forsake their natural diversity, and their citizens grow more removed from personal contact with nature, awareness and appreciation retreat. . . . So it goes . . . the extinction of experience sucking the life from the land, the intimacy from our connections. (p. 147)

Indirect experiences with nature offer physical contact with nature that is often restricted by built environments, organized activities and domesticated plants and animals. This contrived human activity exposes children to the functions and processes of nature but fails to allow children to learn through the powerful approach of spontaneity and free play. Many children and youth have exposure to indirect experiences such as nature programs, zoos and museums, however these are often experienced for short periods of time and do not generally allow for free play. While indirect encounters offer relevant developmental benefits, they are more suitable to early childhood skills such as naming, labelling and classifying (Kellert, 2002). Often these programs do not allow for the relationship to be re-explored and re-discovered over time, and thus for the natural setting to develop along with the child. This temporal arc is one defining benefit of urban neighbourhood natural places and other such direct experiences with nature.

Direct experiences are independent of any human built environment and outside of human input and control. Direct experiences in nature are characterized not only by a wilderness of place but also interaction. It is largely spontaneous and unplanned activity free from any organized structure and allows children to explore and play freely. While children are spending decreased amounts

of time in both direct and indirect settings, it is direct experiences that are of particular concern. Direct experiences with nature are considered essential for healthy development and maturation. Kellert (2002) links direct, indirect and vicarious nature experiences to cognitive and affective modes of learning that children often demonstrate through the creation of places.

The program at Kandalore allows for all three types of play as described by Kellert (2002). Vicarious activities are experienced through Anishinaubae stories. These stories of the people who lived on the land where Kandalore is situated provide a creative introduction and context for many of the activities. These stories often also lead to natural history lessons as the group goes about indirect experiences in organized group activities in the outdoors and as participants explore on their own during free time.

### **Place and Childhood Experiences with Nature**

The loss of the natural places where many experiences take place, especially among urban children, is most disconcerting. The growth of cities, both in population and physical size, has triggered

the elimination, fragmentation, isolation, and contamination of pockets of naturalness once characteristic of most neighborhoods and communities, even in urban areas. Moreover, . . . remaining habitats so often become victims of invasion and replacement of native organisms, further signifying not just ecological decline but also the loss of historically familiar nature. (Kellert, 2002, p. 142)

Children have often formed initial relationships with nature in the backyards of many homes and the surrounding neighbourhood, ravines, ditches, fields and parks. These are the places children know



best. According to Snyder, “[t]he childhood landscape is learned on foot, and a map is inscribed in the mind—trails and pathways and groves — the mean dog, the cranky old man’s house, the pasture with a bull in it — going out wider and farther” (2001, p. 472). Children identify with the places where they walk, play, bike and swim.

These natural settings give children the opportunity to build forts and hiding places. Often deemed secret, these places hold deep meaning for children. They allow them to feel ownership over something they can manipulate and change and allow the feeling of being able to create a place for oneself. In the words of Moore, “[n]ature is really the only medium that allows repeatable rewriting or remarking by the same children over time as they elaborate the place-relationship” (2000, p. 478). In this sense, the places discovered by children develop along with them. In building such places children “achieve both autonomy and a surging confidence” (Kellert, 2002, p. 134). This type of free play has no particular limits for children and thus intensifies their relationship with nature. As the relationship deepens, children become part of the secret — young naturalists observing and interacting with the wild. Summer camps provide an opportunity for children to connect with a sense of place. Often situated in non-urban wild settings,

camps provide a space for free play where the encroaching development of cities is not an obstacle. Camps are not always focused on learning about nature in nature; some camps are oriented towards more sedentary activities such as music or technology. Even these camps however often have an element of outdoor physical activity and often a section that focuses specifically on nature-based learning or environmental education. At the very least, the camp experience creates a learning situation where biophilia is encouraged in some way.

A recent survey conducted by the American Camp Association identified physical and thinking skills including adventure, exploration, and environmental awareness as one of the four overarching domains related to camper outcomes. The remaining three domains are positive identity, social skills and positive values (Henderson, Bialeschki, & Sutherlin, 2005). The survey found that camps are more likely to achieve the skills set out in these domains if they are explicitly stated in the camp objectives and programming (Henderson et al., 2005). This finding is encouraging for camp administrators looking to provide environmental education within the camp curricula. It also provides incentive for parents who have an interest in sending their children to camps that promote this type of learning. It is interesting that the



average age of campers in a random sample of American camps was “ten years old, with a range of 6–14 years, and 90 percent between the ages of 8–12 years” (Henderson et al., 2005, p. 79). This range correlates with middle childhood, thus rendering camp a quality place for children and youth to experience wilderness.

Places in nature for children are often located at the peripheries of their known world. This allows for greater exploration and wonderment regarding what lies at the edge and inquisition into what lies beyond. Morganroth-Gullette reflects on “how small the perimeter, how safe we had been all the time. It was amazing to me; plans could fail to produce adventure and still be the stuff of legend” (2000, p. 610). Children need only a brief glimpse of some places for them to have an affect on them for a lifetime (Kellert, 2002). For children, these experiences seem timeless. The places become ingrained in children’s minds and when experienced with a group, different children often remember different details. This extension from a direct nature experience to re-living it vicariously represents one of the benefits of vicarious encounters. That is, “[w]hen coupled with direct contact and immersion in nearby nature, these symbolic encounters provide extraordinary opportunities for psychosocial growth and development” (Kellert, 2002, p.135). These experiences often mature and form the basis of values of nature during adolescence as moralistic, naturalistic and ecological components emerge as significant skills development during these later years.

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- Rebecca Francis is in the late stages of a master’s degree in the Department of Environmental Studies at York University in Toronto. For her major project she is working at Kandalore Outdoor Education Centre looking at the roles of indigenous education, natural history and journaling in outdoor experiential education.

## That's a Wrap: Debriefing Ideas for Outdoor Educators

by Scott Caspell

Ensuring outdoor learning experiences have an effective closure is an important aspect of outdoor education. A well-facilitated debrief can help participants reflect and process their experience as well as help with the transference of leanings and skills.

The following ideas can be modified to suit a variety of groups, learning objectives and participant needs. All the activities will require framing regarding appropriate language, behaviour and so forth.

### Roses and Thorns

- At the end of a day have each participant share a "rose and thorn" (highlight and challenge) with the group.
- Add space for "shout outs" or celebrations. Participants can acknowledge a positive act or attribute of another group member or anything else they wish to celebrate. For example: "I want to give a shout out to the strong westerly winds for helping us sail across the lake today."

### Sand Sculpture

- Have each participant create a sculpture or draw a picture in sand/snow to represent his or her experience.
- Share in small groups or as a whole.
- If you like, focus on a theme or learning objective, such as leadership or ecology, to provide a framework for the activity.

### Human Sculpture

- Have students stand in a circle. Silently, one at a time, have participants shape their neighbour's body into a static position that reflects the sculptor's experience that day.
- Encourage participants to be appropriate and creative. For example, I could have my partner lie on the ground, arms behind his or her head, looking comfortable. I could then explain to the group that this reflects my comfort as a "leader of the day," learning about navigation, and so on.

### Newspaper Headlines

- If your experience could be summarized in a newspaper article, what would the headline be? Have participants share a newspaper headline that represents their experience.

### Skittle Debrief

- Open a bag of Skittles and pass out 8–12 pieces to each participant.
- On a portable whiteboard or with chalk on rock or a canoe bottom, write down a discussion topic for each colour. For example
  - Yellow — Highlight from the program
  - Red — One challenge you experienced and how you over came it
  - Green — Something you learned or enjoyed about the natural environment
  - Orange — Something you learned about yourself
  - Purple — Something interesting you learned about another group member
- Have each participant share his/her thoughts on the corresponding topic one Skittle at a time. Participants can eat the Skittle once they have spoken. Keep going until all the Skittles are eaten.

### Pinwheel Reflections

- Find a suitable outdoor location and have the members of the group lay on the ground like the spokes of a pinwheel, looking up towards the sky with their heads pointing inwards.
- Ask participants to close their eyes, take a deep breath and visualize the first moments of the program.
- Go around the circle and have participants chronologically share their memories.

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*Scott Caspell is currently working with Outward Bound Australia.*

## Who Killed the Electric Car?

Reviewed by David Spencer

Review of Paine, C. (Producer and Director). (2006). *Who killed the electric car?* [Motion picture]. (Available from Sony Pictures Classics, [www.sonyclassics.com/whokilledtheelectriccar](http://www.sonyclassics.com/whokilledtheelectriccar)) United States: Sony Pictures.

As the price of gasoline rises and consumers' awareness of global warming spreads, one might wonder why more people don't choose an automobile powered by electricity. In 1996 drivers in the US could lease an electric car from General Motors (GM). The car required no fuel and could be plugged in for recharging at home and at a number of battery parks. Not anymore.

*Who Killed the Electric Car?* is a documentary feature film that chronicles the life and mysterious death of the GM EV1 electric car. The film examines the EV1's cultural and economic ripple effect and how the alternative vehicle concept moved through the domains of government and big business. The film suggests that big automakers, combustion engine parts manufacturers and oil supporting politicians wanted the car to fail. The film begins with a mock funeral to mourn the loss of the EV1.

Actor Martin Sheen provides the narration. Other EV1 drivers voice their support, including Tom Hanks, Mel Gibson, Peter Horton, Alexandra Paul and Ed Begley Jr. "[T]he EV1 was a high performer. It could do a U-turn on a dime; it was incredibly quiet and smooth. And it was fast. I could beat any Porsche off the line at a stoplight. I loved it," said actor, Alexandra Paul (as cited in JumpStart Productions, 2006).

### Zero-emissions Vehicle Program

After the government of California Air Resources Board (CARB) saw GM's electric car prototype in the late 1980s, they launched the Zero Emissions Mandate (ZEV) in 1990 to clean up California's smog. Under the program, 2% of all new cars sold in California had to be electric by 1998 and 10 % by 2003 (JumpStart Productions, 2006).

Almost 1,000 EV1s were produced by GM before the company pulled the plug on the project in 2002 due to perceived insufficient demand. Other major carmakers including Toyota (RAV4 EV) also ceased production of their electric vehicles.

In the wake of a legal challenge from GM and DaimlerChrysler, the California government amended its regulations and abandoned its zero-emissions vehicle program. Shortly thereafter, automakers began reclaiming and dismantling their electrics as they came off lease. The EV1s were trucked to Mesa, Arizona, stripped of tires and batteries, subjected to a 46 cm crush, then trucked back to smelters in California where they were melted down. It is estimated that GM spent about \$600 to destroy each EV1 rather than selling them to lease holders for \$25,000 each. A few EV1s were donated to automobile museums minus the battery and mechanical systems.

Many suggest that GM never really wanted the cars to succeed at the consumer level. They say GM intentionally sabotaged its own marketing efforts because it feared the EV1 would cannibalize its existing business with gasoline combustion powered cars.

### GM Responds

GM disputes these claims and says it invested some \$1 billion in the EV1 (JumpStart Productions, 2006). Dave Barthmuss (2006) of General Motors USA outlines "GM's side of the story referring to their big investment before and since the EV1, the limited market for the EV1 in spite of their efforts, and a review of their poor handling of the decommissioning" in his blog post entitled "Who Ignored the Facts About the Electric Car?"

GM purchased several advertisements criticizing the film and filmmakers, including a two-page spread in the film industry magazine, *Variety*. Their intention may have been to either sway movie critics or intimidate media outlets addicted to GM's advertising dollars. One of the most intriguing facts is GM's \$10 million donation to the Smithsonian Institute, which was shortly followed by the Smithsonian removing the only fully intact EV1 on display from the transportation hall of the Museum of American History. This happened one week before the film opened in New York and Los Angeles (McCormick, 2006). In an interview, tree hugger Chris Paine, writer and director of *Who Killed the Electric Car?*, said, "If the Smithsonian is pulling the EV1 and replacing it with an SUV they should put that EV1 back where it belongs: on the road. SUVs are the dinosaur and electric cars are the promise. Putting the EV1 into "storage" as they've said is just so wrong" (Gordon, 2006).

## Response at the Box Office

Chris Paine's *Who Killed the Electric Car?* premiered at the Sundance Film Festival in 2006 before its release by Sony Pictures. The Toronto Premiere was July 8, 2007 at Harbourfront Centre in Toronto where movie goers also engaged in a post-screening Q&A with the director. The film was the third highest-grossing theatrical documentary of 2006 and screened with *An Inconvenient Truth* in many markets. The film was nominated in the Best Documentary category by the Environmental Media Awards and received four other film award nominations (Papercut Films, 2006).

## Do We Want to Change?

Electric cars are very reliable. No oil changes, no tune ups. Electric powered vehicles have less than one-tenth as many parts as a gas powered car. There's no engine, transmission, spark plugs, valves, fuel tank, tailpipe, distributor, starter, clutch, muffler or catalytic converter. Electric cars do not consume oil-based products to operate.

According to the US Department of Energy website, "Oil is the lifeblood of America's economy." Currently, it supplies more than 40% of our total energy demands and more than 99% of the fuel we use in our cars and trucks" (US Department of Energy, 2006).

This writer found the film informative and inspiring. Switching from oil-based vehicles to alternative powered transportation makes good sense for our environment and reduces political interference in foreign oil producing countries. Sign out the *Who Killed the Electric Car?* DVD from your library or buy the film and show it to your students, family and friends. We need to overcome our addiction to oil and drive greener cars.

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*David Spencer is a secondary school educator working in an alternative school. He has recently championed the COEO Facebook page (<http://faceto.us/coeo>).*



# COEO Annual Conference 2008

Bringing  
Us All  
Together  
An Algonquin Rendezvous

September  
26 27 28



Together we learn best and grow strong. The rendezvous idea is for folks in the outdoor field to come together to celebrate our diversity and potential to learn from each other. Perhaps we are spread thin and work in isolation. COEO members are hoping to connect with a wide array of outdoor education practitioners and researchers.

Location: Camp Ahmek, Canoe Lake,  
Algonquin Park Road Accessible

We will draw out these connections by hosting a series of roundtable meetings as a special conference feature. Come and meet peers and colleagues and share in a dynamic conference program in an Algonquin site steeped in history and natural beauty.

A list of presenters, conference highlights and registration information will follow in the next issue of *Pathways*.

## Information for Authors and Artists

### Purpose

Pathways furthers knowledge, enthusiasm, and vision for outdoor experiential education in Ontario. Reflecting the interests of outdoor educators, classroom teachers, students and academics, the journal focuses on the practice of outdoor experiential education from elementary to post-secondary levels and from wilderness to urban settings. Pathways highlights the value of outdoor experiential education in educating for curriculum, character, well-being and the environment.

### Submitting Material

The Pathways editorial board gladly considers a full range of materials related to outdoor experiential education. We welcome lesson outlines, drawings, articles, book reviews, poetry, fiction, student work and more. We will take your contribution in any form and will work with you to publish it. If you have an idea about a written submission, piece of artwork, or topic for a theme issue, please send an email outlining your potential contribution to the Chair of the Editorial Board, Kathy Haras (kathy.haras@lakeheadu.ca).

We prefer a natural writing style that is conversational, easy to read and to the point. It is important for you to use your style to tell your own story. There is no formula for being creative, having fun and sharing your ideas. In general, written submissions should fit the framework of one of Pathways 20 established columns. Descriptions of these columns may be found at [www.coeo.org](http://www.coeo.org) by clicking on the publications tab.

Whenever possible, artwork should complement either specific articles or specific themes outlined in a particular journal issue. Please contact the Chair of the Editorial Board if you are interested in providing some or all of the artwork for an issue.

### Formatting

Use 12 point, Times New Roman font with 1.25 inch (3.125 cm) margins all around. Text should be left justified and single spaced. Place a blank line between paragraphs but do not indent. Please use Canadian spelling and apply APA referencing style.

Include the title (in bold) and the names of all authors (in italics) at the beginning of the article. Close the article with a brief 1–2 sentence biography of each author (in italics).

Do not include any extraneous information such as page numbers, word counts, headers or footers, and running heads.

Pathways contains approximately 500 words per page. Article length should reflect full page multiples to avoid partially blank pages.

Submit articles to the Chair of the Editorial Board or issue Guest Editor, preferably as a Microsoft Word email attachment.

Each piece of artwork should consist of a single black and white drawing (cross-hatching but no shading) on 8½ by 11 paper.

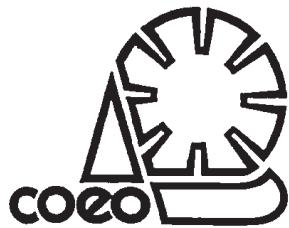
Submit artwork to the Chair of the Editorial Board or issue Guest Editor either as a digital file (jpg is preferred) or as a hard copy.

### Submission Deadlines

Volume 1	Fall	September 15
Volume 2	Winter	December 15
Volume 3	Spring	February 15
Volume 4	Summer	April 15

### Complimentary Copies

The lead author receives one copy of the issue in which the article appears and one copy for each co-author. Lead authors are responsible for distributing copies to their co-authors.



# The Council of Outdoor Educators of Ontario

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| <input type="checkbox"/> Regular \$50.00                                 | <input type="checkbox"/> Student \$35.00         | <input type="checkbox"/> Family \$60.00 |
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Organizational memberships are for businesses, conservation authorities, outdoor education centres, etc. This rate will include one copy of Pathways, a Web link (if requested in writing), a maximum of three people at a member's rate for conferences and workshops, reduced cost of ad space in Pathways, and display space at conferences.

**United States orders please add \$4.00. International orders please add \$12.00.**  
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Please send this form with a cheque or money order payable to

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