Pathways

THE ONTARIO JOURNAL OF OUTDOOR EDUCATION
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Pathways

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. We achieve this by publishing the *Pathways* journal, running an annual conference and regional workshops, maintaining a website, and working with kindred organizations as well as government agencies. Members of COEO receive 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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Pathways is always looking for contributions. Please refer to page 36 for submission guidelines.

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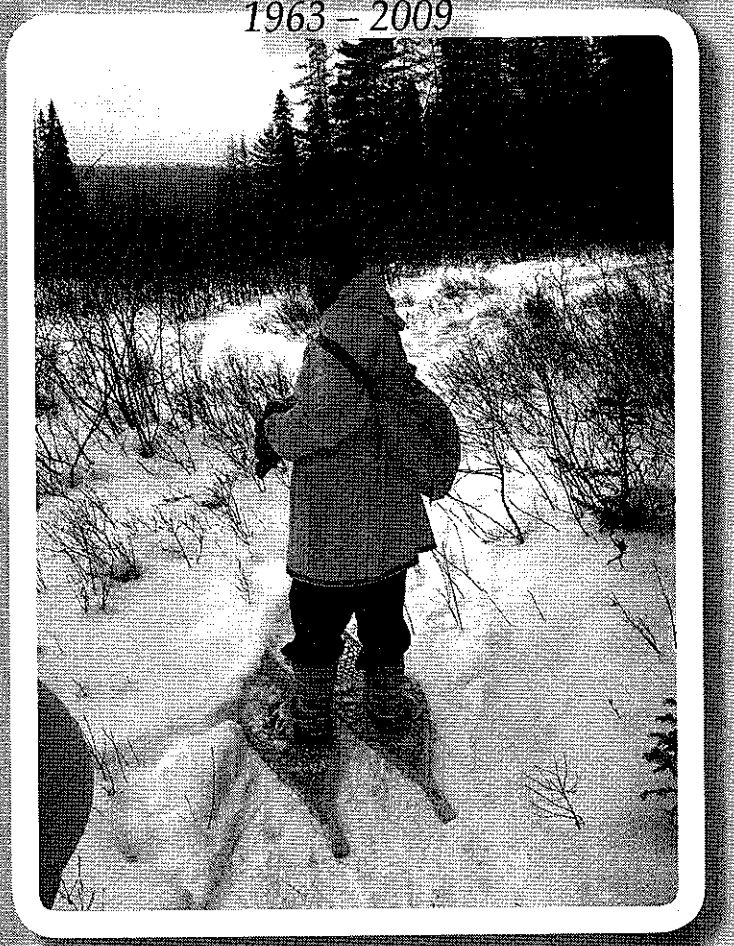
Features

Columns

In Memoriam

Michael Rosholt Elrick

1963 – 2009



He was known to most COEO friends as Mike Elrick, or simply, Mike.
He was a trailblazer in the world of outdoor education in many ways.
His own words and writings frequently talked of being "home."
He was home while in Guelph where he spent his childhood, taught and lived with his family.
He was home on wilderness trails where his teapot boiled with kindred spirits around.
He was home wherever he held a paddle and explored a watershed to its source.
He was home in the space that resonated from his guitar strings.
He was home in the feel of a hug with family members, colleagues and friends.

Even in Mike's later days, when he knew he had cancer, he referred to being on life's later journey, perhaps his last, but it was still a journey in which he sought to find a sense of comfort — a sense of having never left home.

To know Mike was to learn how to gracefully explore one's sense of home.

May your last trail in life's journey take you peacefully home, Mike.

A future issue of *Pathways* will honour Mike's many professional accomplishments.

Editor's Log

For me, fall is the perfect time to travel. The crowds are gone and so are most of the bugs. The days are still warm and sunny while the nights are cool and crisp. There is time to reflect and get ready for the winter.

In putting together this fall issue of *Pathways* it struck me that it too has a bit of a travel theme. Brian MacTavish takes us to central Ontario where we run into two dead deer and explore the meaning of life. Then we visit Lynn Picard at the Island Lake Outdoor Education Centre. Last year at the conference round tables people indicated they wanted to learn more about how and where outdoor education occurs in Ontario. Lynn is the first (but I hope not the last) COEO organizational member to respond to my plea to "write something about yourself for *Pathways*."

Submissions by François Gravelle, Jacquelyn Oncescu and George Karlis along with Heather Ross and Jonathan Fowles just found their way to my e-mail in-box. While we don't usually publish three such academic pieces in one issue, their practitioner-friendly focus makes them an interesting read. How do we nurture a one-time cross-country skiing experience to become a life long activity? How do we determine if outdoor educators are fit enough for their job? How do we interest rural youth in outdoor recreation? The answers are in this issue of *Pathways*.

Our journey continues with a brief stop in Calgary to visit long-time contributor Greg Lowan. His article about wolves and water takes us to Mongolia and beyond. From Calgary, it's just a hop-skip-and-a-jump to Igloolik where three former Queen's University Outdoor and Experiential Education students are teaching in the local high school. Kim Hedges, Larissa Geraghty and Maren Vsetula have conveyed their experiences in an article that leaves me wanting to hear more. Or perhaps it's just encouragement for me to go up for a visit.

Gisele Winton Sarvis takes us back to RKY Camp and wraps up the most recent COEO conference. While we don't have anything from astronomer Terence Dickinson, we do have a "Backpocket" article about stargazing from Christopher Britt and Dale Warring to keep up your interest in the night sky. If you've ever wondered how to project a star map onto a ceiling using an overhead projector, this lesson plan is for you.

As always there is Zabe MacEachren's "President's View" and a call for you to contribute to your journal. The winter issue is wide open to suggestions while Jessica Dunkin and Bryan Grimwood are looking for submissions about all things canoeing for the summer 2010 issue. So relax and enjoy the trip. We'd love for you to send us a postcard.

Kathy Haras

Sketch Pad - The art for this issue of *Pathways* was generously provided by Chris Gyuk and Jennifer Owens.
Chris Gyuk lives in Hamilton and works at Adventureworks building ropes courses and climbing walls. His work appears on pages 6, 10, 21 and 27.
Jennifer Owens is a registered massage therapist who has a passion for painting. Her work appears on the cover and on pages 11, 17, 19 and 23.

President's View

What I like about fall is that I can trust the leaves will change colour. I never know when they will peak but I love that I can depend upon the horizon becoming a fire of red, orange and yellow. Every fall no matter what else happens, at some point, I know that my eyes will be greeted with a palette of warm colours. As for my work life I never know what I will encounter. After a great summer of canoeing and adventuring out west, I had expected to slip back into some work routines and COEO-related tasks but was instead greeted by computer and teaching space glitches.

Working in unfamiliar spaces and having to constantly call technicians to deal with major computer repairs was daunting. On more than one occasion I found myself expressing gratitude to COEO's passionate volunteers. At the peak of my computer woes the COEO fall conference was well into its planning. Board members came to my rescue and arranged conference calls for final meetings. This made my fall and my first year as COEO president seem smooth and successful, just like the leaves changing colour.

I don't know about you but I am still riding the energy wave from the COEO conference. I want to especially thank all those COEO members who worked so hard throughout the year to put together a fabulous weekend. The range of presenters was enriching and for many people familiar with the central or northern part of the province it was great to share some of the Eastern region's highlights. Less than a year ago the horizon of Wolfe Island lacked huge wind generators. Now they capture my attention every time I am downtown in Kingston. And for so many youth in Kingston a visit to the Ryan Centre, also on Wolfe Island, is very special with its hands-on curriculum designed by Walt Sepic (this year's Dorothy Walters Award winner). And what could be more rewarding than having youth themselves give a tour of their gold EcoSchools?

I want to thank the departing, returning and incoming board members. COEO has always depended on the relentless commitment of its volunteers to make things happen. We acknowledge the contributions of Jane Wadden and Denise Biega, both of whom are leaving the board — you will be missed. Special thanks are extended to returning members Kyle Clarke, Laura Yakutchik, Margot Peck, Shane Kramer, Scott McCormack and Kate Humphreys. And a warm welcome to two new board members, Daniel Oster and Michelle Parsons. To our treasurer I want to say a special thanks; Chris Lee can make pie charts and juggle numbers much better than I can.

I am looking forward to my second year as COEO president. Guided by the wisdom of the board, I hope we at COEO can continue to build our political presence throughout Ontario as well as embrace and strengthen the Ministry's new environmental education policy framework. In the midst of computer glitches towering over me, I find great comfort in knowing many people are indeed outside and learning directly in Earth's greatest classroom. For all those who made it to the COEO conference, please wear your shirt frequently and proudly. It bears a message that cannot be overstated: Ask your teacher to take you outside. And when you are outside this fall notice how well the leaves embrace change as they turn from green to fire red and orange.

Zabe MacEachren

Education and Interpretation with Difficult Issues Outdoors

by Brian MacTavish

Tippy went to sleep. Ginger ran off. The kitty passed away. All are attempts at distraction to avoid talking to children about death as a natural occurrence. Yet this shielding may block important opportunities to teach and interpret. If we are creatively resourced in various education and interpretation methods, we should instead be able to seize these as important times of learning. Death is an accepted part of life, all too well known when surviving by hunting and farming, but we have isolated ourselves from it through our sanitized urban living.

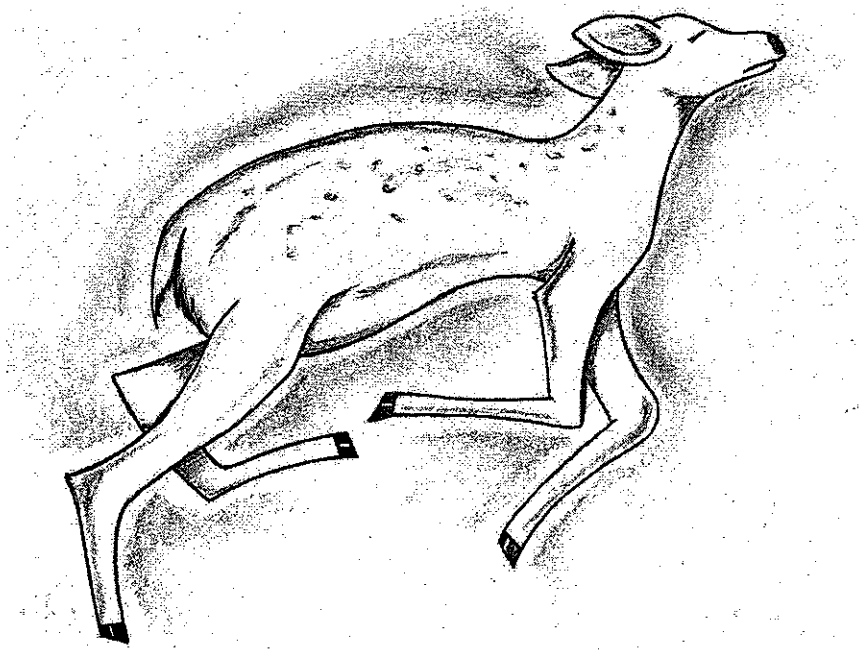
Last winter, two timely "wild deaths" refreshed my focus on maximizing nature interpretation experiences with children. Specifically, these occurrences instructed us on how death plays out in the natural environment. They illustrated the brevity of life, wildlife's valiant struggles against harsh challenges and the ecosystem's perfect way of recycling nutrients and elements.

Last winter, staff coming in to work at our outdoor education centre early one morning found blood everywhere on the snow. A dead deer lay amidst it all, partially consumed. In the interests of "protecting" the weekend guests arriving that evening, the deer was scooped up in the maintenance tractor loader bucket and hidden. With the kill site disturbed long before our residential students were out of their cabins that departure morning, we decided to take the deer over to our 40-hectare forested site, to be both a natural feed and an ongoing observatory.

Over the coming weeks, each new school group was briefed generally on the upcoming kill site before approaching the carcass. Though many were squeamish at first, they witnessed the natural decomposition process few ever see and soon began to postulate as to what may have caused the deer's death. They collectively showed unprompted respect for the animal and soon moved from comments of "gross" to matter-of-fact questioning and acceptance. Deeper conversations on death and dying were not noted at the site, but may have occurred later with trusted classroom teachers, especially among students attending faith-based schools where death has been previously discussed.

The earliest groups were able to see internal organs, skeletal bones and herbivore distinctives, such as plant-grinding molars and a long intestinal tract. Successive scavenger feedings meant gradual consumption of various deer parts. The remains began to diminish as the carcass was used for individualized purposes, such as bones for calcium and hair for lining dens and other homes.

A few weeks later, as one local secondary outdoor education group was snowshoeing, it was discovered that all of the large trace remains were missing. Without any prodding, the students then proceeded to go on a "wild deer chase" to locate the missing parts. The students persevered and found the remains widely scattered throughout the bush by various carnivores. With a vertebral column here and a jawbone there, we witnessed the near completion of integrated recycling. It was one of my favourite bush crashes, and it was totally student led.



The Sequel!

Another example of death and decay occurred later the same winter. As the ice was going out on the Trent–Severn Waterway, I received a call from a neighbour that a deer was stuck in the ice — an odd description! Upon searching, at the softened edge of the shore ice shelf, a deer was found swimming frantically, trying to get up onto the ice.

Having just read a news report of a man killed by a train while trying to rescue a dog, I did a full risk management analysis. I called on two colleagues who helped me get out two winter-stored canoes together with safety equipment. Once on the ice, I moved the canoes forward, stepping from one to the other until I reached open water. Sadly, upon arrival I found that the deer had succumbed to the cold water. With no tracks leading from shore, the deer apparently had been swimming from the far shore through open water to arrive at the ultimate ice barrier. At some point prior to, or during the struggle, it had broken its hind leg so that post-rescue survival would have been highly unlikely in any case.

My colleagues and I concluded it would be best to remove the deer from the water for decomposition — a task involving some strenuous ORCKA solo paddling! We then took the deer across to the "coyote drive-through" at the farm where, again, it was recycled, but this with unfortunately few student groups visiting to observe the stages.

Some may debate whether we were encouraging the carnivorous populations in leaving the deer for predatory consumption, but our feeling was that these were local casualties in a local habitat, and predators would eventually have found and scavenged them in any case. We simply moved the site of decomposition to create better learning opportunities.

Interpreting Natural Occurrences

What are we to learn from these two difficult experiences — first discovering a deer kill and then attempting to rescue another deer unsuccessfully? Simply, that life is precious and death is beyond our control. This preciousness moves us to "save" lives in many contexts. As outdoor educators we care about each individual person with whom we are journeying and share with them some of the joys we see in our outdoor experiences. Though many situations are beyond our

control, we are compelled to take action and carefully manage risk. We will not always see happy endings. Such unfavourable outcomes should not be hidden from children who do see and will wonder. There is purpose in witnessing and sharing these humanly sad occurrences. For my part, I still ponder things our family and I learned as my father died in 2006.

Taking children outdoors requires spontaneous processing and sensitivity to what natural life will present to outdoor leaders. We must be prepared to teach with sensitivity, that is, to interpret while considering all fears, inexperienced participants and varied comfort thresholds across the group. We know that many of these unplanned occurrences provide natural teachable moments that enable children to explore deeper issues, possibly for the first time. We must be familiar with tools of "interpretation" and "environmental education," "two trees . . . found to be grounded with common roots" (Cable & Cadden, 2006). In this regard, after John Muir (1870s) and Enos Mills (1920s), Freeman Tilden proposed six principles of interpretation focussed on the National Parks (1957, published in 2008) that may guide us in "best practices" for interpreting nature.

According to Tilden, interpretation is:
1. *Relating the universe to the personal world*
2. *Revelation from information (see below)*
3. *A learnable art*
4. *Provocation, the aim*
5. *Presenting the whole story to the whole person*
6. *Adapted for children, sensory rich (he suggested advance briefing material)*

Also consider Joseph B. Cornell's (1989) engaging, similar approaches when designing a nature interpretation program for children.

In addition to Tilden's six principles, Craig (Tilden, 4th ed. Introduction) suggests five lesser known interpretation principles based on Tilden's later writings:

7. Mindsight, seeing behind the mind's eye
8. Building connections, a sense of wonder
9. Using sensory experiences to self-interpret
10. Promoting desired environmental behaviour
11. Developing the idea that stewardship is a personal obligation

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Using Information to Encourage Wonder and Revelation

During my Queen's University OEE internship at Bruce County OEC, Peter Middleton, an outdoor teacher and accomplished naturalist shared with me that we need to increase opportunities for children to "experience wonder."

What information might aid students' investigations towards revelation about the white-tailed deer? Discuss with them how deer are masterfully suited to their niche. Children may experience wonder upon learning that, "Deer are even-toed ungulates — mammals with split hooves. The legs are structured perfectly for running . . . . The deer actually walks on its toenails instead of its toes. This type of foot is designed effectively for fast movement" (The bone structure of whitetail deer, 2006). Since only the hooves touch the ground, the other parts of the foot, essentially, are parts of the leg, substantially increasing the length of stride (Huffman, 2007). But, as much as these legs are suited for fast running, they are not well adapted to running in the snow once it reaches a sink depth of more than 40 cm or for swimming long distances. Therefore even in death they are an essential part of the food web, ensuring the survival of many associated predators and scavengers.

On Scene Reality

The dead deer in the snow, upon closer examination, had an aged, prior amputation of its hind leg; it was already three-legged. So, like the leg-fractured "aquatic" deer, this magnificent animal could not have survived on its own much longer.

In teaching faith-based student programs, schools and environmental centres recognize a component of revelation is displayed outdoors in God's creation* around us. We use and extend the teaching to apply it individually and to family relationships. Our goal is to nurture our children and our students in order to get them ready to "leave the nest." After more than 20 years teaching outdoors, I still believe we must continue, against societal apathy and symptoms of "nature deficit disorder" (Louv, 2005), to compel students to "go and experience" with all their senses more natural scenes regularly for themselves. They will be able to understand relationships and make better decisions to protect natural beauty and intricate processes. Let us encourage them to be the environmental threat "Lorax's" to warn others for this generation (Dr. Seuss, 1971).

Students who we have exposed to natural life realities and encouraged to be more in touch with their eco-surroundings will be more apt to have awareness of local happenings and threats. So, too, they must be vigilant in their human community to anyone who, like the deer, may need their help. Jesus Christ died to bring new life. In order to sustain life there must often be death. We dare not shield our children from this harsh reality. However, we can let them know that they are not alone in all of it. Age-appropriate experiences of natural occurrences such as death, plus strong relationships and personal supports, will enable them to be prepared, with a realistic view of all life, to weather many storms and potential losses in the future.

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**Related Biblical scripture references are available upon request to the author.*

Brian MacTavish has a BES (Geography) from the University of Waterloo, a BEd from Queen's University in Outdoor and Experiential Education, and a COEO-partnered MScEd through Northern Illinois University. He has directed the Fair Glen Outdoor Christian Education program since 1988. It is part of Fair Havens Ministries (FHM) offering residential and day-use programs for private Christian, Catholic, public, home and alternative schools. FHM offers family camp, youth leadership and family canoe trips. He and his wife, Dianne, have four "nature surplus disorder" children.

Island Lake Outdoor Education Centre

by Lynn Picard

Island Lake Outdoor Education Centre is a partnership between the Upper Grand District School Board (UGDSB) and the Credit Valley Conservation Authority (CVCA). The UGDSB has an agreement with the CVCA to use its facilities at Island Lake Conservation Area, near Orangeville, for education programs. The centre is run by one teacher, volunteers and recruits through the UGDSB program department.

To maximize the use of this facility, programs are scheduled by the facilitator and schools are notified via e-mail when grade appropriate programs are available to their classes. Due to the location of the centre and bussing time, costs and environmental impact, students most likely to visit the centre are those from the eastern part of the UGDSB.

Busses are booked and paid for through the Island Lake Outdoor Education Centre. Participation fees vary depending on the program and are used to off-set bussing and program costs.

For full-day programs, teachers may wish to organize a cookout lunch. Traditionally this involves purchasing hot dogs and marshmallows or s'mores for their school group and bringing the food to cook on the open fire pits. Or, teachers may ask students to bring a litterless lunch. We ask students to always slug a mug, carry a cup, or bring a reusable drinking bottle. Hot chocolate is provided in cold weather.

Following are some of the programs running at Island Lake Outdoor Education Centre:

Grade 8 — Water and Character Education Program

This program focuses for a half day on "water." Students do scientific tests to determine water quality, and investigate the aquatic life that lives in our local waterways. Students learn about watersheds and their Credit River watershed connection at Island Lake. This program is directly linked to the science expectations for Grade 8 students on water systems.

The other half day focuses on "character education," which is being introduced to all schools in the board, through games and initiative tasks. This is a chance for students to gain needed skills at the beginning of their leadership year in school.

In order to accommodate a large number of Grade 8 classes during our fall program, we book two Grade 8 groups per day and rotate the students after lunch. Retired teachers and CVCA education staff assist with this program.

Grade 5 — Earthkeepers Program

Grade 5 classes are invited to participate in the Earthkeepers program. Earthkeepers is a program developed by the Institute for Earth Education. Students visit the centre for three consecutive days to learn about Munch Lines, Specks, Connections and Time, and to experience the natural environment. In turn, they learn how to care for the environment when they return to home and school by earning all of their Keys. Earthkeepers is an integral part of the Grade 5 Conservation of Energy science curriculum and creates energy for change in schools. It works very well with Ontario EcoSchools programs. High school co-op students are sometimes available to assist with this program.

Grade 4 — Habitats Program

Grade 4 students participate in the Habitats Program. The program focuses on what animals need to survive: food, water, shelter and space. By playing several simulation games, students experience firsthand the difficulty of animal survival. Through

discussions and personal experience, the different needs and adaptations of herbivores, omnivorous and carnivores are also discovered.

Grade 7 — Trappers and Traders Program

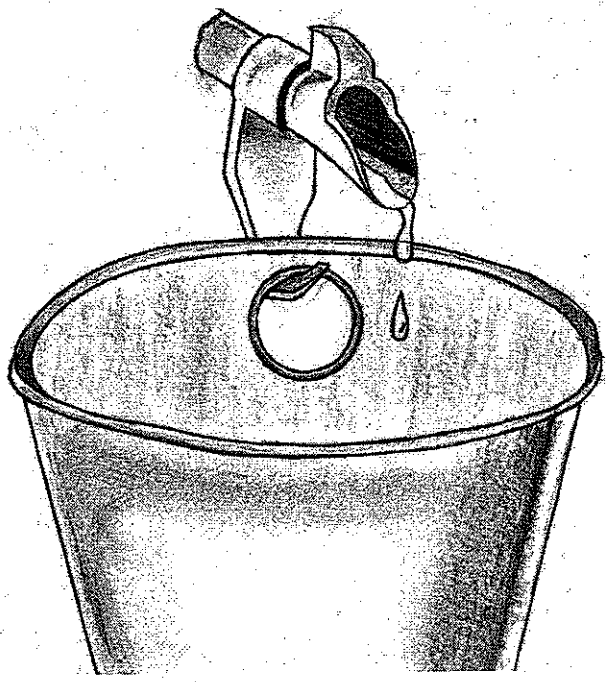
The Trappers and Traders Program is directly related to the Grade 7 History Curriculum, which focuses on New France. Students take on the role of fur traders — coureur des bois — with an understanding on how to survive winter in "the new world." They use map reading skills to gather furs and purchase the supplies they require to survive. Examples of cooperation between the French fur traders and Natives, and conflict between the French and English fur traders, are also shown. Traditional songs and games from the period may also be included.

Getting into the spirit of the day teachers sometimes organize a "Trappers and Traders" cookout lunch. This may include brown beans warmed over the fire or other fare they find in their research to be appropriate. Having the students "slug their mugs" and so on is true to the time period and environmentally friendly. Participants eat lunch in a scattered fashion throughout the day.

Adults are required to play various roles in the fur trade simulation, such as trading post attendants, bankers, store clerks and Native guides. Last year we were fortunate to have teacher candidates from Lakehead University's Outdoor Ecological and Experiential Education program to assist with this program.

Grade 1 — Maple Syrup Event

With spring comes the Maple Syrup Event at Island Lake Outdoor Education Centre. We are delighted to be able to invite Grade 1 students to come and take part in the tradition of making maple syrup by sending a bucket, spile (spout), and teacher's package to their schools. The Maple Syrup Event covers many of the Grade 1 science



curriculum objectives including studying characteristics of living things, energy in our lives, and daily and seasonal cycles.

School groups are invited for a half-day program. Parents are encouraged to join us to assist children in action, learning about their environment.

During the visit, students

- tour the maple bush
- are involved with sensory awareness activities
- identify maple trees
- measure trees and determine the number of taps required
- see a comparison of historical techniques for collecting syrup
- tap trees and hang buckets
- sort tools
- see an evaporator
- taste product

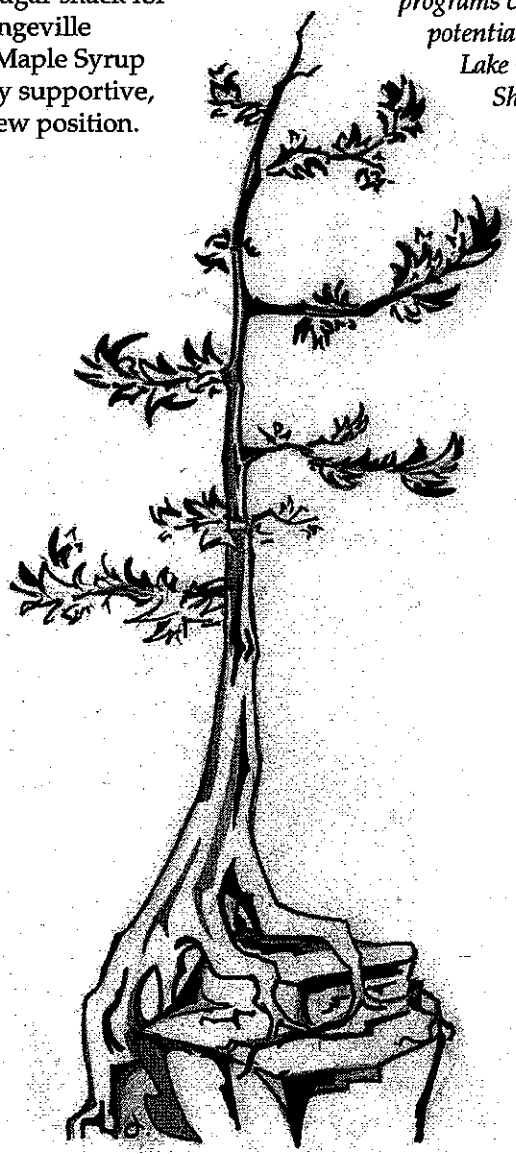
Participants from Canada World Youth, Katimavik and retired teachers assist with this program. Last year it was even offered in French, as one of the retired teachers was a French teacher.

Teacher / Facilitator Thoughts:

I owe my awesome vocation to two wonderful educators. The first is Dave Lyons, who established Island Lake Outdoor Education Centre for the Dufferin Board of Education before it merged with the Wellington Board of Education. He set up the Earthkeepers program at the site, gathered equipment, and created props that are still being used. The second is Gregg Reekie, who worked at the centre for about 13 years. He managed to keep the centre running during many "cutbacks" when other outdoor education centres were being shut down. Gregg also created the Grade 1 Maple Syrup Event, acquired grant money to purchase a new evaporator, and returns each year to the sugar shack for the program and the Orangeville Optimist Club weekend Maple Syrup Festival. He has been very supportive, mentoring me into this new position.

I am currently in my third year at Island Lake Outdoor Education Centre. I have recovered from feeling overwhelmed during my first year, have settled into the changes I made in my second year, and now feel like the centre is providing excellent programs to as many students as possible. To arrive at this place, I recruited a lot of help and owe thanks to the many people who have assisted me. Though there are too many to list, I must make special mention of Wanda and Wayne White, retired teachers who volunteer their time to help with programs at the centre.

Lynn Picard is looking for resources, activities, or great ideas that go with the programs currently running, or with the potential to be offered, at the Island Lake Outdoor Education Centre. She can be reached at lynn.picard@ugdsb.on.ca.



Of Wolves and Water

by Greg Lowan

Both Easterners and Westerners refer to the land as the mother of humanity. How then can anyone who does injury to Mother Earth be considered civilized (Rong, 2008)?

In *Wolf Totem*, a recent Chinese bestseller, Rong (2008) describes the intimate relationship between the nomadic Mongolian grassland people and wolves. The grasslanders simultaneously depend on, fear and worship wolves as the ultimate rulers of the grasslands. Based on centuries of experience, they recognize the important role of wolves in maintaining the ecological balance of their environment. *Wolf Totem* describes the nomads' struggle under the threat of government-sponsored colonists who were determined to subdue and transform the grasslands for agricultural purposes during the Chinese Communist Cultural Revolution of the 1960s.

While reading *Wolf Totem* one leisurely morning, I was suddenly interrupted by a flash flood in my neighbourhood. Heavy rain and high temperatures left my entire neighbourhood under a foot of water. Many basements were filled to the ceiling causing extensive damage. I was immediately struck by the similarity between the simultaneous fear / worship relationship of the Mongolian grasslanders with wolves and peoples' relationship all around the world with water. While this phenomenon may be embodied in different ways in different areas, there is a consistency in our common worship, dependence on, and fear of water that transcends culture and geography. We are dependent on water for life, hypnotized by its many forms, and fearful of its awesome destructive power.

In our increasingly interconnected global society, conflicts over water take many forms. In this article I explore several cases of water conflict, and interweave these with observations from *Wolf Totem*. Similar to the Mongolian nomads and their struggle to preserve grasslands, many people involved in current water conflicts are wrestling to preserve local water access and management in the face of increasing global political and economic pressure.

The Mongolian Grassland

Rong (2008) relates the semi-autobiographical experience of Chen, a Han Chinese university student who is forcefully relocated to the inner Mongolian grasslands in 1969 during the Cultural Revolution. Along with other Han Chinese students, Chen is hosted by an Indigenous Mongolian grassland community. Chen spends several years learning traditional skills, such as shepherding and hunting, the teaching of which is infused with the traditional shamanistic beliefs of the Mongolian grasslanders.

Central to the grasslanders' belief system is wolf worship. Wolves represent the pinnacle of mastery and nobility of the grassland environment. The Mongolians have learned how to survive and thrive in the grasslands by observing the habits and practices of the wolves. Chen observes the Mongolians mimicking wolves' strategies in everything from hunting, trapping and warfare to structuring their society.

The Mongolian grasslanders and their wolf cousins seem engaged in an endless dance — vicious in one moment, reverent the next. Every night shepherds must stay awake watching over their herds of sheep, goats and horses to protect them from wolf attacks. At one point Rong (2008) describes a full-scale wolf hunt that occurs in retaliation for the massacre of a hundred horses by an especially vengeful wolf pack. Chen observes that while the Mongolian hunters relish the battle, exterminating 50 wolves in an elaborate trap, they also express remorse for killing those that they hold in such high regard.

For millennia the Mongolians have been keenly aware of the wolves' role in maintaining ecological balance on the grasslands. For example, wolves routinely feed on gazelles, marmots and other small rodents such as mice, voles and squirrels. The Mongolians recognize that the wolves are needed to regulate these populations, thus ensuring that the grasslands are preserved for their own grazing herds. If the wolves were eradicated or restricted from their feeding routine, gazelle and rodent populations would explode, reducing the grazing pastures to stubble and pock-marking the grasslands with leg-breaking burrows. It is in the Mongolians' best interest, then, to ensure that wolf populations are preserved. This position often creates conflict with communist government authorities who view the wolves as fearsome pests that should be indiscriminately exterminated. Similar clashes in perspective on how humans ought to interact with the nonhuman world are right now resonating around the globe. The growing global water crisis is a prime example of this kind of conflict.

Water

Human beings cannot live without water. A quick review of basic science reminds us that our bodies are composed of approximately 75% water and that 70% of the Earth's surface is covered by water. We all use water in different forms for cooking, bathing, recreation and transportation. There is no denying that water is a vital building block of life. While modern Western cultures might recognize this merely as scientific fact, others have long histories of worshipping water as sacred. The world's population continues to increase at an alarming rate, and within this "global village" more and more people are scrambling to emulate a highly consumptive Western lifestyle. As a result of rapidly increasing populations and lifestyle expectations, issues of water access and management are at the forefront of many peoples' consciousness. People are dying of thirst, starvation and disease due to lack of access to clean water. Water is becoming a central issue even to wars.

While we all recognize the necessity of water for life, we simultaneously fear its wrath. Recent examples from around the world of natural water-related disasters are readily identifiable. In 2004 there was the tsunami that killed over 200,000 people. In 2005 it was Hurricane Katrina and the devastation in New Orleans. And just this past September floods in the Philippines displaced some 450,000 people. On a smaller scale I am reminded of the recent flooding of my own neighbourhood in central Calgary. I found it ironic that while I was struggling to keep water out of our basement, I was simultaneously gaining sustenance from sipping it.

India

Shiva (2002) describes the global water crisis from an Indian perspective. She relates that water is sacred in Indian culture. For example, India itself is named after the Indus River. Punjab, a recognizable cultural, linguistic and geographical name, literally means "five rivers." Perhaps the most famous example is the Ganges River – in Indian mythology, the Ganges was given to the people by the Gods. Throughout India the Ganges is believed to have cleansing and healing powers. It serves as the site of many religious practices.

India also has a long history of successful communal water management (Shiva, 2002). Indian communities traditionally maintained water temples that were communally managed by the landless caste and freely available to all community members. These water temples contained cisterns for drinking and cooking water while also controlling irrigation for agriculture. These practices persisted successfully for centuries until British colonialists forced foreign water management techniques on villagers with drastic results. Compounded by the building of hydroelectric dams and water privatization forced upon them by the World Bank, many Indian communities face famine due to a lack of water for drinking and agriculture. However, Shiva (2002) also notes that several communities, often led by women's groups, have fought back against government and multinational interests, reclaimed their water

systems and successfully returned to their traditional methods. These examples serve as beacons of hope that local people may successfully confront government and multinational forces to take control of their own communities.

Elsewhere

Shiva (2002) and Midkiff (2007) also describe the global water crisis as it is unfolding in other regions of the world. Shiva (2002) describes conflicts over water access between nations such as Israel and Palestine and the various countries of the Nile Basin (Egypt, Congo, Burundi, Ethiopa, Kenya, Rwanda, Sudan, Tanzania and Uganda) as well as internal conflicts in Bolivia, China and Turkey. Midkiff (2007) discusses the current water crises in the United States, such as the conflict with Mexico over access to and use of the Rio Grande and the Colorado River.

Water conflict in Bolivia is perhaps one of the most highly publicized cases of the potential hazards of privatization (Midkiff, 2007; Shiva 2002). Under pressure from the World Bank, the Bolivian government allowed a consortium of private companies to take control of its public water system. The consortiums promised to restore and repair the aging system while keeping costs at a reasonable rate for citizens. Unfortunately, they did not stay true to their promises and soon raised water rates well beyond the means of average Bolivians. This betrayal prompted large-scale outrage and protest from the Bolivian people, eventually resulting in the government regaining control over their water system. Although rates have returned to pre-privatization levels, consistently supplying adequate water to the Bolivian people still remains a challenge.

Internal conflicts over water management have also occurred in China and Turkey (Shiva, 2002). In China approximately 60 million people have been displaced from their homes due to the construction of hydroelectric dams. While in Turkey, citizens who speak out about water issues in volatile areas risk being labeled as separatist extremists. These are just a few examples of water issues that are currently pandemic in our interconnected world.

The United States

Midkiff (2007) and others (eg. Barlow and Clarke, 2002) describe in detail the growing assortment of water crises in North America. Midkiff (2007) suggests that, similar to other regions of the world, privatization has become a major issue in many American cities. He provides several examples where the privatization of a city's water systems has resulted in increased cost and decreased quality for its citizens (eg. Atlanta).

Midkiff (2007) also discusses other issues such as endemic water shortages in agricultural areas and large western cities like Los Angeles, San Francisco, Phoenix and Las Vegas. He provides interesting historical insight into water management in the United States. Midkiff suggests that traditional European principles of public water access were supplanted by the Manifest Destiny mentality during western expansion that positioned waterways as private resources that could be exclusively controlled by the first colonial settlers of a region. Part of the Manifest Destiny mentality was an attitude that the wild rivers of the West were dangerous foes that should be subdued and controlled in a similar fashion to the region's Indigenous peoples.

Midfkiff (2007) proposes that the practices of the early settlers in the American West laid the foundation for their current water crises. He highlights several cases in agricultural and urban water management. For example, Midkiff suggests that the insatiable appetites of average Americans (and their northern neighbours and business partners) for water hungry non-indigenous crops such as rice, have forced farmers in the American West to deplete the Ogallala and other central and western aquifers at an alarming rate. Some western farmers have already drained their wells dry, rendering their arid farmland useless.

The same western farmers find themselves in continual conflict with large cities such as Los Angeles, San Francisco, Phoenix and Arizona for water diverged from large rivers such as the Rio Grande and Colorado River. While the daily water needs of these large western cities are artificially supported through extensive irrigation canals, the farmers that produce their food struggle to irrigate their crops (Midkiff, 2007).

The solutions proposed by American government and corporations to the current water crises are diverse (Midkiff, 2007). Their ideas range from large-scale desalinization of seawater to towing Arctic icebergs and water bladders filled with fresh Canadian water down the West Coast. However, Midkiff suggests that these kinds of solutions are not adequate. He proposes that the only long-term solutions for North America's water crises involve wide-ranging lifestyle changes focused on reducing our water-dependency. He provides several examples such as eating less meat and water dependent produce, driving and flying less, using less water at home, buying locally, not buying bottled water and supporting public water access. Midkiff also notes that stricter industrial and agricultural laws that encourage the use of less water dependent processes, crops and animals will also help to reduce North American water consumption.

One can't help but see the irony in the global water situation – while people fight starvation caused by drought, famine and thirst in India and other poor regions, North Americans are politely asked to reduce their water consumption for the greater good – a striking contrast in perspective and power.

Final Thoughts

Wolf Totem gives us insight into the lives of the nomadic Mongolian grassland people who simultaneously revere, fear and inextricably depend on wolves. Based on centuries of locally developed wisdom, they recognize the wolves' integral place in maintaining the ecological balance of the grasslands (Rong, 2008). The nomads' indigenous knowledge and practices clash with the desires of the Chinese authorities who aim to eradicate the wolves. The government hopes to clear the grassland of its wild elements, making it safe for high-yielding agriculture to feed the overpopulated southern regions of China.

Similar clashes between foreign and local interests abound in current water politics. While some have successfully fought to preserve equitable, locally directed public access to water, others have fallen prey to the greed and insatiable thirst of private corporations, governments and the unsustainable lifestyles of large, artificially supported metropolises. Some cultures honour water as sacred, while others simply recognize that it is a vital source of life. No matter which perspective you subscribe to, there is no question that we are in the midst of a global water crisis. Perhaps combining the wisdom of ancient cultures with creative contemporary problem solving will help us to quench our collective thirst.

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Nurturing the Flame: Encouraging Enduring Involvement from a Serious Leisure Perspective

by François Gravelle, Jacquelyn Oncescu and George Karlis

How often do we as educators confide that, despite our interest in outdoor activities, we no longer "go out and play"? Having developed basic skills and abilities to feel comfortable in the outdoors, why do we not pursue this practice — that is, go out and play?

It is well documented that being physically active throughout life is important to maintain overall physical emotional, spiritual and social well-being (Wedderkopp, Froberg, Hansen, & Andersen, 2004). From childhood to late adulthood, from a school setting to a high-stress work environment, many turn towards physical and leisure activities to find this sense of comfort and welfare (Mannell, Smale, & Butcher, 2005; Darbyshire, 2007). For many, their preferred physical and leisure activities are practiced outdoors and are significant and positive means of maintaining personal balance (Tinsley & Eldredge, 1995; Brown, Smith McIver, & Rathel, 2009). Staempfli (2009) points to the importance of introducing outdoor play early in life, to promote well-being amongst children and young adults.

Travelling through life, individuals need "islands" where they feel comfortable and especially competent. These islands allow for escape and fantasy. They provide the chance to take a break from the stressful reality of life and become one with nature. Certain activities encourage participants to experience this connection with nature. Some, such as mountaineering and scuba diving, may also satisfy various individual needs such as novelty and self-actualization (Tinsley & Eldredge, 1995; Tinsley & Tinsley, 1986).

The focus of this paper is on non-competitive, rule-based (Stebbins, 2005) activities that can be pursued at all ages and that provide both physical and strategic challenges. Trekking, mountain climbing, cross-country skiing and canoeing are some examples.

As outdoor educators we seed curiosity and interest by teaching and perfecting skills and abilities related to outdoor activities. Our biggest challenge may lay in maintaining individuals' interest in outdoor activities beyond their initial experience. The discussion that follows focuses on the concept of enduring involvement as it pertains to outdoor activities and serious leisure, and then suggests some guidelines for nurturing the interest of participants in outdoor activities for a lifetime.

Enduring Involvement

Havitz and Dimanche (1999) define enduring involvement in terms of motivation, arousal or interest in a recreational activity or associated product. Similarly Yoshi and Havitz (2004) point to the fact that involvement and loyalty are important elements related to ongoing participation and activity retention.

Enduring involvement is a complex reality associated with the quality of the learning environment, support from significant others such as parents and friends, and personal evaluation of the importance of the activity (Kyle & Chick, 2004; Dimanche, Havitz, & Howard, 1991; McIntyre & Pigram, 1992; Havitz & Dimanche, 1997; Wiley, Shaw, & Havitz, 2000). Kyle and Chick (2004) consider commitment to be closely related to enduring involvement in specific leisure practices. But what is commitment? Commitment is the product of leisure involvement that will exceed the activity itself. For example, commitment can be achieved through social interaction, camaraderie or evolving

in a favourite environment. Therefore commitment will vary amongst participants, which in itself poses quite a challenge for outdoor educators (Iwasaki & Havitz, 1998).

Educators may be doing a good job at teaching skills, but students might gain greater long-term benefits from an increased focus on maintaining involvement in outdoor activities for longer time periods. The question is how do we nurture enduring involvement in outdoor activities? To guide us through this journey, we will look at a concept called "serious leisure" to gain a better understanding of the importance of activity in participants' lives.

Serious Leisure

According to Stebbins (2005), "serious leisure involvement typically contrasts with 'casual' or 'unserious' leisure, which is considerably less substantial and offers no career" (p.29). Based on this definition, serious leisure involves commitment of participants towards a chosen activity such that they realize the benefit of maintaining their participation outweighs the detriments.

Stebbins (2005) points to three categories of commitment in serious leisure — amateur (the most committed level of participation), hobbyist and volunteer. Ultimately an individual's involvement in a serious leisure activity could be planned in the form of a career with specific goals and objectives leading to long-term personal accomplishment. For some individuals, this "career" could be more important than their actual job — for instance, outdoor enthusiasts who live for and by trekking expeditions undertaken on weekends or during holidays.

Connecting Serious Leisure and Outdoor Education

Stebbins (2005) suggests that, in relation to outdoor activities, serious leisure applies to "nature-challenge activities" where success is directed at interacting with nature rather than with opponents. For example, anindividual might work at climbing a very difficult mountain and making it to the top. Nature challenges come in all different shapes and forms ranging from fishing and bird watching to trekking, climbing and kayaking. Each nature challenge will offer very different experiences, such as appreciation of the outdoors and challenges posed by the environment.

Helping Participants Develop a Serious Leisure Career

Based on serious leisure, Stebbins (2007) suggests six characteristics that impact participants' enduring involvement:

- Need to persevere (confronting danger, supporting team, or embarrassment) through thick and thin.
- Finding a leisure career.
- Significant effort based on specially acquired knowledge, training or skill.
- Durable benefits such as self-actualization, self-enrichment, self-expression, regeneration or renewal of self, feelings of accomplishment, enhancement of self-image, social interaction and belongingness, and lasting physical products of activity.

- Being part of a social group based on the activity or common interest.
- Identifying with their chosen pursuits.

Using these six characteristics as a guide, let's take a look at our practice as outdoor educators and extrapolate how we could nurture enduring involvement among participants.

1. Need to persevere:

As educators we should take time to teach participants that long-term involvement in an activity has its ups and downs. Many mistakenly assume that an outdoor activity must always be fun and positive. However, when participants go through a tough patch with an activity, our support can help them move forward towards more positive involvement. Sometimes a change of activity or environment can help refocus energy towards a more positive view.

2. Finding a leisure career:

As outdoor educators we should take the time to help participants develop realistic goals and objectives. There is no harm in having a long-term goal that will take time to accomplish. Transition periods, namely when participants progress from elementary school to high school, or from high school to post-secondary education, are delicate times where individuals have to make choices and reassess their involvement in an activity. Outdoor educators should support participants in making well-informed choices regarding their involvement in outdoor activities.

3. Significant effort based on specially acquired knowledge, training or skill:

Success and arousal are often perceived as the most important factors feeding the desire to learn. By creating a learning environment where participants can have fun while feeling competent it is possible to capitalize on the desire to acquire knowledge, skills and techniques thus enhancing competency within the activity.

4. Durable benefits:

As outdoor educators we need to provide opportunity to participants to revisit their experience outside the actual practice times. Providing support outside of class time could be achieved by asking participants to accomplish a simple task related to the activity on their own, directing them to specific information sources on the Internet, and so on.

5. Being part of a social group based on the activity or common interest:

Generally speaking, leisure activities are an important factor in community development. As outdoor educators we need to address this reality by providing opportunities for participants to socialize outside of instruction and activity time. Often participants will maintain their involvement because they appreciate the presence of their friends; for example, meeting at a coffee shop after the activity often will contribute more to enduring involvement than the session itself.

6. Identity with their chosen pursuits:

Outdoor educators need to be able to provide a variety of outdoor practices that will suit the needs and expectations of participants. As participants will stay involved for different reasons, finding the right activity and form of practice is essential.

What More Can We Do As Educators?

Ask students how they would see their practice evolve in the next five years. What do they perceive to be the biggest barriers to their participation in the future? What is their strategy to address these issues? Ask them to design a dream map of their involvement in outdoor activities. State what needs to be done to achieve each objective.

To avoid the need for specialized equipment becoming a barrier, develop an equipment co-op so participants can try out equipment by renting it. Individuals with participation

challenges could alleviate these by using the right specialized equipment, thus resulting in greater enjoyment and longer involvement with the activity.

Conclusions and Recommendations

The previous paragraphs have highlighted enduring involvement as it relates to motivation, arousal or interest in an outdoor activity. Commitment has been closely associated with enduring involvement. Based on the six characteristics related to the commitment of participants towards their serious leisure practice, we have established the significant role of outdoor educators in maintaining involvement in outdoor activities.

As outdoor educators we should

- look beyond the instruction of outdoor skills and set the scene to allow participants to take ownership for their own participation.
- recognize transition periods and help participants find ways to incorporate regular outdoor activities into their changing schedules.
- be realistic with participants in order to help them make enlightened choices related to their outdoor involvement.
- provide participants with opportunities to experience a variety of outdoor activities, thus helping them find the best possible experiences for today and tomorrow.
- provide participants with a learning experience that will enhance the value of outdoor recreation involvement.

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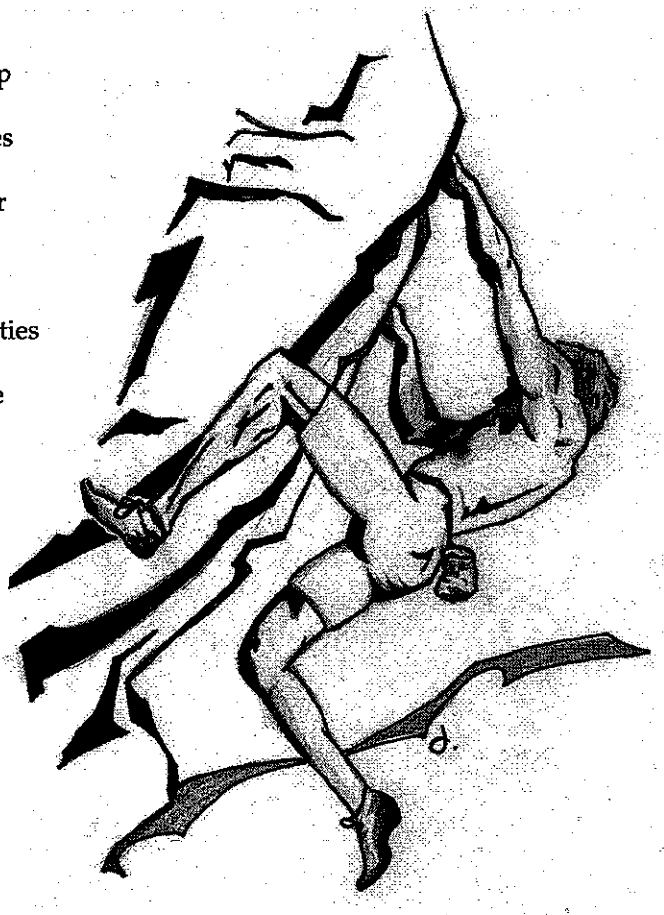

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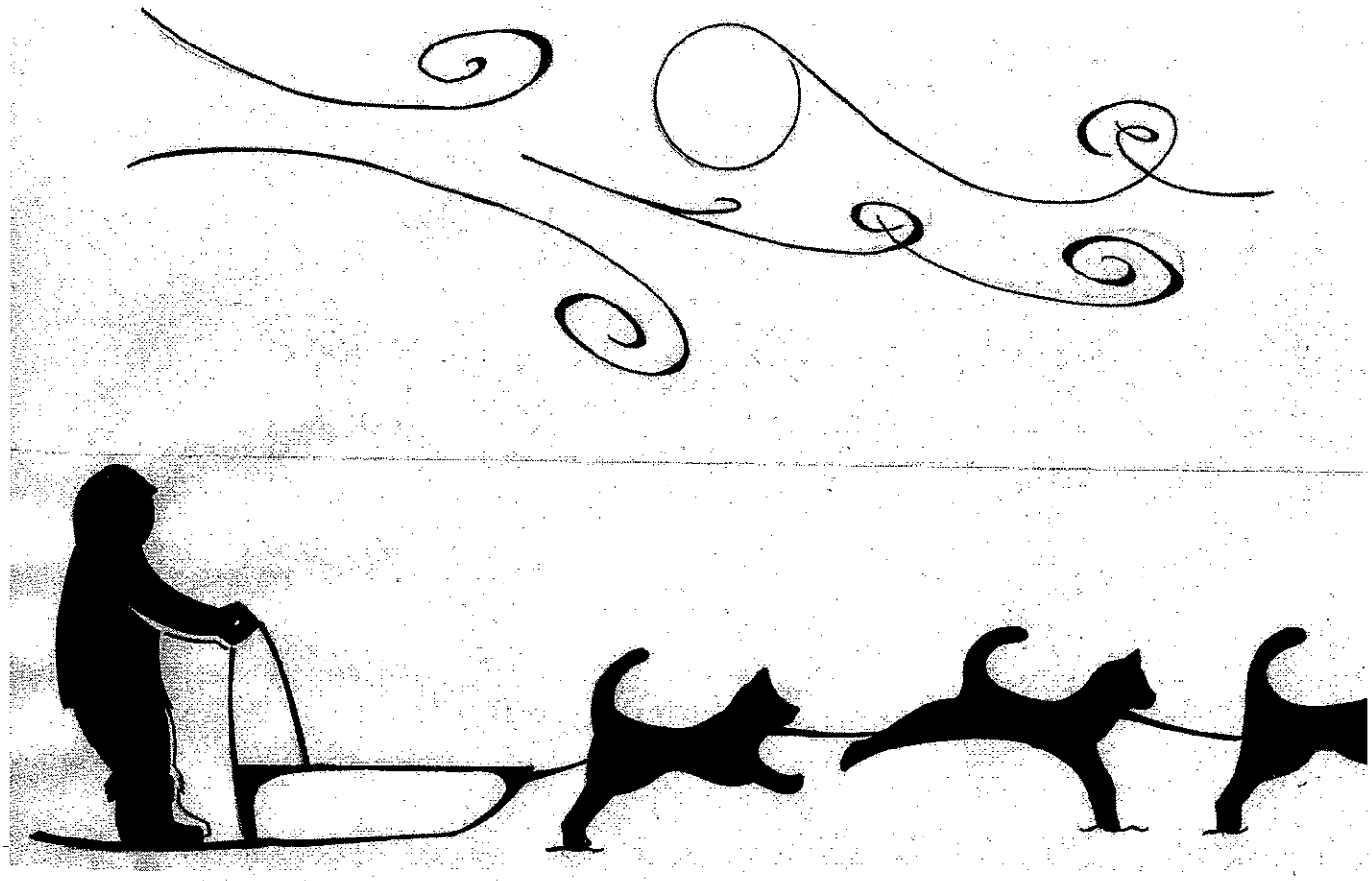
69° 24' 0" North, 81° 48' 0" West — Teaching in the Circle

by Kim Hedges, Larissa Geraghty and Maren Vsetula

Along the western coast of the Hudson Bay off the Melville Peninsula, a tiny island is situated between the mainland and Baffin Island. Igloolik is a traditional Inuit community, home to about 2,000 people and known as the cultural capital of the Eastern Arctic. Here, many people continue to practice and pass on traditional survival skills from hunting and igloo building to sewing with hides and dog teaming. The area is abundant with seasonal wildlife, including whales, walrus, seals, caribou, arctic char, and the occasional polar bear.

Survival is the underlying theme of most traditional stories in this community. The uncompromising harshness of winters shaped the Inuit to be masters of creating and maintaining warmth and light during the long, dark freeze. In the past, children learned essential life-lessons by listening to and observing their elders. A young boy would learn to hunt by following his father; a girl would practice sewing after carefully watching her mother. Learning was not a compartmentalized part of living, but rather a fluid process — an expected and necessary part of growing older.

Prior to the settlement process in the 1950s and 1960s, Inuit families ventured away from town for months on end. Many of the elders in Igloolik grew up on out-post camps and remember a time when the communities were not as they are now. This generation has seen the introduction of television and the Internet, and witnessed the shift from kayaks and dog teams to motorized boats and snowmobiles.



Despite these changes, the camping culture remains strong and binds elders and youth to each other and practices of old.

With settlement came residential schools, a legacy that Canada is only now acknowledging and apologizing for. For youth, the cultural practices of living and learning were replaced by text work, and rules strictly enforced by southerners who brought with them their preoccupied anxieties about time.

Today, youth face the challenges of negotiating a hybridized education system that is still in its infancy. Many southern influences remain a part of "formal education," though the territory has developed and mandated Inuktitut courses, northern studies, cultural arts, and time with elders and experts on the land. Some youth handle the cultural mixing with ease: walking to school in –30° with their jeans and iPods, speaking to their friends in blended language, and sharing tea and seal with their elders on weekends. Other youth appear lost as to their roles in this "between" space of cultures, disengaged by expectations of education and responsibility from both sides they feel they simply cannot meet.

Of course, our job as educators is to do our best to engage students, and we do so through repeated and differentiated experiences. As with education anywhere, successes are the result of conceptualizing the lesson in an engaging, relevant way for a particular group of students. Bringing the outside in to the school has proven very popular across the disciplines. Instead of fetal pigs, students dissect freshly caught Arctic char, massaging the heart muscle to see if they can produce a beat. The science lesson turns into an early lunch as the day's catch is appreciated for more than its educational value. The discovery of a frozen seal pup is a delight for the art class where students appreciate having warm enough fingers to create a sketch. Elders are brought in on a weekly basis to the school to share both stories and wisdom; on one such occasion, a class followed the elder's account of his childhood migration across Baffin Island using "Google Earth" as a visual aid.

School activities that incorporate the community are always very popular and meaningful for students and adults alike. Last year, the high school hosted its first ever prom, attended by all students and family members of all ages. On that night, young and old put aside any past or present qualms about the school system, as together they celebrated student graduation and the beginning of new experiences.

Being a southern educator in Nunavut is about finding a balance amidst many extremes. These extremes are represented in all areas of northern living, from weather patterns and landscape to the isolation of the communities and the cost of living. Leaving southern Ontario for Nunavut's tundra often means leaving support systems of family and friends. On the other hand, the journey opens the door to snow forts through to June and the delights of the seasonal skies. These extremes are also apparent in the classroom where the challenges of the territory's developing curriculum and the struggles of the students can feel overwhelming. Successes are hard-won and enormously gratifying. What a time to be fostering the growth of Nunavut's future!

Kim Hedges has been living in Igloolik for three years. She enjoys the variety inherent in teaching and living in the north, and summer snow for kick sledding with her dogs.

Larissa Geraghty enjoys living and working in the north. She is adventurous and loves camping and exploring Canada.

Maren Vsetula has lived and worked in Igloolik for the past six years. She enjoys learning about the Inuit culture and spending time on the land with her dog team.

Pilot Physical Fitness Testing Protocol for Outdoor Leaders

by Heather Ross and Jonathon Fowles

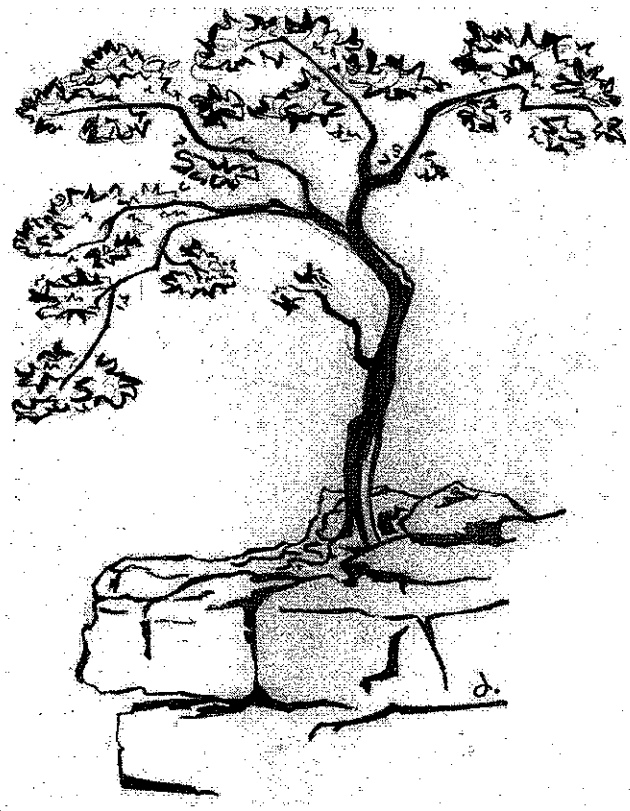
Outdoor leaders require a certain level of health and fitness to lead others in physically engaging outdoor activities such as hiking, camping and canoeing. Being physically fit to handle the high demands involved in an outdoor leadership position is very important for risk management of the individuals and groups the guide is leading. Fitness levels can be particularly important when there is a crisis during an outdoor adventure and the leader is responsible for everyone's safety. Unfortunately, very little research has been done on the minimum fitness level required to lead outdoor programs. In light of this, we have developed a fitness testing protocol to identify individuals who may not be physically fit enough to engage in outdoor leadership. The results of testing can be additionally used to direct physical training aimed at overcoming deficiencies in a specific area of fitness.

Physical Requirements of Outdoor Leaders

Outdoor leaders engage in prolonged, rhythmic dynamic movements of the large muscles during outdoor activities such as hiking and walking. An above average level of cardiovascular fitness is important for this task as leaders may need to walk or hike upwards of 10–16 hours per day while carrying a pack of 10–15 kg (20–30 lbs). Cardiovascular fitness is also important in handling variations in temperature. The more efficient an individual's cardiovascular system, the better they will be able to adapt to extreme temperature variations while in the outdoors (McLellan, 2001; Marrison, Sleivert, & Cheung, 2006).

Body composition is a direct predictor of an individual's overall fitness level. High body fat mass is directly correlated to decreased fitness level (Mattila, Tallroth, Marttinen, & Pihlajamaki, 2007). There is also an increased energy expenditure in moving a large body mass (DeLany et al., 1995). Subsequently, a healthy body composition is important in outdoor leaders, not only for predicting their overall fitness level but also for decreasing their energy expenditure during long days of hiking and performing manual labour.

Strength endurance and absolute strength are very also important for carrying and lifting individual packs, canoes and camp equipment at camp and during walks. A lot of stress is put on the back and core muscles as a result of these physical demands. The most common injuries in outdoor wilderness activities are those to soft tissue (Twombly &



Schessman, 1995). As a result the upper body needs adequate strength endurance to prevent injury when setting up camp, carrying gear and paddling for long hours. The legs also need good strength endurance for walking and climbing long distances.

Functional motor fitness refers to the interrelated qualities of strength, coordination, balance and flexibility that allow for the performance of defined movements in an efficient and effective manner. It includes coordination, flexibility, strength and balance and is very important when walking and hiking over uneven ground and through variable environments. It has been determined that 50% of all injuries during outdoor excursions are athletic injuries. These injuries included strains and sprains of the knee (35%), ankles (30%) and back (13%). It has also been concluded that 46% of all injuries occur while hiking with a pack (Leemon & Schimelpfenig, 2003). This indicates that strength, balance and coordination are especially important for injury prevention during hiking — one of the main activities in outdoor expeditions (Leemon & Schimelpfenig, 2003). Balance is also a very important component for injury prevention. Poor balance is directly correlated to an increased risk of ankle sprains (Hrysomallis, 2007). Individuals leading trips in the outdoors are often walking over unstable surfaces and therefore good balance is needed to reduce the risk of falls, back injuries and knee and ankle sprains. Adequate flexibility is important for overall health and injury prevention. Limited flexibility may decrease efficiency of an activity, and hip and leg flexibility specifically is important for climbing and taking long, high steps (Crill & Hostler, 2005).

Fitness Testing Overview

A composite fitness test was developed to match the requirements of outdoor activities. To meet fitness standards for the entire test, the individual needed to meet "pass" requirements for both Criteria A and B. Criterion A consisted of the aerobic portion of the fitness test and was measured using the Leger 20 m Shuttle Run. This is a multistage aerobic capacity test that involves continuous running between two lines positioned 20 m apart and is used as a predictor of maximal aerobic fitness or VO2 max (Leger & Lambert, 1982). The minimum requirement set for this test (i.e., a "pass") was stage 7, which is equivalent to a good aerobic fitness score (35 ml/kg/min) when compared to the general population (CSEP, 2004).

Criterion B was based on eight different fitness tests that measured the body composition, strength, balance and flexibility of the individual. Test results were calculated and each of the eight tests was rated on a scale of 1–5 giving a total score out of 40 points. As compared to available normative values, an excellent score for any particular test was 5/5, good was 4/5, fair was 3/5, poor was 2/5, and very poor was 1/5. The subjects were required to achieve a minimum of 30/40 points in order to pass Criterion B.

Description of the Tests

Body composition was calculated using the combined measurements of height, weight and waist circumference. This calculation was determined using a modification of The Canadian Physical Activity, Fitness & Lifestyle Approach Manual (2004) protocol for body composition.

Functional motor fitness was tested using a "Movement Screen" using three tests — shoulder mobility, hurdle step, and in-line lunge — that measure shoulder flexibility, and coordination, mobility and stability of the legs, hips, knees and ankles, respectively. The hurdle step and in-line lunge were done wearing a 10 kg backpack.

Absolute strength was measured using the dumbbell lift and press test. This is a test of upper- and lower-body strength in which the individual is required to lift a weighted dumbbell overhead for one repetition.

Strength endurance was measured using the push-up test, wall sit, partial curl-up and side-support test. The push-up test is a measure of upper-body strength endurance and was measured as per the CPAFLA (2004) protocol. The wall sit is a test of lower-body strength endurance. The participant was asked to lean against a flat wall and hold a seated position with legs and hips at a 90° angle for as long as possible. The partial curl-up and side-support tests are measures of core strength-endurance. The partial curl-up is a measure of abdominal strength endurance and was assessed using the CPAFLA (2004) protocol. The side-support test required the subject to hold a plank position on their side while resting their weight on their feet and elbow. They were required to keep their shoulders, hips, knees and feet in straight alignment for as long as possible.

Flexibility of the lower back and hamstring muscles were measured using the sit and reach test and assessed using the CPAFLA (2004) protocol.

Preliminary Results

During preliminary testing we were able to examine 11 (five male and six female) recreation students at Acadia University. The testing battery identified that three of the 11 students did not meet the minimum fitness requirements. Two of the students failed Criterion A and three failed Criterion B (the two failing Criterion A also failed Criterion B).

As an examination of the validity of this pilot fitness testing protocol, ten of the 11 participants completed a ten-day outdoor leadership camping trip. The head instructor was blinded to the fitness testing results and was asked to rank the physical competency of the participants following the trip. Interestingly enough, the two individuals who did not pass Criteria A and B were ranked ninth and tenth out of the ten participants. The subject who passed Criterion A but not Criterion B was ranked fifth out of the ten participants. Further research is needed with a larger sample to adequately test the validity of the current testing protocol and its applicability to the leadership of outdoor activities. Our initial analysis shows promise as a useful tool.

This fitness testing study can be used to detect specific physical weaknesses an individual may have prior to going out on a trip. With

Table 1. Criterion B Fitness Testing Requirements*

Pts	Rating	Body Comp Score	Push-ups (#)	Wall Sit (sec)	Partial Curl-ups (#)	Side Supp. (sec)	DB Clean (lbs)	Sit & Reach (cm)	Function-al Fitness screen
5	Excellent	5	20+	120+	40+	90+	40	40+	9
4	Good	4	16-19	119-90	30-39	89-75	35	35-39	8
3	Fair	3	12-15	89-60	20-29	74-60	30	30-34	7
2	Poor	2	8-11	59-30	10-19	59-45	25	25-29	6
1	Very Poor	1	4-7	29-1	1-9	44-30	20	20-24	5

* A total score of 30/40 is required to pass the test.

appropriate knowledge about physical weaknesses it is possible to direct appropriate training. Appropriate levels of fitness ensure the physical capabilities of the leader, as well as the safety of the leader and the group. We recommend that individuals seek out qualified exercise professionals to assist them in administering testing as well as in directing exercise training.

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Heather Ross is a Certified Exercise Physiologist (CSEP-CEP) and graduated from Acadia University with a Bachelor of Kinesiology degree. Heather extends her thanks to Scott Hennigar of Acadia University for suggesting that this project be undertaken and for offering his guidance during the development of the testing protocol.

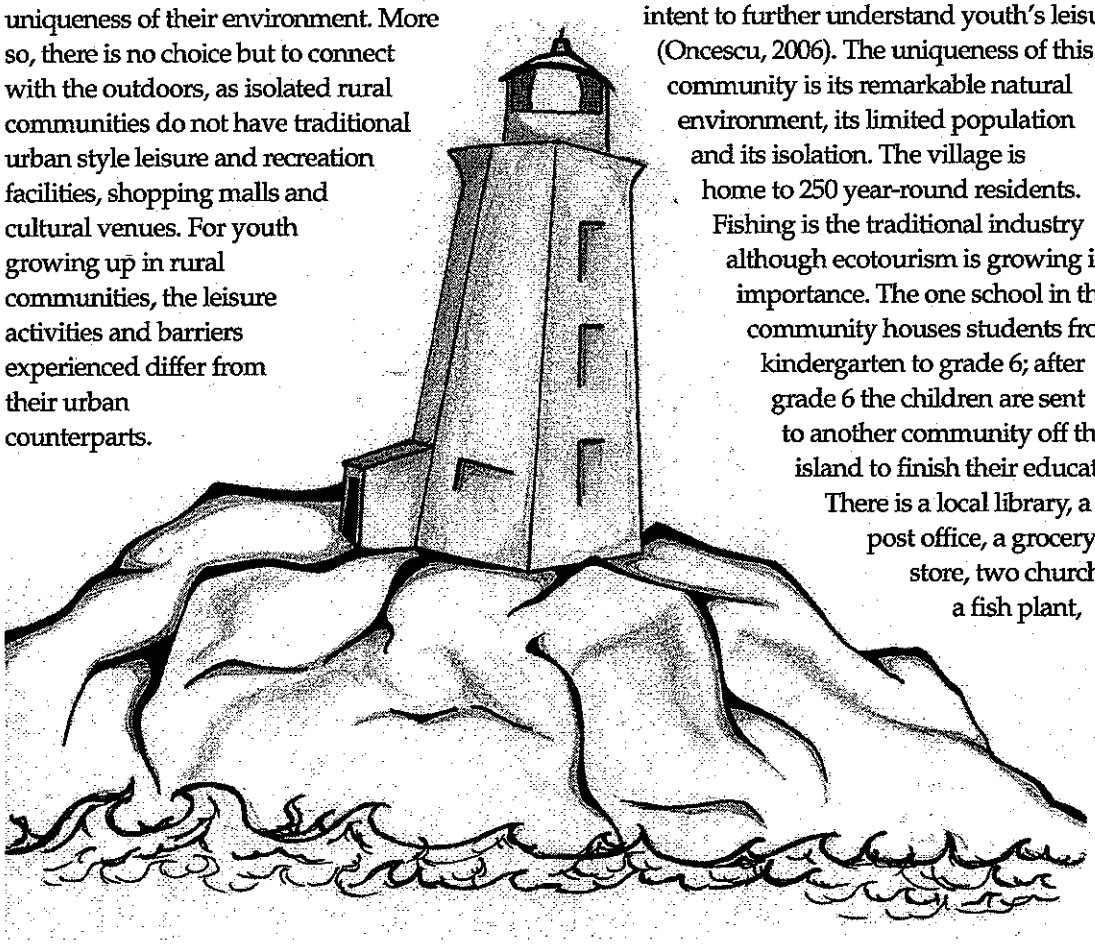
Jonathon Fowles, PhD, CSEP-CEP, is an Associate Professor of Exercise Physiology in Kinesiology at Acadia University and Master Examiner for the Canadian Society for Exercise Physiology (CSEP). He specializes in fitness testing and exercise training in applied populations.

Rural Youth and Technology: Counteracting Youth Cocooning with the Great Outdoors

by Jacquelyn Oncescu, François Gravelle and George Karlis

Rural communities are typically located in regions rich in resources, such as mining, agriculture, and fishing, and are host to distinctive natural environments. Often rural communities located in remote and isolated areas have a unique way of life that is influenced by the natural environment in which they are located. This way of life is often expressed through leisure and cultural activities that bring together the community and make use of the natural environment.

Whether the rural community's way of life is related to fishing, farming, mining or forestry, more often than not you can find youth connecting with the environment and its related resource industry through play and leisure activities. In particular to youth growing up in rural communities is the natural gravitation to connect with the outdoors and the uniqueness of their environment. More so, there is no choice but to connect with the outdoors, as isolated rural communities do not have traditional urban style leisure and recreation facilities, shopping malls and cultural venues. For youth growing up in rural communities, the leisure activities and barriers experienced differ from their urban counterparts.



Although there are numerous differences among urban and rural youth leisure experiences, there are also shared common experiences such as access to technology, including video games, television, computers and the Internet. Advances in technology have reached far beyond city limits; current technologies are present in rural homes across the country. The impacts of such technology on youths' leisure can be identified through decreases in engagement in physical activity and increases in the incidence of childhood obesity. Therefore, the ways technology influences rural youth and their connection to the outdoors needs further discussion.

Rural Community Case Study

In 2004 a study of an island fishing village in Atlantic Canada was conducted, with the intent to further understand youth's leisure (Oncescu, 2006). The uniqueness of this community is its remarkable natural environment, its limited population and its isolation. The village is home to 250 year-round residents. Fishing is the traditional industry although ecotourism is growing in importance. The one school in the community houses students from kindergarten to grade 6; after grade 6 the children are sent to another community off the island to finish their education. There is a local library, a post office, a grocery store, two churches, a fish plant,

a seasonal lodge, a number of ecotourism-related businesses, and a large variety of fishing operations. At the time of the study, there were 50 children ranging in age from infancy to 18 years dwelling in the community. Transportation links to the mainland involve boat rides; most of the island's economy is based on fishing.

With a long rugged coastline, thick brush, and marshlands, the island is home to an abundance of unique plants and wildlife, including thousands of migrating and native seabirds and marine life such as whales that visit the island annually. Naturalists and tourists visit the island specifically to see birds, whales, plant life and rock formations. During the mid-1980s, the ecotourism industry started to develop in the community when outfitters began offering nature-based experiences for summer visitors. Many of those involved in the ecotourism industry also work in the fishing industry. Some off-season fishermen have developed ecotourism businesses that are operated by their entire families. The ecotourism season, which runs primarily from June to September, keeps the community busy hosting visitors from around the world. Since the mid-1980s, a steady increase in ecotourism has had a positive economic impact on the village.

Due to the unique natural environment and isolated location of the community, this study's intent was to explore youth's leisure activities and any barriers to engaging in those activities. In particular, the study examined the leisure activities experienced by youth during the past 30 years. The evidence indicated that, compared to present-day youth, youth 30 years ago were much more connected to their natural environment and community through leisure activities experienced in the outdoors and community settings. Youth of today are pursuing more individualized withdrawn leisure activities related to computers, video games and the Internet. These individual leisure pursuits are causing a cocooning effect among the youth within the community. A large amount of evidence indicated that technology in the form of computers, video games, television and the Internet had a strong influence on the youth's transition of outdoor leisure to more individualized, indoor leisure pursuits.

In today's society there is no doubt that technology has influenced our leisure choices and our rural isolated communities. In fact, technology was often looked upon as a benefit to such communities to reduce the sense of isolation they experience and provide a sense of connection to the greater world. Consequently, technology in remote rural communities has also changed the outdoor leisure pursuits of the youth.

Thirty years ago the youth in the village did not need water parks, shopping malls, skate parks, video games, computers or recreation centres. In fact, the youth utilized their outdoor environment to pursue leisure activities. Such activities included bird watching, swimming in the ocean, fishing, boating, flying kites, racing bikes, playing street hockey, and sledding during the winter months. There were also activities related to social clubs such as Cubs, Scouts and Brownies, which took the youth into the outdoors.

Today, outdoor leisure pursuits do not appear as popular as playing the latest video game or chatting on the Internet with friends. There are a couple of reasons why the lure of technology has impacted the youth. First, it is a remote and isolated community that relies on its own assets and strengths for recreation activities. Therefore, when new forms of recreational activities become available in the community, whether all-terrain vehicles (ATVs) or the Internet, many of the youth are interested in participating. Second, the youths' activities in the outdoors are often passive with regards to adult leadership; youth are frequently guiding their own leisure experiences. When the youth are left to entertain themselves, they often feel bored and limited; activities related to video games and computers

are thus enticing and entertaining. Rather than being outdoors or pursuing active leisure pursuits, youth here are found indoors, isolated, and engaged in video games, computers, and the Internet. When youth are outdoors, they are often using ATVs, and thus damaging the natural environment.

Findings from the research study indicated that the primary forms of recreation for youth are using the Internet and computer, playing video games, and watching television and movies. Those aged 12–18 years spent an average of 40 hours a week playing video games, using the computer and Internet, and watching television and movies, while children under 12 spent an average of 30 hours a week at those same activities.

What these findings suggest is that there are high rates of participation in sedentary activities, which can negatively impact the younger generation by decreasing physical activity, disassociating them from the natural environment, and disconnecting them from the older community members. Overall there is a cocooning effect taking place that isolates the youth from community life.

The cocooning effect that the youth are experiencing is detrimental for their personal development and the development of a healthy community. As technology impacts the youth's recreation repertoire, there is minimal involvement in the outdoors. Long and Kraus (1983) identified that leisure and recreation broadened the experiences of rural life, provided opportunities for socializing, enhanced family solidarity, and provided a strong base for youth to pursue recreation and leisure activities during their future adult life. Recent studies reported that an adolescent's experience within his/her community or neighbourhood could provide information and help in developing his/her identity as an individual and as a community member.

So how do community leaders and outdoor recreation educators combat this cocooning affect? Most often in rural communities, leadership for youth activities, whether indoors or outdoors, comes from adults within the community. Although not formally labelled as "outdoor educators" or "recreation programmers," adults who volunteer their time to provide opportunities in the natural environment are often experts in their own backyard, and need to take their skills and assets to the youth. Below is a list of suggestions as to how outdoor recreation educators/community volunteers can help re-introduce, re-integrate and re-acquaint rural youth with outdoor recreation activities.

1. Aid in the Establishment of a Relationship with Community Mentor

Outdoor educators/community volunteers can help in the re-development of relationships between older generations and youth through the outdoors. A lot of what youth learn regarding sport, leisure and the outdoors comes from individuals who are passionate about such activities and take the time to mentor youth. For this community in particular, there are seniors here who have lived numerous years on the island with insight and knowledge regarding the natural environment who could provide unique experiential learning opportunities.

2. Help in the Creation of Partnerships with Provincial Organizations

Outdoor educators/community volunteers can help in the development of partnerships with outdoor provincial organizations, and local schools or community groups to establish experiential learning workshops and activities for youth. The creation of such partnerships will ultimately lead to the creation of more community-run programs, with a percentage of these programs focused on outdoor education and recreation. Eventually these partnered

programs could be planned and run by and for youth.

3. Promote the Uniqueness of the Natural Environment

Outdoor educators/community volunteers have the knowledge and necessary information needed to celebrate the uniqueness of the natural environment — particularly with respect to the magnitude of recreation opportunities. Through a series of community workshops, the expertise of outdoor educators can be utilized to enhance the awareness of the unique recreation potential of the outdoors. The focus needs to be on the communities' unique environments as a means to highlight what is available in the youth's own backyard.

4. Pass on Knowledge of the Benefits of Outdoor Recreation

Outdoor educators/community volunteers should conduct a series of youth-targeted workshops to discuss the diverse benefits that outdoor recreation involvement has to offer. These experiential-based learning workshops should target social, psychological and educational benefits that can be gained from outdoor recreation involvement. Although these workshops will be targeted to youth in rural communities, parents should also attend as knowledge disseminated will provide valuable insight to both parties.

5. Recognize that Learning is a Two-Way Street

One of the features of the community is its ability to utilize its natural environment for ecotourism purposes. Due to the small size of the community and the island on which it is located, the time needed for tourists to explore the environment is not substantial. The youth of the community are probably one of the greatest assets the community has for tourism. The youths' extensive knowledge of and experience from exploring the island would equip them well for positions as community tourist guides. Although it is the adult population in the community that act as tourism decision makers, it would be beneficial for these adults to listen to and consult with youth. Outdoor educators can aid in bridging the gap between youth and adults in the community, and thus ultimately enhance the exchange of information that is paramount to developing the ecotourism industry.

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Jacquelyn Oncescu is a PhD student at the University of Ottawa where she is focusing her studies in the area of leisure studies and community development. She completed a Master of Recreation Management degree at Acadia University in Wolfville, Nova Scotia, focusing on rural community leisure and social cohesion.

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George Karlis is an Associate Professor in the School of Human Kinetics at the University of Ottawa. His areas of specialization include leisure and society, community development, and recreation, culture and ethnicity.

Reading the Trail

A Useful Addition to the Risk Manager's Bookshelf

by Kathy Haras

Review of Hirsch, J., & Sugerman, D. (2007). *Administrative practices of AEE accredited programs (2nd ed.)*. Boulder, CO: Association for Experiential Education. (ISBN 978-0-929361-15-4)

If you're an avid reader like me, books need to "qualify" to take up space on your bookshelf. To do so, they may earn their place in any one of a variety of categories. There are your personal classics that you read over and over again, the trashy summer books that are too much fun to give away, the latest and greatest from the bookstore that you are hounding your friends to read, and that giant collection of books related to outdoor education. And then there is the small category of useful.

Administrative Practices of AEE Accredited Programs fits into the useful category. Like my dictionary, home repair manual and cookbook it is not a book I choose to read in bed. Just the same, I'm glad it's there for the times I need it.

As those of us with responsibilities for risk management know, getting hold of the most current standards, guidelines or policies is only the first step. The second step is translating those edicts into local operating procedures our staff can consistently implement. It is here that *Administrative Practices of AEE Accredited Programs* has earned its keep. Written as a companion piece to the *Manual of Accreditation Standards for Adventure Programs* by the Association for Experiential Education (AEE), authors Jude Hirsch and Deb Sugerman have provided risk managers with examples of ways other organizations have translated standards and policies into action.

My most recent search through *Administrative Practices of AEE Accredited Programs* reminded me of what I like about this book. First, all the organizations selected have successfully completed AEE's extensive accreditation process. As a result, there is little concern that when looking at a sampler you may have managed to choose a dud. Only good examples are provided. Second, the authors have deliberately included a range of organizations. Whether you are a university program, camp, school board outdoor education centre, or independent school, there is a kindred organization for you to consider. Finally, multiple examples are provided in many areas. Thus, if you are reworking your backpacking procedures, you have the wisdom of not one but five different organizations to mull over.

As you might imagine, reading other organizations' policies and procedures can be tedious. Nevertheless, I see this comprehensiveness as a strength. I can't think of a single other source I could consult where I could find information about caving, international travel, lost participants, transportation and intimate relationships. Missing, however, are an index and a sufficiently detailed table of contents to help the reader navigate the 364 pages of information.

Although the organizations highlighted in *Administrative Practices of AEE Accredited Programs* are all based in the United States, I believe there are enough parallels for this book to sit on the bookshelves of outdoor educators in Ontario. You may not reach for it regularly, but when you need a bit of risk management help you'll be glad you have it.

Kathy Haras is the Editor of Pathways.

Stargazing

by Christopher Britt and Dale Warring

Observers of the ancient sky saw patterns in the stars. From these patterns arose rich stories that incorporated the cultural beliefs and traditions of the people living in a particular place and time. While one half of our lives are spent under the stars, few of us come to know these giants of fiery gas on a personal level. Connecting with these constellations and mythologies can guide our own stargazing experiences as they challenge us to see what others have seen and then look further to find new patterns appropriate to our own time. The following activities are designed to spark the interest of children and adults by helping them successfully locate the northern stars. Even the small success of finding a few northern constellations is awe inspiring and often motivating enough to continue the process.

Preparation

Before delivering this lesson, you as the instructor must engage in some self-directed learning. Scout out a site uncompromised by excessive light pollution. Research the legends surrounding the major constellations. These may include Greek as well as Indigenous mythologies appropriate to one's specific location. Gather paper, markers, star maps, and any other materials such as a stargazer. If you don't have a stargazer simply draw the constellations you are teaching onto laminate paper so you can use an overhead to project them on the ceiling (tape the laminate to the projector and turn the projector on its side).

Before Night Viewing

Gather your students together and explain how stars have been used throughout history for navigation, storytelling and so on. Illustrate the constellations on a blackboard or large sheet of paper, so the basic patterns start to become familiar. The number of constellations you decide to share will depend on time constraints or participant enthusiasm. Explain the mythology that accompanies specific constellations. For a basic stargazing lesson on constellations of the northern hemisphere, start with Ursa Major, Orion and Cassiopeia.

There are numerous books on the mythology and history of nearly all the constellations. Try to identify connections among the different myths. For example, Orion is considered to be a hunter/guardian figure in Greek and various Indigenous mythologies. Once the constellations have been introduced, hand out the star maps to the students, and use the stargazer or hand-drawn illustration to show where the constellations are in the night sky.

The Night Hike

Once the indoor component of the lesson is complete, take the group outside to witness the stars themselves. Be sure to pick a night where the sky is clear and there is little light being given off by the moon. Give the students time to locate the constellations either on their own or in pairs. Allow the students to find all the constellations through self-guided discovery and only assist if asked.

To further discovery, ask students whether they are familiar with any other constellations. Or ask students if they can identify any star formations that make up a shape. This allows students to make up their own constellation

and create a myth to go with it. Try to spend the majority of the lesson outside; once the students can identify one or two constellations, they may begin to locate more constellations using the star maps. As a result, the instructor should have some knowledge of other constellations as well. It may be beneficial to bring out blankets or tarps to lie down on.

"For many of the students this will be the first time they have really looked at the stars."

Follow Up

Once the group has been brought back together, separate them into groups of two to three. Instruct the students to use the back of their star maps to reflect on a specific constellation that sparked their interest. They may use a constellation they made up, were able to identify, or heard described earlier in the lesson. Encourage the students to use markers and paper to reflect in any way they feel comfortable. Suggest they create a picture history, using poems, stanzas, pictures and so on to convey the knowledge they gained about one constellation. The outcome is completely up to them. The completed reflections can be displayed on a wall or kept in a trip log.

Do not underestimate the value of this hike. For many of the students this will be the first time they have really looked at the stars. You will find that the stargazing will continue if you are on a trip with multiple overnights, or students may want to be educated further on more constellations. In such cases it may be beneficial to have resources on hand to encourage and enable additional exploration.

Learning Expectations

The learning expectations reflect the Ontario Ministry of Education Curriculum Expectations for Grade 6 — specifically the ability of students to recognise major constellations at night and explain the origin of the names.

Suggestions and Tips

- Locate a nice site for the stargazing; try to limit obstructions and light pollution.
- Safety is important. Don't run at night and ensure a responsible person is sweeping at the back of the group so no one becomes separated.
- Be aware of other distracting circumstances such as black flies, mosquitoes and other animals.
- Depending on length of the hike, ensure there is water available.
- Extra resources and knowledge of other constellations will prove beneficial.

Resources

Kennedy, A. (1995). *Mapping constellations.* Hisperia, CA: University of California Education Department & Hisperia Unified School District.

Ministry of Education Curriculum Expectations for Grade 6. Retrieved from Ontario Ministry of Education at http://www.ocup.org/resources/documents/gr6_exp.pdf

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Christopher Britt and Dale Warring were students in OUTD 3171 – Outdoor Education Practices at Lakehead University.

2009 COEO Conference Report

by Gisele Winton Sarvis

Fall's first week of stormy weather followed participants of the 2009 COEO conference into RKY Camp in Parham, Ontario from September 25 to 27. Though no one opted for an early swim, some took part in a pre-breakfast birding session. The rest of the troops pulled out of their cabins to tuck into a hot breakfast before the morning reflection.

With a proverbial oar in the water, environmental lawyer Bruce Pardy asked everyone staring at a pretty wooden structure on the screen, "What colour is the house?" He questioned how we knew the colour of the whole house when only two sides of it were visible, demonstrating the difference between literal and lateral thinking.

Pardy returned as the keynote speaker Sunday morning to discuss the philosophy behind the province's environmental education policy, *Acting Today, Shaping Tomorrow*. While outdoor educators applauded the document as a first of its kind, and something from which to work, Pardy was critical.

He suggested that themes of indoctrination and integration ran through the document. He said, "This is not a document that encourages kids to think for themselves outside." Pardy thought the flexible wording of the document did nothing to encourage more learning out of doors. He said outdoor education could be diluted to reading a poem about a forest within the classroom. "It comes down to a message of control," said Pardy. "Teachers have control in the classroom. They are the ones talking to children."

On another oar in the ever turbulent waters of outdoor education was Grant Linney, a career outdoor educator and former COEO president. His seminar distilled the essential elements of outdoor education into a sweet brew. To promote natural connections and empowerment, Linney encourages teachers to take kids outside often during the school year to places within easy walking distance. "You don't have to be an expert. You just have to get them outdoors, at every grade level, and every time of year," Linney said.

Educators need to have proper planning and safety measures in place, but also need to give students freedom when they reach the destination. "Let serendipity happen," Linney said, meaning that if the topic is trees and someone finds a salamander, let the salamander become a teaching moment and not a distraction.

Quoting David Sobel, Linney said that Adventure and Discovery must be part of the lesson as children have an "inherent developmental thirst for exploration." Hunting and Gathering, the use of Maps, employing Fantasy and Imagination, studying Small Worlds, using Animal Allies and helping students find a Special Place all serve to connect students to their environment.

While Linney and Pardy were the two strongest paddlers in the COEO conference boat, astronomer Terrence Dickinson guided participants in reading the night sky by using the Big Dipper to find Cassiopeia and the North Star.

Returning COEO president Zabe MacEachren said COEO is continuing to raise its profile within the Ministry of Education and that membership is rising. For more information go to www.coeo.org or visit the organization's Facebook site.

Gisele Winton Sarvis is an outdoor educator with the Lake Simcoe Regional Conservation Authority at its Scanlon Creek Nature Centre.

Call for *Pathways* Submissions: The Role of the Canoe in Outdoor Education

In 2007, the Canadian Broadcasting Corporation (CBC) sponsored a competition to determine the Seven Wonders of Canada. The finalists included Niagara Falls, Old Quebec, the Rockies, the Halifax-based immigration museum, Pier 21, and . . . the canoe — an unassuming open, keel-less boat propelled by single-blade paddles. As noted on the competition's website,

> The canoe has slipped quietly into the stream of the nation's common parlance. Whether you're practicing your J-Stroke out on the lake, rooting for your favourite professional soccer team in the national Voyageurs Cup, or simply standing at the corner of Portage and Main in Winnipeg, you are reflecting a bit of Canadian canoeing history. (*The seven wonders of Canada: The canoe, n.d.*)

In addition to holding a prominent place in historical and contemporary Canadian identities and cultures, canoeing and other paddle-based activities have long played an important role in outdoor education programming. While this may be familiar terrain for practitioners and scholars alike, the landscapes are worth re-visiting as many new currents remain to be explored in, with and by the canoe.

The Summer 2010 issue of *Pathways* will explore this relationship between paddling and outdoor education within the contexts of the four central values of the Council for Outdoor Educators of Ontario (COEO): Education for Environment, Character, Curriculum and Wellbeing. The guest editors invite you to submit original research-based, conceptual or programmatic-focused articles for consideration in this special issue. Possible topics include, but are not limited to

- the history and future of canoeing and kayaking in Canada and other countries
- the relationship between paddling activities and identity/culture, the environment, place-based education or physical fitness
- the role of canoeing and kayaking in outdoor education broadly, as well as integrated outdoor education programs specifically
- contemporary risk management issues or best-practices surrounding water-based activities
- backpocket games for paddling programs
- other investigations, contemplations or critical insights concerning paddling activities in relation to COEO's four central values.

The deadline for submission is **December 15, 2009.**

Papers submitted for review as well as communications regarding this special issue should be directed to the guest editors: Bryan Grimwood (bryan.grimwood@gmail.com) and Jessica Dunkin (jdunkin@connect.carleton.ca).

Submissions will undergo *Pathways* standard review, selection and editorial processes. Submission guidelines can be found on page 36 of this issue or at www.coeo.org/pathways/AuthorArtistGuidelines.pdf. Only electronic submissions in Microsoft Word format will be accepted.

References

The seven wonders of Canada: The canoe. (n.d.). Retrieved October 6, 2009 from www.cbc.ca/sevenwonders/wonder_canoe.html

Submission Guidelines

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, wellbeing 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 e-mail outlining your potential contribution to the Chair of the Editorial Board, Kathy Haras (kathy@adventureworks.org).

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 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 e-mail 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.