Pathways

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Pathways

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COEO

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

Contributions Welcome

Pathways is always looking for contributions. If you are interested in making a submission, of either a written or illustrative nature, we would be happy to hear from you. For a copy of our submission guidelines, please contact Randee Holmes, Managing Editor.

If you are interested in being a guest editor of an issue of *Pathways*, please request a copy of our guidelines for guest editors from Randee Holmes, Managing Editor.

If you have any questions regarding *Pathways*, please direct them to Bob Henderson, Chair of the *Pathways* Editorial Board. If you'd like more information about COEO and joining the organization, please refer to the inside back cover of this issue or contact a Board of Directors' member.

Our advertising policy:
Pathways accepts advertisements for products and services that may be of interest to our readers. To receive an advertising information package, please contact Bob Henderson, Chair of the *Pathways* Editorial Board. We maintain the right to refuse any advertisement we feel is not in keeping with our mandate and our readers' interests.

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Features

Columns

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

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Editor's Log Book

In 2004 *Pathways* enjoyed a healthy list of submissions. Many of these were from our readership outside of Ontario and from keen outdoor educators outside of COEO membership. This set of contributors is most evident in our winter and spring issues.

In 2005 we encourage COEO members to report on "In the Field" activities and offer "Backpocket" teachable items in the main. We also welcome reports on our membership activities generally.

Two items within this current issue are related to conference sessions from the COEO 2004 gathering at Tim Horton Onondaga Farms. Thanks to Jeff Cameron and Monika Grau, as well as Mark Whitcombe, for these conference session follow-up papers. Papers by Eileen Nicolle and David Mackenzie as well as by Paul Van Horn speak to the omnipresent need to link health and environment in our thinking about our work in general and specific ways.

Erin Sharpe has re-energized our "Explorations" column concerning research. *Pathways* hopes to further develop this specific "pathway," linking research literature to our practice and showcasing research articles that are particularly practitioner-friendly in terms of methodology and relevant in terms of content.

Plotting our course ahead, our summer issue will have a research theme. Other potential themes include looking at outdoor education east of Ontario, and the elements and outdoor education. And we are always looking for both new ideas and people to take them on with our help.

A reminder: *Pathways* will move to four issues per year this coming fall.

A committee was struck at the January COEO executive meeting to seek a new Chair of the *Pathways* Editorial Board. New membership to the Editorial Board is also welcome in 2005.

Thanks to all contributors who have made this, we believe, an exciting electric issue. Special thanks to Josh Gordon who continues to offer lively sketches to grace our pages.

Bob Henderson

Letter to the Editor

I arrived home from a beautiful warm Florida vacation to read the wonderful tribute to Brent [Dysart] in the *Pathways* magazine.

Knowing the friends who participated in the tribute made it very special to me. Brent believed deeply — very deeply — in COEO and all that it stands for. He was passionate about his love of nature and passed that on to many, many people.

Please pass on my thanks to the *Pathways* board and the COEO directors.

Carolyn Dysart

Sketch Pad — Art for this issue of *Pathways* is generously provided by Josh Gordon (cover and pages 28, 31 and 36), Steve Tourney (page 6), Heather Read (pages 13 and 15) and Mors Kochanski (page 19).

President's View

Ask Not What Your COEO Can Do For You . . .

It seems to be a *dis-ease* of our times: being busy on so many different fronts, being consumed by endless lists of things to do and people to please, and feeling guilty about not devoting enough time to the people and pursuits you really care about.

I am lucky. I am happily married, I have a full-time job in outdoor education and I currently have time to join a diverse, talented and hard-working number of volunteers who are serving as your Board of Directors, your *Pathways* editors and authors, your Annual Conference and other event planners. I get a real charge out of my colleagues' enthusiasm, dedication, creativity . . . and results. If you have read *Pathways* and our electronic newsletter, if you visit our regularly updated Web site (www.coeo.org), you will know that we are working hard to promote our field and to provide you with opportunities for professional development, connection and affirmation.

The thing is, I'm also feeling disappointed. First, despite all the positive steps we've taken over the past year-and-a-half, our membership numbers are slowly declining (currently 184). *If we're not careful, a time will come when we simply do not have enough members to sustain our organization*. Second, the two regional events we planned for this winter (a day of outdoor pursuits at **Seneca College**, and a full weekend **Make Peace With Winter** conference on the Bruce Peninsula) have been cancelled due to low registration. And, third, no doubt largely because of those busy lives we all lead, COEO volunteers seldom get feedback about the good works they have been doing.

So, if you are taking the time to read this, I have a favour to ask of you. Please let me know what you think about the following:

1. In your grand scheme of things, is outdoor education still worth supporting and promoting?
2. Is COEO still a worthwhile organization to do this? How so (i.e., what COEO activities do you value) or how not so (i.e., what is COEO not doing and/or wasting time on)?
3. Given your current situation, is there anything **you** can do to
   - increase our membership base? For example, do you know kindred spirits who are not currently members? This strikes me as square one stuff.
   - help promote outdoor education and COEO, either in a small and limited way, or in the larger and/or longer term sense?

COEO has a long and proud history as a volunteer organization. Over the years, a great many members have stepped forward (often repeatedly) to make us viable and exciting. Let's keep it up.

Please note that any COEO member is welcome to attend a Board of Directors meeting. Contact me for more details.

Grant Linney
glinney1@cogeco.ca

Date	Time	Location
Sat. April 2, 2005	9:30 am to 4:30 pm	Norval Outdoor School
Sat. May 28, 2005	9:30 am to 4:30 pm	Norval Outdoor School
Sat. Sept. 17, 2005	9:30 am to 4:30 pm	Norval Outdoor School

Understanding the Wilderness Canoe Trip Experience of Older Adults

by Jeff Cameron and Monika Grau

As trip leaders, our close contact with and direct observations of our seniors on trip make it impossible for us not to notice their enthusiasm and mettle. During the trips we discuss the seniors' performance, needs and preferences so that we can make the right decisions and adjustments to provide a quality experience. Our post-trip debriefings invariably lead to intuitive interpretations about the nature of our participants' experience. Over time, our curiosity led us to one common over-arching question: "What is going on here?" An invitation to discuss this outdoor program at the Council of Outdoor Educators of Ontario (COEO) Conference gave us cause to consider this question more formally.

Background

Reflecting on his personal exploration of the notion of becoming an athlete in later adulthood and, its seeming obverse, the realities of aging, John Jerome (1982), a sports journalist, concedes that, "Aging is very rude, making no attempt at diplomacy, at softening its message. No small talk: it just starts slamming doors in your face, yanking things out of reach (of your arms, your eyes, your deeper longings)."

The decision to participate in a wilderness canoe trip can be fraught with a range of doubts and anxieties, especially if it is a first-time experience. This is true for anyone, regardless of age or stage of life, but for the older adult the apparent contradiction of involving oneself in a physically demanding activity and the physiological downslope that accompanies aging can magnify those concerns. There are joints that take a set like an engine on a cold winter morning; risk of injury, self-doubt, forgotten psychomotor circuitry of how to move at all, and attitudes that suggest the pretentiousness of even trying.

But if a wilderness canoe trip seems contradictory to the messages an aging body sends, there are other offsetting motivations that accompany one's senior status. For many older adults, both leisure time and disposable income are more plentiful. Opportunities to meet new people and make new friends are appealing in the face of social isolation that is variously experienced by older adults. The more adventurous senior is frequently motivated by an imperative to experience something new and intriguing and for which time to have this experience is increasingly limited. But can the influences of aging be put aside long enough to take on an outdoor adventure program?

As amateur guides (this is not our day job) we work with a number of groups for whom the wilderness canoe trip affords a variety of opportunities for learning and leisure. We paddle with employees attracted to outdoor programming as an alternative to traditional classroom-based workplace education. We guide students enrolled in an outdoor education program affiliated with the McMaster University Department of Kinesiology. Recently we have been collaborating with a local seniors' centre to offer a five-day wilderness canoe trip experience for their members. Centre membership is generally restricted to those 55 and older. Thus far we have guided four all-inclusive trips for seniors ranging in age from 51 to 79. We have never taken for granted the age of our trippers. However, born of our experience guiding novices, we paddle with seniors based on the belief that, short of having any debilitating condition that would preclude participation (we screen for this) and with the right accommodations applied, age needn't be an exclusionary factor.

The invitation extended by COEO to speak at their fall 2004 conference about our experiences tripping with seniors came with few conditions and rules. Welcome to think for ourselves, we chose to describe the seniors' experience from their perspective, rather than our own. With ready access to a group of potential respondents (the 30 seniors with whom we have paddled over the past four summers) we undertook a modest research effort to understand in some depth the wilderness canoe trip experience of older adults.

The literature on adult stages of development and change extends back to the 1960s and is both voluminous and comprehensive (Becker, 1964; Kidd, 1973; Gould, 1977; Levinson, 1978; Mayer, 1978; Colarusso & Nemiroff, 1981; Mezirow, 1983). Although providing a base for understanding the journey to and through later adulthood, these works are too broad in scope to address specifics of the experience, such as the influence of physical activity. A number of authors have explored the challenges of engaging in vigorous physical activity into later adulthood (Henderson, 1974; Gardner, 1986; Cameron, 1988). Jerome (1982) chronicled his own personal experiment to become a competitive swimmer in his later years.

Several studies have been conducted on the role of leisure participation for older adults (Ragheb & Griffith, 1982; Siegenthaler, 1996; Tinsley, Teaff, Colbs & Kauffman, 1982). Sugarman (2001) continued her exploration of older adult participation in outdoor adventure experiences and in one survey study (2002) investigated, from a life cycle perspective, the general motivations of older adults to participate in this type of activity. Williams (2003) provided insight into an elderly couple's concession that advancing years must dictate the end of 24 years of canoe tripping.

Few studies have recorded the actual experience through the voices of the trippers themselves or described the depth and fullness of the experience, including barriers, joys, apprehensions and personal perspectives. This study, we hoped, in addition to answering some of our own curiosities (hypotheses of sorts), might offer direction for trip guides and leisure programmers wishing to make the wilderness canoe trip more accessible to seniors, or help them further consider what to account for in planning such a trip. We hoped as well to learn more about the attitudes and perspectives of older adults with respect to their participation in outdoor adventure programs.

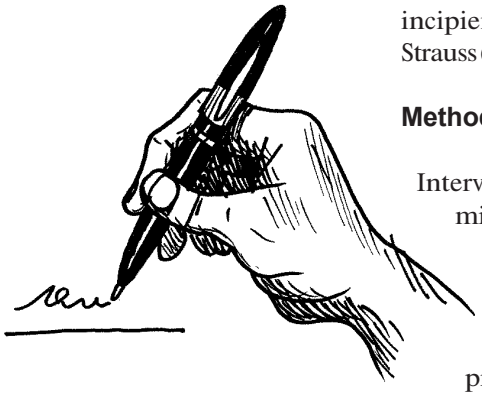
Research Question and Methodology

The research question in this study was this: *What is it like for an older adult participating in a wilderness canoe trip?*

Our study was designed to explore that experience and its meaning for a group of older adults as they described it and as we observed it in the field. Ethnography was the research framework applied to uncover and interpret their experience.

Ethnography is a form of qualitative research that aims to capture the essence of a particular phenomenon or social act. The method has its roots in the work of poets, historians and travelers who observed and wrote about the strange-seeming behaviours and world views of people "different" from themselves (Hodgen, 1964). It begins with a brief exploration of the components and implications of an anticipated problem, loosely articulated as, "We're not sure what is going on here and we wish to get closer to an answer."

We begin by turning the problem into a set of questions to which a theoretical answer might be given. To arrive at a set of abstract categories that describe, in this case, a seemingly familiar phenomenon, we temporarily suspend our notions about "what is going on" by assuming a "voluntary ignorance." Based upon our observations in the field and data collected through in-depth interviews, and the subsequent analysis and decoding of that data, we worked to discover



— to hear — the perspectives of the participants as revealed through their thoughts, behaviours, and words. It is a process of "unpacking" the individual's lived experience to create a conceptual framework that connects fruitfully with the empirical world (Blumer, 1969). Where that connection was incomplete or not fully understood we checked back with our respondents to ensure that our incipient interpretations were, as Glaser and Strauss (1967) described, grounded in our data.

Method

Interviews, each lasting one hour to 90 minutes, were conducted with the respondents. Questions were open-ended and posed to initiate and sustain conversation. Respondents were encouraged to elaborate and provide examples to describe why they perceived their experience as they did. We took notes or tape-recorded the interviews, which were later transcribed. We compared the meanings imbedded in each respondent's text and looked for shared themes and core categories.

Findings

Five categories emerged: intrigue, engagement, inherent accommodation, burden to others and environment. Given the volume of data captured we could have quite readily identified within each category at least five or six meaningful themes. The iterative work of post fieldwork analysis must stop somewhere, however, especially when the original intention was to conduct a modest investigation. Following is a summary of the categories, a few of the themes, and sample comments.

Intrigue — For many older adults, a shortage of resources, skill and physical capability can frustrate even the contemplation of a wilderness canoe trip. Once they became aware that these barriers need not apply, our respondents reported being intrigued by the possibilities. For a number of our seniors, the canoe trip had been a protracted curiosity of some priority: "It was on my list of ten things to do before I die." Others viewed the canoe trip as an exotic adventure to be taken advantage of sooner rather than later: "I've got lots of time but I'm running out of time." For many, the intrigue was a product of the tension between the child-like anticipation of the unknown and concerns about the feasibility of canoeing at this later stage of life: "It's not easy having a young mind in an old body."

Engagement — One of the respondents was adamant about disputing the stereotypical notion that a canoe trip is not appropriate for older adults: "That attitude, for me, is like a red flag to a bull!" The canoe trip represented for her an affirming and demonstrative challenge to the threat of social isolation. Similarly, the trip was for many a significant enough undertaking (both the decision to participate and the participation itself) to be a meaningful demonstration of personal growth. It is as if there is no equilibrium: one is either growing by finding new ways to stay engaged, or one chooses at some point to concede to the gradual wane of aging. Once aware that the canoe trip was available to him, one respondent felt the gravity of choice: "I could choose to opt in, or opt out. I chose the former." Another paddler viewed opting out as, "growing moss on my north side."

A theme or dimension of engagement was evident throughout the trip and confirmed by our interviews. We called it "imbued confidence." On a concrete level, the daily activities, novel encounters, and learning that take place on the trip are almost perfect "acts" of engagement. But it was their sense of legitimacy, of rightfully being in the wilderness and comfortably making their way across the land, as others much younger would do, that was truly engaging for them. Several expressed that a source of their confidence was an attitude exuded by us, their guides: "We always felt that you expected us to succeed." [*Researchers' note: We suggested respondents not say nice things about us because to do so would constitute a research bias. They did anyway.]

Inherent Accommodation — Direct observation in the field and our reviews of

interview text revealed that, among many of the respondents, there was a sense that the canoe trip is an inherently accommodating activity. This came as a gradual revelation for most, given the prevailing notion of the canoe trip as a rather rigorous and physically demanding endeavour. Many especially enjoyed the smooth, low-intensity nature of the paddling. There is always another paddler to help and the activity is invariably, one hopes, undertaken while seated. Even quite senior trippers, at times unsure of their footing or capable of managing only light loads on the portage, could paddle comfortably and effectively for considerable stretches. One of the most elderly respondents applied a well-chosen simile to describe his cohort: "We are like loons — awkward on land but comfortable on the water."

Another dimension of this category was something we called "fluid demand." Trippers expressed an appreciation of the manageable tempo of the canoe trip and the assistance available from all quarters. For canoe trippers of any age the act of giving and receiving help is much valued; for many seniors it is requisite to the experience.

Burden to Others — Our interview data included numerous references to explicit or implied concerns about holding others back. Many expressed varying degrees of anxiety about burdening the group, and this concern was often factored into the decision to participate in the first place. In several cases, this concern was exacerbated by negative reinforcement from family or friends. A 74-year-old prospective tripper reported that her daughter, upon hearing the news of her mother's imminent adventure, advised against her participation warning that she would "hold everybody back." (She in fact did not hold the group back and subsequently served as the cover girl on the city leisure guide, a copy of which was promptly mailed off to the concerned daughter).

Many of the seniors expressed apprehension about their experience, fitness and ability, or lack thereof, during pre-trip encounters such as registration, screening interviews and trip planning sessions. This fear of burdening others diminished as the hours and days passed on trip, and as they came to the realization that almost any personal insufficiency could be accommodated or "learned away."

Environment — A theme that emerged in this category was that of contrast. Palpable during the trip, and frequently expressed during our interviews, were the respondents' feelings that the environment yielded a "permission to play." One tripper stated, "I never thought I'd find myself wading through a creek;" many others delighted at lying in the bottom of a canoe, staring into the night sky during a starlight cruise. Their child-like response to a simple stick race stood, for them, in contrast to the age-appropriate behaviour expectations of their everyday life back home. For some, age-associated changes in their life circumstances have resulted in reduced social contact and smaller living accommodation — from a large home on a large lot, for example, to a tenth-floor apartment. Their appreciation for the natural environment and the meaning of living outdoors was heightened by the contrast to feeling increasingly "housebound."

Another environment theme evident in our data was one we called "reconnection." Many linked their canoe trip to youthful experiences or associated memories from their past. One respondent said, "I grew up on the Baltic Sea. I spent a lot of time on the water." Another had paddled with his young son many years previous. A canoe trip in his later years and especially the concomitant environment served almost to conjure that reconnection with his son. A prevailing sentiment was that participation was not so much the beginning of something new, but rather an opportunity to close a circle of experience.

Conclusions

This paper reports the findings of a study designed to gain a better understanding of the wilderness canoe trip experience of older

adults. It articulated the research method that was followed to discover and provide a brief review of the five categories or themes that help illuminate the details of that experience. It discussed the meanings of the perspectives and thoughts shared by the respondents, and implied how outdoor education practitioners might take advantage of these insights when working with older adults. A further research consideration might simply be the application of the ethnographic approach. Its capacity to help unravel the meaning behind the lived experience may hold promise for teachers and outdoor educators working with a variety of students and age groups.

Older adults accrued numerous benefits from their canoe trip participation. Their perspectives on that experience reflect a triangulation of the awareness of their physical limitations, and advancing years and their desire to remain connected to effortful aspects of life. The wilderness canoe trip experience for seniors can be seen as a gentle "push back" against the vicissitudes of aging, and perhaps even as a metaphor for a mental and physical reawakening.

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Jeff Cameron and Monika Grau are employed at the Homewood Health Centre in Guelph, Ontario, where Jeff is the Coordinator of Staff Development and Monika is a Recreation Therapist and Body Esteem Counsellor. In addition to working closely with the Evergreen Seniors Centre in Guelph to provide the canoe trip program for its members, they have guided education-based canoe trips for employees and university and college students.

Environmental Education, Ecosystem Health and the Medical Curriculum

by Eileen Nicolle and Dave Mackenzie

Eileen writes:
In the first month of medical school, as part of my anatomy course, I began dissecting a cadaver. When I opened the thorax, I discovered a pair of black lungs, stained, I assumed, by smoking. However, as a tutor explained, my cadaver was probably not a smoker. Rather, like most of the cadavers in the room, he had lived in the city. A lifetime of breathing within an urban environment had taken an enormous toll on his lungs.

I was alarmed by this experience. The cadaver's lungs, blackened through life and into death by smog and exhaust, made me wonder why the environment did not feature in our medical school lectures and discussions about health. History and current events are replete with evidence of the environment's role as the principle determinant of health. But in my first few years of medical school, there has never been an opportunity to discuss, as a class, how physicians can support the environment, and thereby contribute to human health and wellness.

While environmental education is of general importance, it has particular relevance for medical students. Above all, medical students must understand and reflect on the fact that the environment is the ultimate arbiter of the health of their future patients. With this realization, physicians can build more environmentally sensitive professional lives, and perhaps better contribute to the health of their communities. As physicians, they will be part of a system that uses physical resources intensively; an appreciation of these demands, which exist in most conventional practice settings, can help promote waste reduction. If physicians wish to adopt a lifestyle that promotes healthy living, it seems reasonable for this lifestyle to include environmental protection and waste reduction. As well, there are many areas of private life that can incorporate environmental values, and introducing these concepts early in medical education could lead to desirable outcomes. Lastly, as advocates for health and wellbeing, physicians are positioned uniquely to advocate for the environment in their community and professional lives.

Thus, there is a clear call for introducing the concept of *ecosystem health* in the medical curriculum. Ecosystem health has been defined as "a systematic approach to the preventative, diagnostic, and prognostic aspects of ecosystem management, and to the understanding of relationships between ecosystem health and human health. It seeks to understand and optimize the intrinsic capacity of an ecosystem for self-renewal while meeting reasonable human goals. It encompasses the role of societal values, attitudes and goals in shaping our conception of health at the human and ecosystem scales" (Canadian Association of Physicians for the Environment, 2005). Here, we review some examples of the evidence demonstrating the link between the environment and human health, followed by an exploration of the feasibility, availability and applicability of ecosystem health education in the undergraduate medical curriculum.

Evidence for the Link Between Environment and Health

There is good evidence demonstrating that the environment, in the broadest sense, can greatly influence health. Humans can enjoy healthy states across a range of environmental conditions, and this adaptability has probably influenced medical education's near-exclusive focus on individual determinants of health. But just as personal choices such as smoking or drinking affect one's health, societal choices about how we use our resources, where we dump our garbage and how our food is processed also have an important role in determining health.

Collectively, we only come to recognize that health is a function of environmental parameters when furnished with an obvious example of acute environmental change, such as the deaths in Walkerton, Ontario as a result of water contaminated with *E. coli* in 2000, or a catastrophic event, such as 2004 tsunami disaster in Southeast Asia.

The relationship between human health and the environment becomes more significant with the awareness that many profound environmental changes, with attendant effects on human health, are the result of human activity. Effects of human-induced stress on the biosphere include ozone depletion, biodiversity loss, climate change, land degradation, freshwater depletion, air pollution, and the accumulation of organic chemicals in biological systems (Vitousek, Mooney, Lubchenco & Melillo, 1997). Admittedly, assessing the extent of these hazards is difficult, because disease causality is typically multivariate and complex (McMichael, 2002). Moreover, some consequences of ecosystem change for human health may be as yet undetectable. However, a significant body of evidence and experience demonstrates that the environment and environmental change affect health and, as such, are important subjects for medical students to consider.

Evidence for a relationship between the environment and health exists on different orders of complexity. At the simplest level, an individual study can suggest the interaction between one environmental condition and health or disease — for instance, elevated toxins of industrial origin contaminating a food supply (Hites et al., 2004). At the most complex level, integrated case studies reflect the intricate interactions linking human ecology and patterns of disease. For example, the dramatic increase in the incidence of allergic asthma in industrialized countries over the past 20 years is likely due in part to cultural and environmental change, leading to fewer childhood infections (Liu & Szefler, 2003).

There are other important signals of the bonds between our ecosystem and population health. Increased exposure to ultraviolet radiation due to ozone depletion is most commonly associated with increased incidence of skin cancer and affects cellular immunity (de Gruijl & van der Leun, 2000). Climate change has driven the spread of vector-borne disease (Lindgren & Gustafson, 2001; Kovats, Campbell-Lendrum, McMichael, Woodward & Cox, 2001), and it is anticipated that it will have a host of effects on human health (Haines & Patz, 2004). Airborne pollutants released by industrial activity have been correlated with mortality (Dockery et al., 1993) and exacerbate respiratory disease (MacNee & Donaldson, 2000). Chemicals released to the environment, such as PCBs and poly-aromatic hydrocarbons, may affect the incidence of some cancers (Clapp, 2000), endocrine function, and fertility (Rogan & Ragan, 2003).

Despite these familiar examples, there are few obvious causal pathways leading from environmental change to each incidence of disease. In addition, life expectancies nearly doubled over the 20th century; this figure, along with other indices of wellbeing, is used to rebuff the claim that environmental change by humans during that time was detrimental to health (Lomborg, 2002). However, this view fails to account for the prospect that costs may be masked by the absence of null comparison data (McMichael, 2002). Additionally, there may be a lag between ecosystem change and its effects on health (McMichael, 2002). In light of the scale on which we are transforming our surroundings, there is a clear justification for medical students to receive some instruction in the relationship between environmental conditions and change in population health. Indeed, ongoing population growth, which will draw down natural resources, makes this need more pressing (Speidel, 2000).

Incorporating the Environment into the Medical Curriculum

There are many medical organisations, as well as physicians, that recognize the intrinsic link between the environment and health. As early as 1991, the Canadian

Medical Association (CMA) published a document professing that it had "long recognized the important links between health and environment" (Canadian Association of Physicians for the Environment, 2005). Articles released by the Ontario Medical Association (OMA), as well as initiatives by the Canadian Association of Physicians for the Environment (CAPE), also reflect an institutional awareness and appreciation of the interconnectedness of environment and health.

CAPE's mission statement sets out ways in which physicians can expand their role as health care providers through their understanding of the environment. These include serving as a resource on how environmental degradation affects human health; taking actions that will contribute to the protection and promotion of human health by addressing issues of environmental degradation; and educating members, other physicians and health professionals, the public and policy makers about environmental issues (Canadian Association of Physicians for the Environment, 2005). Essential in the fulfilment of these tasks is a well-developed environmental consciousness within the physician, and a clear understanding of the ways in which environmental degradation affects human health. Medical school is an excellent opportunity to establish this consciousness.

Though few in number, some medical schools have introduced elements of environmental education in their curricula. The University of Western Ontario (UWO) and Harvard University have included the concept of environmental health in their medical curriculum. Although the knowledge burden in undergraduate medical school is tremendous, environmental education can be accommodated within the curriculum. Medical students are receptive to environmental education, and to incorporating an environmental health perspective in their practice (Roberts, 2001); the challenge to introducing environmental concepts in the medical curriculum is greatest at the institutional level. Indeed, medical school is an appropriate and perhaps crucial time to introduce environmental education. John Howard, a founder of the ecosystem health program at UWO, has commented: "The problem isn't getting altruistic medical students who care about the environment . . . the problem is maintaining the altruism that medical students come in with" (personal communication, December 23, 2003). An early, formative introduction of environmental perspectives in medicine is critical because the demands of post-graduate (resident) medical training reduce the opportunity to introduce new ideas. Both UWO and Harvard University offer elective courses in environmental health. Both programs attempt to impart a conceptual understanding of the relationship between ecosystem and human health. Directed at this level, the courses have a secondary goal: to effect attitude changes that will influence lifestyle choices and professional practice.

At UWO, the faculty has developed a model of ecosystem health that is incorporated throughout its four-year undergraduate program. This model takes the form of case studies that highlight environmental determinants of health issues (Rapport & Howard, 2001). As well, a final-year elective option allows students to investigate from an ecosystem health perspective cases including a Bovine Spongiform Encephalopathy (BSE) outbreak, the increasing incidence of childhood asthma, and the health consequences of a hurricane. The importance of the ecosystem health program is reflected in the UWO Faculty of Medicine and Dentistry's *Vision: 2020*. The first goal of this document asserts, "We will promote a learning environment focussed on building knowledge to improve human and ecosystem health" (University of Western Ontario, 2005).

Harvard University's portable, module-based course, which introduces the driving forces behind environmental change and associated health outcomes, has been delivered at over 40 medical schools in the United States and abroad by video and the Internet. These

curriculum renewals will help train physicians to be attuned to the impact of environmental conditions on the health of their patients, and to be able to educate their communities.

Conclusions

From the perspective of ecosystem health, a concern for human health extends to a concern for the environment. It is important for physicians to understand that the environment is the essential guarantor of their patients' health, and that environmental change (including change fuelled by human activities) may compromise health. The undergraduate medical curriculum is an excellent opportunity to introduce future physicians to the demonstrated relationship between the environment and health, to foster the expansion of their role as health care providers, and to promote more sustainable models of practice. Physicians, health care professional associations, and some medical schools have already acknowledged the significance of an appreciation of ecosystem health. Affording medical students a formal appreciation of the environmental determinants of health will help them provide better care for their patients with a more comprehensive understanding of human health.

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Reducing the Impact

by Paul Van Horn

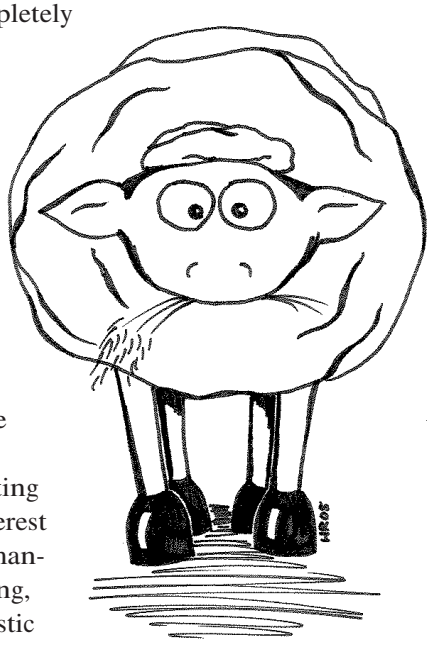
Seasoned outdoors persons know well the principles of minimum impact camping. Cultivating an awareness of and willingness to practice these ideals allows us to preserve the beauty of our remaining wild lands for future generations. But the minimum impact movement and most of its related programs have not adequately addressed the indirect impacts caused by outdoor recreation. These impacts include a vast array of problems associated with the production of the equipment and supplies used for outdoor activities. Mines, oil wells, refineries, factories, cotton fields, and other links in the supply chain all leave their mark on the environment. We cannot "leave no trace" because *everything* we do, wear and eat can be associated with an impact somewhere on the planet. The goal of "leaving no trace" in our fragmented and stressed wild lands is an admirable one, but it is important to realize that the modern outdoor gear industry leaves a gigantic trace on the global environment.

Although those who camp with traditional equipment (myself included) often cite their use of "natural" materials as being inherently less damaging than using synthetic gear, given the methods, materials, and ethics of the modern manufacturing world, the choice of materials may matter little. Nylon, cotton, wool, polyester fleece, plastic and steel all leave a trace. In a world of six billion people, that trace is indeed sizeable, whether in the form of oil wells, strip mines, polluted streams, or greenhouse gases. Exploring the impacts associated with different materials and making educated purchasing choices should be a goal for all outdoor enthusiasts.

Before beginning this exploration, we must realize that the most important opportunity we have for reducing our impact on the Earth is to adhere to the modern anti-consumer mantra "Reduce, reuse, recycle." Like other consumer industries, the outdoor gear industry thrives on, and perpetuates attitudes that encourage, over-consumption of goods. Reducing the amount of stuff we purchase, and keeping old gear in use until thoroughly worn out, should be the goal of every environmentally conscious outdoors person.

If, after keeping to this motto, we still need a new jacket or other item of clothing, what should we consider when making a new purchase? The choice of materials is important, so we must take the time to learn which materials have the most acceptable impact. In considering this question, I'll examine both natural and synthetic insulating fabrics (wool and polyester fleece), and offer a brief comparison of their current impacts and their potential for more environmentally friendly production in the future. Synthetic polyester fleece and wool both have impacts that are difficult to mitigate on a large industrial scale.

Although wool is a completely natural fibre, many undesirable impacts result from modern wool growing, processing and garment production. The large number of sheep (114 million in Australia alone) introduces large quantities of the greenhouse gas methane into the air each year. (While this is worth noting due to the increased interest in the possibility of human-enhanced global warming, in my opinion this statistic



is of dubious importance: What about the greenhouse gases once generated by the now-diminished herds of bison, and the massive herds of ungulates in Africa?)

Conventional modern wool production employs a host of chemicals to protect the sheep from pests such as flies. Two such classes of chemicals are organophosphates (OPs) and synthetic pyrethroids (SPs). OPs are used alone or in combination with other chemicals to prevent fly and lice infestations. According to the Vermont Organic Fiber Company, OPs "affect mammals, and are extremely toxic to humans. . . . These OP pesticides can damage the ecosystem downstream from the scouring plant by killing non-target insects, especially aquatic insects" (2003, p. 2). Concerning SPs, the same company goes on to say "SP pesticides are relatively safe for humans, but are extremely deadly and toxic to many species of aquatic insects" (2003, p. 2). Important progress has been made by some countries — notably Australia, New Zealand, South Africa and Uruguay — in eliminating the use of "toxic and persistent organochlorine and arsenic based pesticides" and devising more efficient application methods (Woolmark, 2003, p. 1).

Possibly the most damaging aspect of fabric production is the dying process. According to the Woolmark Company, an industry clearinghouse, "some dyes include heavy metals which do not break down in the environment. The problem of unacceptable levels of these heavy metals in dyeing effluent is common to all textile fibre dyeing" (1992, p. 2). The impacts of modern wool production render this "natural" fibre potentially as damaging as a synthetic fibre, making it difficult to argue for the use of conventionally produced wool over synthetic fleece.

Synthetic polyester fleece is created from petrochemicals such as ethylene and xylene. Using a catalyst (typically antimony) these chemicals are heated and converted into polyethyleneterephthalate (PET). This plastic is used to create plastic bottles as well as polyester fibres. In addition to the fact that PET is derived from, and furthers the demand for, petroleum, the catalyst antimony also poses a health hazard. According to the US Environmental Protection Agency (2003), antimony "is irritating to eyes, skin, and lungs (*NFPA 1975). Contact with eyes or skin causes severe burns (*CHRIS 1978). The compound is extremely toxic with a probable oral lethal dose of 5–50 mg/kg or between 7 drops and teaspoonful for a 150 pound person (antimony salts) (*Gosselin 1976)." Exposure to antimony poses a risk to factory workers, and residues that escape the production process also threaten the larger ecosystem.

Some of the undesirable aspects of polyester production have been solved by Patagonia Inc. In 1993 they began using fleece made from recycled PET soda bottles in their garments. According to their own information, each fleece jacket they make uses approximately 25 two-litre bottles. Since they began this manufacturing practice they have diverted about 40 million bottles from landfills. Though production still involves the use of antimony (an issue they are trying to address (Chouinard, personal communication, 2002)), by using recycled material, they have committed to reducing the amount of new resources they use. A few other manufacturers have since incorporated recycled materials into their production, but the practice could be far more widespread.

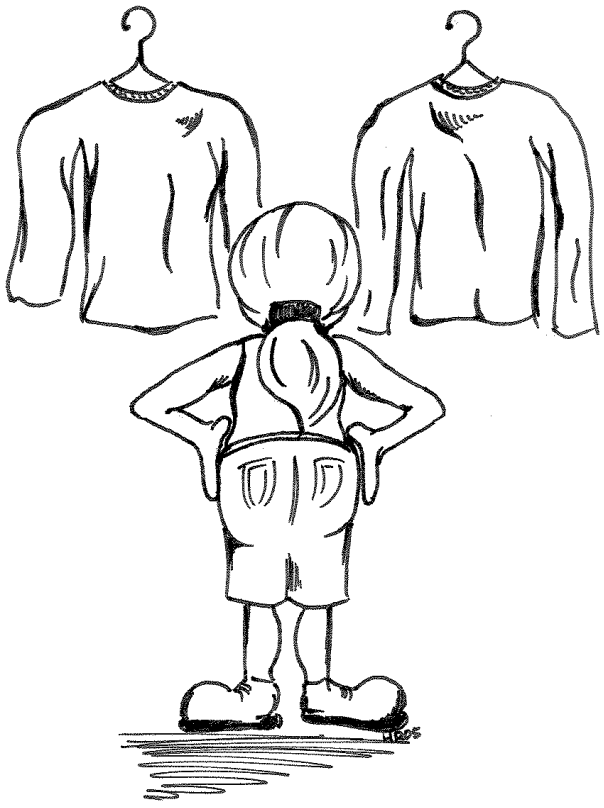
Although the comparison between conventional wool and synthetic fleeces offers no clear cut answers about which might be a more environmentally sound choice, wool appears to offer greater promise for environmentally friendly production. At every stage of production, choices can be made that result in a net reduction of negative impact.

The Spring Creek Organic Farm (2004) relies on good technique rather than chemicals to raise quality sheep and wool:

> We use no chemical sprays for insects; these could leave residues in the wool. Instead, integrated pest control methods or natural products are used. One example is the use of beneficial insects. Each spring and early summer, we purchase and release fly parasites — a tiny relative of the wasp — to control flies, particularly from the horse manure. The parasites lay their eggs in the fly pupae. The hatchling parasites eat the pupae preventing a fly from maturing. Our fly situation is dramatically better than that of neighbors. Also, we encourage swallows to nest in our barn eaves. The swallows eliminate what was previously an unpleasant mosquito problem.
>
> For internal parasites, most producers use chemical wormers. We use diatomaceous earth and garlic and have had perfect fecal counts. We also practiced intensive grazing as part of our pasture management. The sheep were moved to fresh pasture every 3 to 5 days using portable fencing and never return to the same pasture within 40 to 60 days. This breaks the parasite life cycle for the benefit of the sheep, and the long recovery period improves the pasture. We regularly have our veterinarian perform fecal examinations to gauge the success of our methods. We rotate much less frequently now, as we have not seen any parasites for several years."

Although Spring Creek Organic Farm is not yet able to raise "organic" sheep due to the high cost and scarcity of organic winter feed, they eliminate much of the undesirable impact of conventional wool growing. Increased demand for organic feed from other wool growers could conceivably lower the cost of organic feed, and improve the process even further.

The production of natural fibre garments can be done in a very responsible way. I have a sweater, for instance, that is made of undyed wool. Two different colour wools have been used to create a handsome, durable sweater without the use of toxic fabric dyes. Such a sweater could, with the necessary skills, be made completely by hand from organically raised wool. The same simply cannot be said for a similar garment made of polyester fleece. Whereas natural fibres result from entirely natural processes, synthetic fibres cannot be produced on any scale without the aid of modern machinery and energy. Their production also encourages (even if using recycled material) a secondary demand for petroleum.



Additionally, natural textiles (in the absence of toxic dyes or chemical additives) are completely biodegradable — an attribute synthetics lack. And finally, when the production of natural fibres is responsible, their manufacture can actually offer side benefits — something that synthetic fibres will never be able to offer. Wool, for instance, has as its source an animal that provides meat for human consumption. Sheep also provide manure that can be used to great effect as fertilizer. Sheep are also known to be great "herbicides on the hoof." Vermont Organic Fibers point out that sheep may be used to control many noxious weeds, including spotted knapweed, tansy ragwort, and leafy spurge. Selective grazing of sheep can help control these weeds and actually disrupt their lifecycles, thus resulting in long-term reduction without herbicides (Vermont Organic Fiber, 2003, p. 4). Aside from jobs in factories, the production of petroleum-based synthetics offers no beneficial side effects.

The above discussion argues for the use of at least one natural fibre in the production of outdoor clothing. Ultimately consumers drive producers and, if we demand responsibly produced organic clothing, they will have no choice but to provide it. From plastic kayaks and wood-canvas canoes to the metal alloys used in carabiners and other climbing gear, production of outdoor equipment creates some impact on the environment. If we as the outdoor community truly are to begin to minimize our impact, we must begin to think long and hard about the impact our equipment has *beyond* our immediate surroundings.

In addition to following minimum impact guidelines to reduce local impact, two additional points should be considered:

1. Whenever possible, equipment should be homemade, purchased in second-hand stores, or done without. "Reduce, reuse, and recycle" should also be the motto of the outdoor recreation world. Purchasing trends based on fashion or newness should be resisted.
2. Whenever possible, gear should be made of organically produced, natural materials manufactured by environmentally responsible methods.

If we truly want to "leave no trace" we should walk our talk, and relentlessly seek out ways to reduce our global, as well as our local, trace.

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OSEE Page

Compiled by David Arthur

OSEE Spring Conference — *Environmental Education: Journeys into Tomorrow*, to be held at the Ontario Ministry of Environment Laboratory Services Branch on April 30 and May 1, is shaping up to be a very special event. The science behind environmental issues and connections to the Ontario K–12 curriculum is the focus with a number of presentations and tours by Ontario Ministry of Environment staff. Program and registration information appears in the February 2005 issue of *Interactions*. Details and registration forms are available at www.osee.org.

EECOM Awards for 2004 — EECOM's third annual awards to honour educators in eight categories were celebrated at EECOM's annual conference in September 2004. The winners were Anne Commozi — Service to EECOM; Jean Dallaire — K–12 Teacher; Dr. John Livingston — Post-secondary Individual, AQPERE–EE Organization; Tim Grant and Gail Littlejon — Non-profit Individual(s); Ducks Unlimited — Non-profit Organization; Novex Couriers — Private Company; Alberta Parks and Protected Areas — Government Agency. For more details about the winners' contributions, visit www.eecom.org/english/winners2004.html.

EE Roundtable — *The Ontario Provincial Roundtable Concerning the Ecosphere, Curriculum, and Life* has been created to bring together representatives from all of Ontario's organizations concerned with environmental education. It is hoped that the roundtable will provide an avenue for unifying the messages of the member organizations and strengthen communication with the government around environmental education concerns.

Tom Puk of Lakehead University initiated the creation of the roundtable. To date organizations represented include COEO, Ontario Association for Geographic and Environmental Education (OAGEE), Environmental Education Ontario (EEON), and OSEE. The first action taken was to send a letter of support for Tom's application to the Minister of the Environment to have the Ministry of Education prescribed to the Ontario Environmental Bill of Rights (EBR).

Success of the application is critical to ensuring increased support for environmental education. If the Ministry of Education is added to the EBR, it will have to develop a statement of environmental values. Any decisions, actions, and programs with the potential to harm the environment must undergo assessment.

The decision on the application was to have been made by the end of January but has been postponed until June. The upside is that the decision was not negative and there is now time for more letters of support.

For more information, or to write a letter in support of prescribing the Ministry of Education to the EBR, visit http://flash.lakeheadu.ca/~teach and click on "Environmental Bill of Rights."

Study Bolsters Research that EE Helps Students with ADHD — A new study shows that hands-on structured outdoor activities improve behaviour and produce positive results for students with Attention Deficit Hyperactivity Disorder (ADHD). "A potential natural treatment for Attention-Deficit/Hyperactivity Disorder: Evidence from a national study" is authored by Frances E. Kuo, PhD, and Andrea Faber Taylor, PhD, of the University of Illinois at Urbana-Champaign. The complete report appears in the *American Journal of Public Health*, September 2004, vol. 94, No. 9.

Requests for reprints can also be sent to Frances E. Kuo, PhD, Human Environment Research Laboratory, University of Illinois at Urbana-Champaign, 1103 S. Dorner Dr., Urbana, IL 61801 (e-mail: fekuo@uiuc.edu).

David Arthur is a long-time member of OSEE and presented at the 2004 COEO Conference.

Tamarack Root Ring

by Maya March

> *It seems that my deepest connection with the world comes from the simple act of making something.*
>
> Zabe MacEachren

Last summer I had seen a friend wearing a beautiful ring woven from the roots of a tamarack tree and was determined to learn the technique and make my own. This past August, on a nine-day trip in Temagami, Ontario as part of an outdoor education class offered through McMaster University, I explained my objective to my fellow students. They also expressed interest in learning the skill. During our travels we searched the terrain for the tell-tale signs of a spruce bog. On the third day of our trip I had the good fortune of discovering that we were camped directly in front of one. With excitement, I returned to camp to tell the others and invite those still interested to help me gather some roots. To my surprise, the entire group followed me into the bog.

As we made our way across the wet sphagnum moss, I pointed out the different plants we encountered. The group was excited by the abundance of Labrador Tea and we decided to gather some to make our evening tea. As we travelled further, we were soon amongst the tamaracks. Before we began to gather the roots, I explained the importance of sustainable harvest; we would take no more than one root from each tree in order to ensure that we were doing no harm. After extracting each root from the thick sphagnum, we returned the displaced moss to its original position. After we left it would have taken a keen eye to spot that we had even been there.

Later that afternoon I found a quiet moment to myself and sat down along the shore to attempt a ring. No sooner had I done so than half the group was at my side, each eager to weave their own. As we sat on the rock, weaving the raw, pliable roots into a substantive object, I began to think about the powerful impact of the crafting process. Not only would each of us have a tangible memory to display with pride after the trip, but there is a definite sense of accomplishment that comes with the act of physically making something.

The entire process of natural crafting explores avenues inherent and fundamental in outdoor education. From the initial task of gathering, students participate in active learning; it is a rich and rewarding process. According to Zabe MacEachren, "Learning where to look for material and how to harvest material sustainably is often the most significant part of the crafting process which directly engages us with the land"(2000). To gather the crafting materials, students must learn about the ecosystem from which they are harvesting. After all, one must know where to look in order to find something.

Take, for instance, the example of the tamarack rings. Tamaracks are commonly found in black spruce bogs, an unusual and specialised ecosystem. The formation process of a spruce bog is very different from that of a swamp or lake. Swamps and lakes fill from the bottom up, while bogs fill from the top down, creating a thick layer of plant material over a covered surface of water. The carpet of plant life on the water is mainly composed of sphagnum, an amazing moss that can absorb one pound of liquid per ounce of moss.

Numerous fascinating plants grow on this organic carpet, such as the carnivorous pitcher plant.

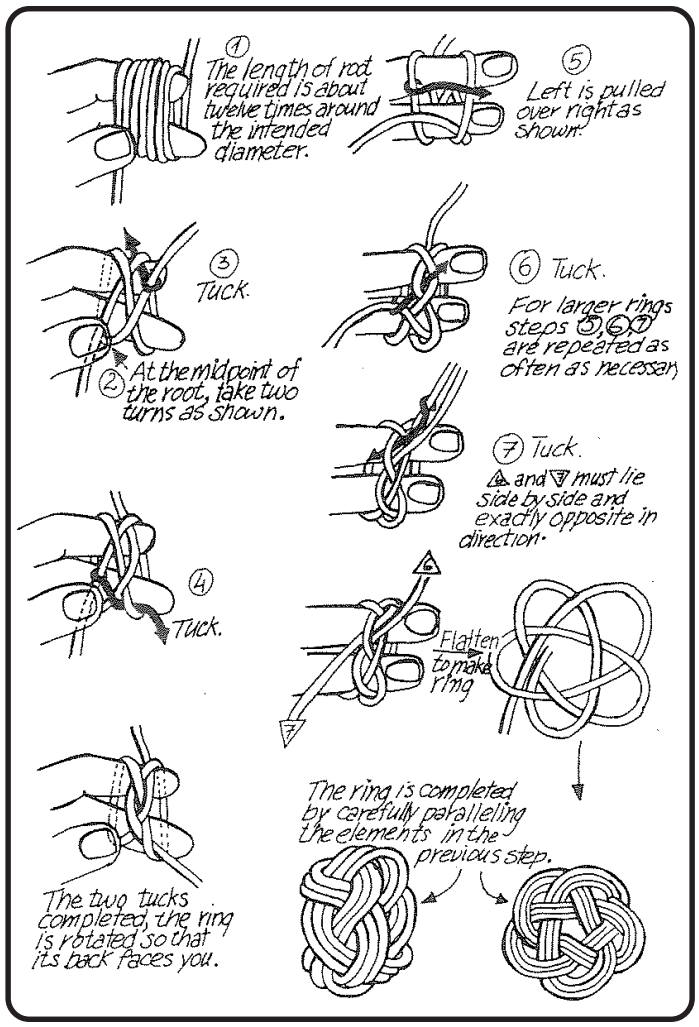
Also of interest is the symbiotic relationship that tamaracks share with mushrooms that grow around their roots. The mushrooms provide the trees with nutrients while the trees provide the mushrooms with sugars from their fallen needles (Strickland, 1996). Tamaracks are the only coniferous trees that shed needles in the fall — a curiosity for students and an opportunity to explore the differences between the life cycles of coniferous and deciduous trees.

Armed with this type of comprehensive knowledge, the students can search out the requisite crafting materials with a qualitative awareness of the environment around them. The more one knows about an area, the more interesting it becomes and the greater the connection that can develop.

Once students have located the trees, a new opportunity for learning is presented. Our society breeds the ideals of consumerism — the idea that the world and its resources are ours for the taking at any cost. It is easy to participate in the rape of the land when we are isolated from nature in an urban environment. In reality,

> We have become numb to the impact the making process creates as our physical reference for it is abstracted when we produce industrial-based items. With no reference point of ever having to make something totally from scratch, we become unaware of the impact on the earth body our consumer habits encourage. (MacEachren, 2000)

The need for conservation practices and sustainable harvesting becomes startlingly obvious when in direct contact with nature. Gathering plants or natural materials



demonstrates a quantifiable reduction in resources. Students come to understand the difference between finite and renewable resources.

I have found that leaving offerings is an interesting way to help students come to terms with the practice of sustainable harvesting. Each time something is taken from nature, one leaves in its place a small offering. I use a pinch of tobacco in honour of my interest in and respect for native culture. While tobacco may not appeal to everyone (for a variety of reasons) almost anything can substitute. I have known different individuals to leave such things as tea, sage or chocolate;

whatever has meaning for the person leaving the offering is appropriate.

The act of offering creates a sacred moment. It inherently instils a connection with the world, a relationship of give and take. It helps the student to understand their place on this Earth as a natural being, a child of the environment. It is a very powerful moment of self-realisation for an urban child. As David Suzuki and Amanda McConnell point out in their book, *A Sacred Balance*, "In big cities it becomes easy to assume that we differ from all other species in that we create our own habitat and therefore escape the constraints of nature"(1997, p. 4). Understanding that our actions profoundly affect the natural world and that we are dependent upon it for all things we have is a lesson every citizen needs to learn.

Once the materials are gathered, the creation process begins. Often natural materials must be processed and prepared before they are ready for use. Tamarack roots must be peeled and processed for storage unless they are to be used immediately. Many natural crafts provide a wonderful link to a native studies curriculum, leading to an understanding of how the materials were used by the people who lived in the area. While tamarack roots make wonderful rings, their traditional use was much more practical. Many native cultures wove their roots into water-tight baskets or used them for stitching birch bark baskets and canoes. When the students experience the effort required to create their own rings, they develop an appreciation for the time-consumption of many traditional crafts and respect for the cultures that developed them.

The rings are a relatively easy craft to master and the time commitment is minor, especially as compared to an undertaking such as paddle making, but the satisfaction gained is no less intense. In Temagami, the rings became our trip token, the symbol that stood for our group identity. It is a wonderful feeling when someone comments on my ring and asks where I got it. "I made it," I can proudly say. It inevitably leads to further discussion about the trip and the outdoors. More often than not the person asks the inevitable: Would I teach them how to make their own?

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Author's Note: I found the pattern for the ring in Mors Kochanski's *Bush Craft: Wilderness Living and Survival Skills* (1988, Auburn, WA: Lone Pine Publishing). It can also be found in his book, *Bush Art*, along with many other easy and exciting natural crafts. The instructions for making the ring are reproduced in this article with permission from the author.

Maya March is an undergraduate student of Philosophy at McMaster University. She has worked as a canoe and raft guide in Ontario, Alberta, Yukon, and the Northwest Territories and is an instructor with the Ontario Recreational Canoe Association.

Making Basswood Twine: A Means of Understanding a Lifestyle

by Mark Whitcombe

Why?

I have used crafts, even mundane simple crafts such as twine-making, to better understand the lifestyle of gatherer-hunters. While my specific interest is in Southern Ontario pre-history, I believe these lessons apply anywhere in the world. My Stone Age ancestors somewhere in northern Europe very probably did similar things with twine.

We know peoples such as the Huron of Southern Ontario are reported to have had fishing nets of a hundred metres or more, made preferably of wood-nettle fibre, but also from basswood. We know also that fish was the major source of animal protein for the Huron. So twine production and use were of great importance to them.

We have some tantalizing hints that some of the earliest people in this hemisphere may have used twine nets as a major part of hunting big game such as mammoths and mastodons, ensnaring and immobilizing them with nets before killing them with thrusting spears.

We know that on many aboriginal archaeological sites in North America plant fibre and twine are major, and often overlooked, components. (Do an Internet search on James M. Adovasio and twine, for starters.) The oldest twine found any where in the world dates back nearly 20,000 years, though evidence points to a much earlier development of the skills of making and using plant fibre for twine production.

Clearly, twine-making is a foundational skill for gatherer-hunters, and I suggest for early agriculturalists, as well. It is a learned technique to produce a material used in many different ways, ranging from making nets and bags to snares and bow-strings, from applications of weaving and sewing to the multitudes of mundane uses of string and twine in tying and securing simple bundles. I believe learning how to make and then use twine can be an insightful way of better understanding the lifestyle of gatherer-hunters.

Through directly doing the sequence of tasks associated with twining, I have come to understand and appreciate something of the knowledge and the skills required. I marvel at the depth of gatherer-hunters' knowledge and understanding of their environs. I have learned about the amount of time and energy involved. I have some practical understanding of the social contexts in which the skills were learned and practiced. The annual timing of the component activities begins to make sense to me.

In making twine, there isn't the inherent thrill that I get when successfully producing fire-by-friction. I can quite easily produce twine of a quality and at a rate at which I think any self-respecting ten-year-old gatherer-hunter would be satisfied. But just as my favourite prehistoric tool is an old Archaic-period 'kitchen-knife' blade — because it is so ordinary, and could well have been a favoured tool of some ancient woman — twine-making is very satisfying to me. The significance of how much twine had to be made, of how much time gatherer-hunters must have put into just twine-making and net-making alone, of what other daily tasks would have been done at the same time — all these learnings give me a much better understanding of what it might have been like to live in gatherer-hunter times. (The more I think I know, the more I'm glad I'm living now.)

"Bast-wood"

Basswood (Tilia americana) is a common tree in the river lowlands of my part of Southern Ontario. It was used by the local aboriginals in a variety of ways. Iroquioans used the soft easily carved wood for masks. The inner bark was one of the preferred sources of 'bast' (plant fibre) used for all manner of cordage uses, ranging from quick-and-dirty strip-off-a-branch thonging to tie a rough parcel, to being used for very fine twine that was then woven into thick strong door curtains.

(I knew how to identify basswood for almost twenty years before I realized that the name 'basswood' comes from a corruption of 'bast-wood,' that is, 'fibre-wood.')

Stripping the Bark

As a source of basswood fibre for teaching, I remove the bark from basswoods cut as part of trail maintenance. I 'cheat' (in terms of a total understanding of a gatherer-hunter lifestyle) by using a steel axe. I cut the tree down, and remove the bark when the tree is lying on the ground. I have not yet tried using a stone tool to cut the bark on a living vertical tree and then strip the bark upwards. That would require more energy and time than the cheating method I use, but it would also be more realistic for better understanding people who do not have steel axes.

Basswood bark 'slips' or peels off very easily in May and June, when the tree is actively growing and the cambium is very active. The cambium produces a very mucilaginous slime between the wood and the bark, making it relatively simple to separate the bark from the wood.

Cutting down a 15–20 cm tree with an axe takes five minutes, involving quite high energy and moderate skill. Peeling the bark requires low skill, but requires a high output of energy. It is fairly easy to remove the bark from the main part of the trunk, but removing the bark from the branches is more difficult. Since three-quarters of the bark is on the trunk, it has never made sense to me to take a lot of time and energy to get all the bark off the tree.

I marvel at the depth of gatherer-hunters' knowledge and understanding of their environs.

Choosing the 'right' tree (straight and unbranched) actually takes the most time — though through the year, I usually keep my eyes open, noting appropriate trees, and then remembering where to go when it is time to harvest the basswood bark. Since I am generally removing trees as a part of trail maintenance, I obviously kill the tree. I suppose it might be possible to only take a portion of the bark off a tree, leaving the tree to heal itself. In practice, I would think that would only work on large trees. My limited experience is that the inner bark from younger smaller trees is better, in that it is more even, and less likely to be coarse, 'webby', and woody.

For directions pertaining to Retting the Basswood, Cleaning and Separating and Twining the bark see http://homepage.mac.com/laddie/basswood_twining.html.

Author's Note: The preceding article came out of a workshop I offered up for auction at the COEO Conference in September 2004. At the auction (a traditional part of the conference), Dr. Zabe MacEachern of the Outdoor and Experiential Education Department of the Faculty of Education at Queen's University bought my workshop services. So in January 2005, I took her students through a session of twine-making (and fire-making) as an example of using crafts to better understand a lifestyle. (A version of this article appears online at http://homepage.mac.com/laddie/basswood_twining.html, accompanied by many illustrative photographs.)

While Trimming the Twine

I've often noticed when students work through the various steps of making twine that they still continue to chat with each other about ongoing daily matters. They tell stories. They sing. They talk about this topic and that topic, not in the least connected to twine-making. No matter what their frustrations are with learning the various twining methods, coping with fingers not used to working in the particular ways required, and struggling to keep the mental map of the developing net despite the tangle of misbehaving twine, they keep their social lives going.

But when I ask them to consider whether the people they are emulating were caught in a desperate struggle for existence, or instead constituted the original leisure society, they don't often make the connection. They're struggling with a small and simple component skill, and have difficulty placing that into context.

If I ask them to describe to me their imagined surroundings as a pre-historic family group, then they develop a better picture. Who would you be working with? What tasks would the others with you be doing? Since I work with older teenagers, I ask them where their children would be and what they would be doing. I get them to picture the smoky winter interiors of the longhouses they are excavating, and to recreate the smells, the stories, and the activities. (Why winter? The Hurons preferred wood-nettle for fishing nets. Wood-nettle is harvested in late fall, and is then retted. So the processing season would be in the long winter moons, during the intensely social winter confinement.)

Would specific people have specialized in certain jobs? Would girls and younger women have done most of the actual twining? If so, what would the similar cohort of boys and young men be doing? Would only certain individuals have done the net-making? As young adults, who would they be instructing? Who would be over-seeing their actions, determining what is to be done next, and at what point the task is finished satisfactorily? What criteria would they use to determine when a particular bit of twine was properly made? Were standards based on utilitarian, what-worked criteria? Or did tradition dictate to what standard and with what approach work was done? How many styles of twine-making would they have? When might they use the different approaches? How did the various standards mesh with the matrilocal pattern of habitation of the Hurons? When and by whom would the preparatory work be done? When and how would the finished net (in this case) be used? Who would use the net? How long would a net last? How were repairs affected? What other questions can be raised?

So I attempt to get the students to consider these questions and others they would raise themselves, seeding several questions and thoughts at a time into their ongoing chatter. Would the prehistoric people have considered twine-making 'work'? Given the amazing amount of twine they required, would the consequent amount of time needed to make it have been an issue? Would they have spent concerted periods of time making twine and nets, or would those tasks have been distributed more freely, a bit now and a bit then?

For me, this whole exercise of making basswood twine gives me what I think of as significant insights into the lifestyle of a person living 'in the land' — a much fuller understanding of their relationship to the environment around them. The value for me is not in producing the fibre, though that is a satisfying feeling. It is in coming to more directly understand how fully our ancestors had to integrate all aspects of their existence in order to live.

Mark Whitcombe is the Co-ordinator of Outdoor Education at the Toronto District School Board.

Emergent Environmentalism: What Childhood Experiences Make a Difference?

by Erin Sharpe

What childhood experiences influence people to grow up to become environmentally aware and active citizens? This question comes to me with much more relevance these days, as I am now officially responsible for the care and development of a young toddler. Although I try not to think in overly prescriptive terms (no plans for any mad social experiments any time soon), I thought it would be worthwhile to investigate the important childhood experiences that foster a commitment to environmental advocacy and action. The studies I looked at took a retrospective, "life paths" approach to answering this question. In other words, these researchers found adults who were actively demonstrating a commitment to the environment (e.g., they worked on environmental campaigns, they held jobs as environmental educators, they maintained lifestyles that were environmentally sustainable) and asked them to reflect on the influential and formative childhood experiences that contributed to the emergence of their environmental commitment. While these findings have relevance to me personally, they also offer outdoor educators some points to consider. So, what childhood experiences make a difference?

Time Spent in Nature

One of the most important formative experiences reported in these studies — if not *the* most important — was time spent in nature as a child (Chawla, 1998, 1999; Palmer et al., 1998a; Tanner, 1980). For many committed environmentalists, direct, first-hand encounters with nature fostered a love for nature and grew into a commitment to protect it. In terms of how much time was spent in nature, it is important to note that, in general, these environmentalists talked about their interaction with nature as a frequent and common occurrence during their childhood, so much so that it was "part of the rhythm of their daily lives" (Chawla, 1999, p. 19). Also worth noting is that many of these environmentalists talked about having a special place in nature. These were places they visited for solitude or escape, or used as a home base for play and exploration. For the most part, these special places tended to be located in nearby woodlots or thickets, in abandoned fields, or near local streams or ponds (Tanner, 1980).

This point stresses the importance of having nature that is local and accessible to those areas where children live. Although we pay a lot of attention to the "big parks," the fact that these areas are distant from the daily lives of children may make them less influential than we might think. Instead, where the love of nature is developing is in those areas we give little thought to — the small creeks, woodlots, and abandoned fields near to residential areas. This is likely because these are settings that by "adult" standards are often thought of as insignificant, both aesthetically and ecologically. However, Margadant-van Arcken (1990) reminds us, aesthetic qualities matter very little to children. Instead, they are interested in what the area affords them to do: "To children, a landscape is alluring when it allows all kinds of activities. Children want to be able to do something out there. . . . Their natural surroundings are made up of *active nature*" (p. 87).

Adult Mentors

A second important childhood experience discussed by these environmental advocates was the influence of adult mentors. Most often the mentor that was mentioned was a parent or grandparent, but also included distant relatives, early teachers, or leaders of outdoor organizations. The particular role

played by the adult mentor varied among the environmentalists interviewed. For some, an adult mentor helped to facilitate a love for the outdoors, as they were the ones who took them outside and introduced them to the features of their surroundings (Palmer et al., 1998b). For others, the adult mentor helped develop new ways of thinking about environmental issues by encouraging them to question their environmental habits (Chawla, 1999). Finally, for some, an adult mentor served as an example of a person who was passionately working for environmental protection, which played an important role in solidifying their own commitment to the environment (Chawla, 1999).

What this finding suggests is that a love for nature and a desire to advocate for the environment needs to be encouraged, nurtured, and modeled. It is a guided process. As one respondent in Chawla's (1999, p. 20) study noted, perhaps emergent environmentalism "has to do with who you go fishing with, or who you're talking to when you're walking." Although we know that outdoor educators take on a guiding role when they are directly teaching and leading students, we also know that these opportunities for mentoring are minimal when compared to the potential opportunities for children to be mentored by members of their family and community. Knowing this, perhaps we should think of how outdoor educators can expand their role as guides to positively influence these nature experiences of children in these contexts. Is there a role for outdoor educators to be "guides for the guides," for example? Here, our "students" might be parents, community organization leaders, and other adults who take a mentoring role with children.

Awareness of Human–Environment Impacts

A third factor that these environmental advocates considered as an important formative experience was an early awareness of human impacts on the environment. For many, this awareness came from experiencing the loss or degradation of a favourite place in the outdoors. In Chawla's (1999) interviews, she found that many environmentalists talked about being deeply affected by the loss of a place they particularly valued, such as a local swimming hole or beach that had become developed or contaminated. For others, it was learning about more global environmental impacts, such as the Chernobyl explosion, that acted as the catalyst for their interest in environmental issues (Palmer et al., 1998a). Books, such as Rachel Carson's *Silent Spring*, were also mentioned as important influences (Palmer et al., 1998a).

Although we probably don't want to use these findings as a rationale to *create* environmental problems, I think that what we can learn from them is the importance of supporting children with accurate and informed understandings of human impacts on the environment. Indeed, when Chawla (1999) asked the environmental advocates for recommendations, they most frequently gave the advice of "knowing your facts." They saw this as not only knowing the ecological facts, but also understanding the many sides of environmental issues. Complex understandings, they suggested, better helped them to find solutions as well as negotiate through the political arena of environmental advocacy.

Exposure to Social Activism

A fourth influential childhood experience was early exposure to social activism. Indeed, it is likely no coincidence that many of the committed environmentalists interviewed in these studies stated that they had first become exposed to advocacy and social action in childhood. The route into social activism differed: for some, it came from tagging along with a family member who was involved in a social issue campaign (Chawla, 1999), whereas for others their involvement came from their own initiative (Palmer et al., 1998b). Often these early experiences were working on campaigns for local issues (Palmer et al., 1998b). Further, often this early involvement was on issues unrelated to environmentalism. However, Chawla (1999) found that these individuals still considered these early experiences to be important because they

helped instil an orientation toward social justice, which later blossomed into an orientation toward environmental justice.

These points suggest that it is never too early to get kids involved in the work to make change. In terms of bringing this principle into outdoor education, the most fruitful route appears to be getting kids involved in environmental campaigns local to where they live. First, local campaigns offer (one hopes) the greatest chance of being successful. According to Sivek and Hungerford (1998), success is important not only for reaching the goals of the campaign but also for fostering in those involved a sense of efficacy in activism, or the belief that they have the capabilities to make change, and encourages future involvement in environmental advocacy and action. Second, local campaigns engage individuals in social networks that tend to be active in other environmental or social campaigns (Palmer et al., 1998a).

Conclusion

What do these findings tell us? One point to note is that the childhood experiences that contribute to a commitment to the environment are diverse. In other words, there are a number of different "paths" that lead to the destination of environmental commitment. Perhaps the best way to bring these paths together into a coherent framework is to understand them as contributors to the development of an environmentalist identity (Dillon, Kelsey, & Duque-Aristizabal, 1999). Indeed, these different life experiences all help build a sense of self that is connected to nature and the environment, which translates into a lifetime of advocacy and action.

What do these findings tell us as outdoor educators? First, we can see how outdoor education can directly contribute to fostering an emergent environmentalism. As teachers and leaders, we *are* those mentors and we *do* take kids outside! However, these findings also point out some other ways that outdoor educators can contribute to emergent environmentalism that may extend our perception of who we are and what we do. In terms of emergent environmentalism, we only stand to gain if we also see ourselves as advocates, organizers, and community facilitators.

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Bringing Outdoor Education Home

A Partnership Program for Adventure Education in the Greater Toronto Area

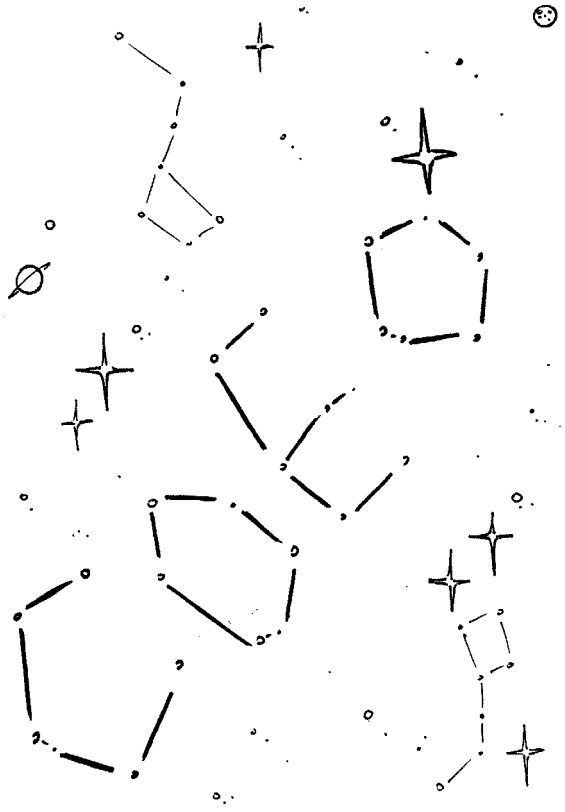
by Kate Humphrys

Last spring the Norval Outdoor School and Outward Bound Canada joined forces to create and deliver a new program for Grade 9 students of Upper Canada College (UCC). The program was an expedition-based program, unique not only because of the partnership, but also because of the location; the entire five-day program was based around the Norval Outdoor School in the Halton Hills area, just an hour from downtown Toronto. Bringing an Outward Bound program to the Greater Toronto Area was not without challenges, but the philosophy of the program made it a necessity; we wanted the students to experience the environment that existed close to their homes, rather than contribute to a belief that the only place to have a "real" outdoor trip is kilometres and hours away from where you live.

The Norval Outdoor School has been running programs for the students of UCC and other independent and local public schools on its 450-acre property since 1913; the current program for students from K–8 is impressive. However, once students enter the scheduling system of grade 9, it becomes more difficult to bring small groups to the outdoor centre as disturbance to the classes is significant and the Norval facilities and staff team simply are not large enough to handle the entire group at the same time. (Last year the grade 9 class size was 135 strong; the average group size for an overnight program at Norval was 25–40.) As well, the majority of the students in the grade 9 class had already benefited from past Norval programs, including a four-day intensive interdisciplinary program in grade 8; thus, we wanted to change the focus of the program, making it different and new for the students. We decided on an adventure-based expedition, with activities that required specific equipment and expertise. The most obvious choice for help in designing and running such a program was Outward Bound Canada (OBC).

Working with OBC we designed and implemented a program based on a five-day circuit. The 135 students were divided into five groups, and each group rotated through the circuit. The groups were staffed by two OBC instructors, one UCC teacher, two UCC prefects and one university volunteer with outdoor leadership experience. The five-day program was a rotating schedule, with transportation consisting mainly of the self-propelled, environmentally friendly means of hiking, canoeing and cycling throughout the Halton Region. Groups camped at the Norval Outdoor School, Rattlesnake Point Conservation Area, Kelso Conservation Area, and the Jack Symthe Field Center. The students participated in a variety of adventure activities run by specialized staff — rock climbing, flat and moving water canoeing, high ropes, orienteering, cycling and hiking — and completed an environmental service project.

Working with OBC made this program possible. Besides providing the equipment for such a large group, their involvement also enabled us to ensure maximum safety at all times. We felt reassured that the staff leading the trip and activities had the experience and qualifications required for a complex multi-element outdoor program. As well, with OBC coordinating the overall safety of the program, they applied their high safety standards, industry leadership and past experiences to develop the risk management models for the unique circumstances of this program. Indeed, it was reassuring for everyone — students, parents and staff — to know that the program



was being scrutinized by a professional company and the higher-risk activities were run by specialized staff with years of experience and training. This model of partnership between professional companies and outdoor centres or schools may provide an interesting vehicle for the integration of higher-risk outdoor activities into the school system in the future. It has already seen success in other areas; for example, indoor rock climbing companies who bring programs to school gymnasiums, and variations and redefined partnerships might be considered by schools and centres faced with removing such activities from their curriculum.

The program plan was ambitious and the logistics certainly were the most challenging part of the program design. Simply coordinating the movement of people, gear, vehicles, food, and equipment, much of which was coming from OBC's Chetwynd Base in Burk's Falls, was difficult. Then there were the issues of camping, water supply, and transportation within the Halton region. As with any first-time program, there were kinks, but the flexibility and professionalism of all staff and partners (big thanks go especially to the Silver Creek Outdoor Education Centre for providing water without any advanced warning) made the program run smoothly overall.

Defining success in an outdoor program is always challenging. Both the objectives of the program, and participants or stakeholders you survey, always influence the outcome. However, I am confident in reporting that this program was successful, and has lots of potential for greater success in the future. Reflections from students and staff allowed an understanding of the impressions and impact of the program. Many students commented on the physical challenges, such as camping, carrying packs, cooking their own food and the new activities like the high ropes course, moving water canoeing and rock climbing. A common theme reported by the students was the support they felt from other members of the group. One student commented that the support of his group helped him attempt activities he wouldn't have otherwise tried: "Being afraid of heights . . . I only went up on the course because I felt comfortable with the group." Others suggested that new friendships were the defining factor of their experience: "We got to meet new people and see what they were good at."

One of the greatest successes of the partnership aspect of this program came from having the students' teachers integrated into the program for the week. These teachers learned firsthand about the value of outdoor education experiences. One of the teachers from UCC, Colleen Ferguson, felt that this trip allowed her to interact with the students differently than in the classroom. She wrote about her experience at the rock climbing site:

> *When a rope hung unused for a while, a number of students encouraged me to*

climb. Not sure if I should, I decided to give it a go. I was supported both figuratively and literally by two 14-year old boys. As you can imagine it is a terrifying experience for a teacher to be suspended 30-feet above unforgiving rock and see two of her students holding the other end of the rope. However, these two boys guided and advised me up to the top. They never stopped being supportive or assuring me that I was okay. By being vulnerable in a way that would never happen in a traditional school environment, I learned a lot about education. I felt the potentially intimidating power of a teacher and I realized that power must never be abused or forgotten. I also saw that education is about learning and teaching: no one party is responsible for just one of these things.

While the student feedback did not focus on the environmental learning as much as the teamwork and group aspects of the trip, some students did seem impacted. One comment was made regarding garbage: "I was amazed to see how people throw their garbage in the environment. I've heard people say it before, but when we did the community service project I was stunned at how much garbage there was." As well, several students with camp and canoeing backgrounds seemed to find it interesting how challenging a trip close to home could be: "One of my fears was that it was going to be [too easy]. I was looking for more of an intense trip. After the lesson, when we started in our real canoes, all of my fear were dissolved. I found the canoeing very fun and even challenging."

As outdoor leaders and enthusiasts, many of us have had the privilege of extended trips in remote and isolated areas, and often do not consider such experiences close to home as "real" outdoor trips. While I don't argue the benefits of remote trip experiences, many of our students won't have had such experiences, and thus will not hold the same prejudices and biases about what defines nature or natural beauty. I recall many experiences watching students express amazement at seeing the Big Dipper and Orion in a night sky where the light pollution from Toronto caused an eerie glow. All I could see was the pollution; all my students could see where the stars. For most of them, they had never seen the stars this clearly before. Many of them will never experience the view of the stars from the middle of a clear lake in Northern Ontario, so who am I to tell them that these stars are not "as good" as the stars I saw this summer?

As outdoor instructors, we might know that taking our students to remote areas will give them a wonderful and unique adventure. However, saying that programs close to home are not as good or as effective is not doing our students any favours, and in fact is probably disconnecting them from their environment and from their ability to connect their day-to-day actions with impacts on the Earth. While there is a place in environmental education for teaching about the preservation of remote wilderness areas, I feel there is an even more important place for exposing students to the environment close to home. So, while the students may not have commented on the environment as part of this program, they certainly experienced it, which was our aim.

Overall, the UCC and OBC partnership program allowed our students and staff to experience the same learnings as expected from a more remote trip, in an area close to home. It was a great experience for all involved, and proved that there is much potential for further programs of this nature in the rapidly changing field of outdoor education.

Kate Humphrys has worked both at the Norval Outdoor School and with Outward Bound Canada. Kate is currently working with Youth Challenge Intervention.

From East to West: Same Title, Different Job

by Angela Ripley

At Harrison Trimble High School in Moncton, New Brunswick, *Outdoor Recreation and Leadership* is a course designed for leadership students deemed to be the "cream of the crop." The program is capped at a maximum of 18 students, and an application process ensures that instructors are familiar with the students entering their program. With a small class of 18 students or fewer, enriching outdoor pursuits, environmental studies, outdoor education and recreational activities begin. Sound good? It is. I have taught this program once and it was an experience I have not forgotten. Besides being memorable, my time spent teaching *Outdoor Recreation and Leadership* provided me with an educational framework, one that I have often used as a reference point for developing my own programs and practices in outdoor education.

At Harrison Trimble, each day we would delve into exciting topics. Our explorations were facilitated through the use of our 15-passenger van, which allowed us to take our studies beyond the boundaries of our school. Other days we would simply stay at school. Activities included, among other things, orienteering, swimming, snowshoeing, cross-country skiing, canoeing and kayaking. Topics of exploration included map and compass, minimal impact standards, environmental ethics, plant identification, survival, weather studies, animal studies and even social studies. It was a great experience with enthusiastic students.

Perhaps the most encouraging aspect of this program was the amazing support it received from the school and school community. The program was constantly in demand and consisted of several classes per semester. In addition, there was typically a line-up to get into the class for the following semester. It is not hard to imagine the enthusiasm both the students and I, a new teacher, had for this program. I was hooked. Imagine getting paid to have fun all day! I woke up each morning smiling, anticipating what a great day I was likely to have. It was at this point that I knew I wanted to teach outdoor recreation.

Shortly after my experience with this program, I began to dream about the possibility of doing this fulltime. Unfortunately, there was already a line-up for teaching positions in outdoor recreation in Moncton. As I continued to apply for jobs, the only position I could find in all of Canada was at an outdoor recreation program in Fort St. John. "Fort St. where?" I asked. As it turns out, Fort St. John is the largest city along the Alaska highway and is situated exactly 14 hours from Vancouver and 14 hours from Alaska. After much deliberation, I decided to accept the position and moved across the country for my dream job: teaching outdoor recreation.

In my first semester, I had one class of 33 students without a classroom. As a result, we took over the shop classroom. From this first experience, I quickly realized that this program would be far different from the one that I had encountered in New Brunswick. But I was keen and ready to make some changes. What I slowly discovered over the following three years was that these changes would not come easily. I was now in quadding (four-wheeling), sledding (snowmobiling), hunting and grizzly country. My students had lots of experience in the bush and many had already taken the Conservation Outdoor Recreation Education (CORE) program — a hunting, fishing and gun certification course. Overall, my students' outdoor experiences were much different than my own. I think it is also fair to say that these students were quite unlike

those I had encountered in Moncton. Moreover, as a petite, young, female outdoor recreation teacher, I was quite unlike the teachers to which they were accustomed. But, all in all, I was keen and up to any challenge.

In the beginning stages of my experiences in Fort St. John, when I asked to see the curriculum guide for outdoor recreation, I was told that I was free to teach whatever I wanted in outdoor recreation given that I was the "expert." Having taught for four months and completed a three-month practical course, I felt that this attribution might be a little inflated. Still, despite my hesitations about my newly granted expert status, I felt okay. I was free to teach what I wanted.

When I asked my students what they hoped to learn, their responses were not what I had expected. The majority of my students were hoping to go quadding on the backpacking trip and actually had chaperones and parents stating they would not be going unless they could bring their quads! Some students were also hoping to spend class time playing games on the football field. Certainly, there were students who were keen about the idea that it was a different course and they would be outside all the time; even so, most of my students' comments floated back to the idea that this was going to be an easy credit and they were there because their friends were in the class.

The activities I wanted to do were paid for from the $50 course fee students gave at the beginning of the semester. This would cover the three trips that had already been planned. The one bonus I discovered was that our trips were held during school time, so we were able to go out from Wednesday through to Friday. It wasn't until later that I learned why: Fort St. John is the second fastest growing city in the country. It is a working town where many of the students are employed fulltime; some even manage to make more money than their teachers. No one had the time to be away on the weekends. In addition, outdoor recreation on weekends would interfere with the students' social scene.

Over the past three years, I have also come to realize that environmental ethics is a hard sell in Fort St. John. We live somewhat in isolation and are amply exposed to the natural environment that surrounds us. As a teacher of outdoor recreation, I feel it is my job to turn my students on to learning about and caring for the environment. Yes, it is challenging, but I did sign up for this job. In an effort to diffuse my frustrations, I have learned to feel happy if I can get my students through the semester and manage to teach them how to make a fire effectively without the use of gasoline or by getting them to come on a trip (with their parent's permission) when we don't carry a gun along.

In regards to student engagement, there is always a handful of students in every class that want to take outdoor education and leadership for the same reasons that I love to teach it. Inevitably, these are the students for whom I end up feeling bad, as they are often not getting the program

they deserve. This is because much of my time is spent on classroom management with the other students, students that I cannot simply withdraw from my class. Conversely, we cannot offer classes for just four or five students.

When it comes to out trips, much of the hiking gear in this town is supplied by the local hunting store. This means that the gear students use is often heavy. I am slowly turning students' minds towards the possibility that maybe taking the ten-pound stove and two-pound cast iron frying pan, as they would when going hunting, is not the best idea when attempting a hike. They laugh at first when I bring in all of my gear, but oftentimes end up envying me on the trail.

All in all, I have had many challenges working in outdoor recreation in Fort St. John. After teaching this program for three years, one of my most pressing questions is this: How do you teach outdoor recreation in a public school setting without funding, travel money, a van or assistance, with a class size of more than 30 students, and where most of the four-month course must be taught in the classroom or on a football field?

In terms of programming, the out trips we plan for this class are seven days in length. In addition, there are many days that we need class time to prepare for these trips. But what about the other months, the times when we are not planning for, or going on, out trips? Day-to-day teaching is a challenge. It is not much fun to learn or teach outdoor recreation indoors. It is easy in winter when there is snow on the ground, but not so from late October to January when there is very little snow and temperatures can plummet to –40°C.

One solution I came up with was to introduce certifications along with the teaching units I was doing. Students have been offered the opportunity to become certified in boat operation, first aid level 1, marine radio operation, canoeing level 1, kayaking level 1, and wall climbing. Even with all of this effort and opportunity, there is not a line-up for outdoor recreation in Fort St. John. In fact, the program has experienced a steady decline in enrolment for the past five years. The question is why? This is a question I have been dealing with and reflecting upon for quite some time now.

At first I thought that maybe it was me who was killing the course. I changed my units and tests, added more hands-on learning and outside activities, gathered information from students, previous teachers and administrators, added more guest speakers, and have done everything but beat my head against a brick wall in an effort to make this program more appealing for students. Some say I shouldn't change anything, that I should keep teaching the same program I did in Moncton and let the students who really want to take this course enrol in it. But I am troubled by the reality that, if we don't have enough students attending, the course will no longer be offered. Though I am beginning to think this might be the best thing for the outdoor recreation program and for the sanity of those teaching it, myself included.

Until then, I am constantly looking to improve my practice as an outdoor educator. Yet I fear there will come a time when I will no longer want to teach outdoor recreation if these are the kinds of program difficulties I will expect to encounter. It is in a moment such as this that I thank goodness for my practicum placement, as I am sure it was an experience that will keeping me hanging on, and fighting for outdoor education in the years to come.

Angela Ripley teaches outdoor education in Fort St. John, British Columbia.

Special thanks to Allison Carrier for her input in shaping this article.

CEEPS

I am thrilled to inform you that the third annual Canadian Experiential Education Practitioners Symposium (CEEPS) is returning once more to the Bark Lake Leadership Centre in Haliburton, Ontario.

The symposium will run from Friday, April 29 (evening) to Sunday, May 1 (late afternoon).

Already well known for our very reasonable fee (<$300, including all meals and accommodations), this year we've added two new discounts: one for alumni (those who have attended any previous CEEPS) and one for students (under age 25). In addition, we continue to offer a substantial out-of-province attendee discount.

If you are not sure if this conference is right for you, what its value will be, or why it is different from the others, I strongly encourage you to quickly skim some reports from previous years at our Web site: www.intellact.ca/ceeps. The site also answers many common questions and offers an opportunity to register online.

What makes CEEPS different (and so powerful)? Our biggest draw (and sometimes our toughest obstacle for the uninitiated) is the Virtual Space format. I won't attempt to convey the full concept here, except to say that it works, and you will love it once you've experienced it. (For more on this, see "The Gathering" on pages 34 to 36.)

Andrew Welch
CEEPS Champion
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Risk Management Conference for Outdoor Education in Canada

It is with pleasure that we officially launch this year's "Risk Management Conference for Outdoor Education in Canada" presented by Algonquin College. The conference will take place May 30–31, 2005 in the Ottawa Valley.

This conference comes from an initiative to facilitate student success, explore the value of risk and manage outdoor programs safely. Our goal is to bring together teachers, school administrators, students and parents with industry experts, service providers and insurance representatives to discuss critical issues facing every outdoor program in Canada.

This conference will only be as strong as the community supporting it. We need your help. Here's how you can get involved:

1. Forward this information to your contacts who would be interested in participating.
2. Visit our Web site for more information.
3. Join our discussion forum.

We look forward to hearing from you.

Matt Cruchet
Conference Organizing Committee
matt.cruchet@RiskManagementConference.ca

Conference Registration and Information
Phone: 613-758-2846; 1-800-509-3196
Fax: 613-758-2935
www.RiskManagementConference.ca

Virtual Space: The Secret of Powerful Symposia

by Andrew Welch

I'll admit it. I love conferences. I love it when my circle of colleagues goes international. I love it when I can freely converse with people who know exactly what I do for a living (because they do it too). I love it when I can learn and share my knowledge with direct relevance and immediate applicability. I love connecting with familiar peers and new friends, re-energizing, and returning to my self-employed world with a greater confidence in what I am doing and what is happening around the world in my industry.

Alas, like most loves, this one comes at a cost — and a potentially high one at that. Conference attendance costs money: the fees, the additional pre- or post-workshops, the airfare, the meals and accommodation, the time away from home, office and income; it adds up fast. Is it worth it? Not always. Workshops can be hit-or-miss, the field of 'accepted' presenters (experts?) can be narrow, experience levels of target audiences can be tricky to gauge, and there may be precious few workshop topics of specific individual interest, especially given the diversity within the experiential education world. However, in my previous incarnation as an information technology professional, I was an old hand at the conference circuit; when I changed hats, I immediately sought equivalent forums in the experiential education industry. The results typically fell short of my expectations and the money was disappearing quickly. There had to be a better way. Five years ago, I found it amongst the Flat Irons mountain range of Boulder, Colorado. The format is call Virtual Space (or V-Space to its disciples), not to be confused with the Internet-based concept of the same name.

On the Shoulders of Open Space

Let us begin with some history. It is now more than 20 years since conference organizer Harrison Owen discovered that more was accomplished on the coffee breaks than in the sessions he had created. His response was to create Open Space Technology (Owen, 1997). Open Space is a superb tool for empowering a group to create and control a potentially challenging dialogue, and to exponentially increase its effectiveness. The founding principles are deceptively simple:

- Whoever comes are the right people.
- Whatever happens is the only thing that could have happened.
- Whenever it starts is the right time.
- When it's over, it's over.

While, to the uninitiated, Open Space sounds like a recipe for chaos and anarchy, the tool has a huge worldwide following and, at one extreme, was even used to design the Boeing 777 aircraft (reportedly to great acclaim). Still, it is more of a meeting format than a conference format. Open Space lacks the structure required for attendees to explore multiple complete workshops with clearly defined presenters or facilitators.

NCCPS: A Conference Adaptation

In 1992/93, Tom Leahy created the National Challenge Course Practitioners Symposium (NCCPS) in Boulder, Colorado, an annual event now in its 11th. The format for the NCCPS is V-Space. V-Space is Open Space with a "practical twist" for complete conferences, and Tom gives full credit for the enhancement to Ward Flynn of the Venture Center of Colorado. V-Space is so true to the principles of adult education and facilitated learning that I am still amazed that more conferences are not run this way (although the list is beginning to grow). In V-Space, each conference session is roughly categorized as a Presentation, Workshop Discussion, or Activity. Here is how it works, contrasted with the traditional, workshop-based conference:

Traditional	Virtual Space	Advantage
Workshops are created by presenters, submitted to a committee, and accepted or rejected (often up to a year in advance).	There is no advance agenda. Some workshops are prepared ahead of time by presenters, while others are created in the moment. Any attendee can create a session and have it included as an offering.	There is not a committee making decisions for the participants as to what learning will be offered. Sessions can be created in the moment to respond to the immediate needs of attendees.
All sessions are presented by formally accepted presenters — often those considered to be 'experts' or who have presented in the past.	Any participant can create a session. It might be a presentation or a discussion; the session creator is not obligated to have the answers, but only the desire to have the session offered.	Powerful sessions happen when people who would never consider themselves 'experts' take a lead and champion a workshop where everyone can share their knowledge and experience on a level playing field.
Sessions are usually selected partially on the basis of broad appeal to sufficient attendees to make the offering 'worthwhile.'	With a virtually unlimited number of concurrent sessions, it is quite acceptable to have as few as two participants gathering to create a workshop or discussion.	The importance of the topic to the individuals drives the process, not the estimated mass appeal.
If the learning an attendee wants is not offered, too bad. If two desired sessions overlap, too bad.	Any participant can create their own session around a need or request a session to be created that would provide the learning they want. The most powerful sessions are often initiated this way. Anyone can also ask presenters to re-arrange time slots or offer sessions again to correct personal schedule overlaps.	Each and every participant is directly responsible for (and in control of) their learning outcomes. If the desire for a particular session is shared, it will be created. Also, the opportunity exists to tailor the time slots of concurrent sessions so that many more people can attend the sessions that they want.
Workshops have an implicit obligation to impart formal knowledge; most have at least some lecture component.	In addition to presentations and discussions, sessions entirely devoted to engaging participants in sharing and playing activities are encouraged.	For experiential education this is not only a case of practicing what we teach, it also gives conference attendees hands-on time with new activities and renewed energy for tackling the formal learning segments.
If a participant chooses to attend a workshop and subsequently discovers that the session is not really what they were looking for, there is a polite obligation to sit it out and only kick themselves for their poor selection.	One of the principles of Open Space and V-Space is the "Law of Two Feet:" If the session is not what you need, you are encouraged to move on and find another that is.	The participant is responsible for their own learning, and is expected to be proactive in making sure those needs are met. Leaving an inappropriate session also prevents the inclination to try to change that session at the expense of the other attendees.

Having attended this three-day fully V-Space conference for several years, I can confidently report that it works and works extremely well. It is the most powerful symposium format I have ever experienced. Unfortunately, being based in Boulder, the associated costs did not go away, no matter how much it was worth the investment.

V-Space Comes to Canada

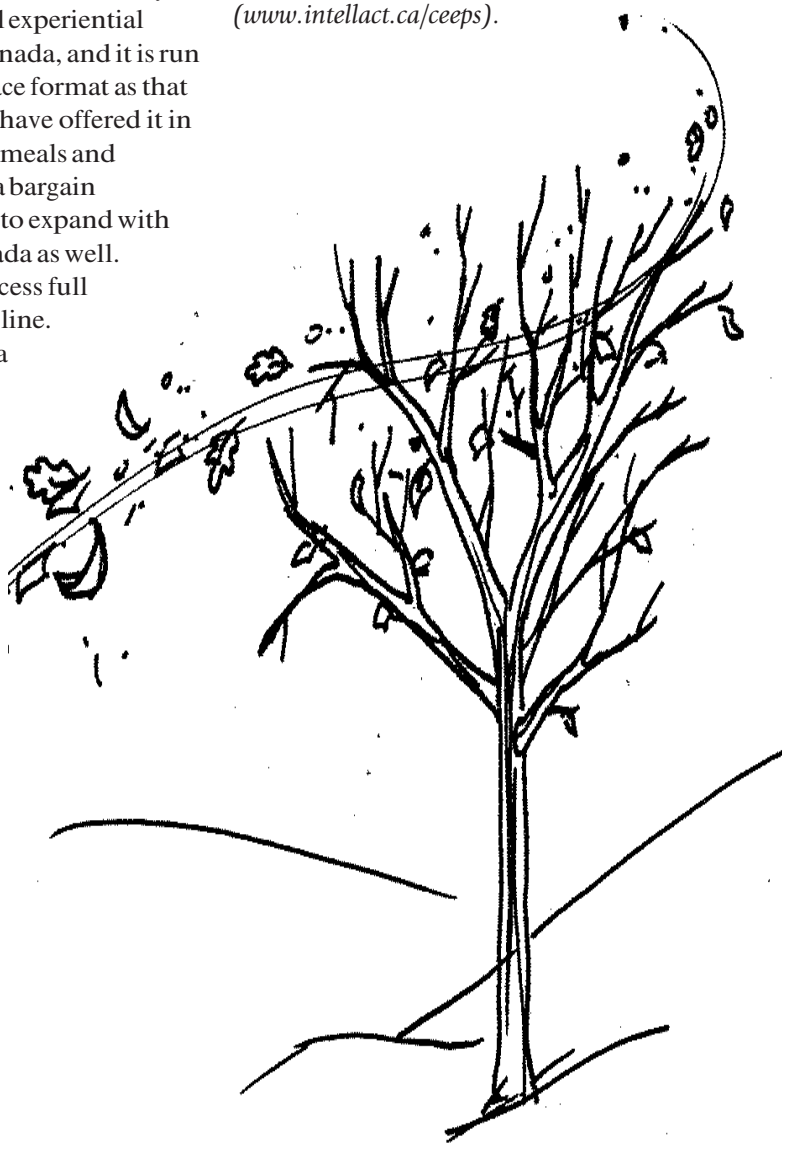
In 2002, I decided to recreate Tom's format in Canada; the following spring the Canadian Experiential Education Practitioners Symposium (CEEPS) was born. It is (to my knowledge) the only annual experiential education conference in Canada, and it is run on precisely the same V-Space format as that in the US. For two years we have offered it in Ontario as an all-inclusive (meals and accommodation) forum at a bargain basement price. Our goal is to expand with an offering in Western Canada as well. The reader is welcome to access full reports of past symposia on-line. I'll close with a quote from a CEEPS 2004 participant:

> *The most remarkable thing happened. I saw one participant, who arrived unsure of anything she could offer and wanting just to attend sessions, end up leading an incredible session. She was fabulous — knowledgeable, insightful, humorous — and she just shone. To think that, without the Virtual Space sessions, she would not have had the opportunity to share in a spur-of-the-moment manner nor would all who participated have been given the opportunity to experience the learning that came out of that session.*

Reference

Owen, H. (1997). *Open space technology: A user's guide.* Second Edition. San Francisco: Berrett-Koehler.

Andrew Welch is the principal consultant of ***intellact*** *and the champion of the annual CEEPS conference (www.intellact.ca/ceeps).*



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Organizational memberships are for business, conservation authorities, outdoor education centres, etc. This rate will include one copy of *Pathways*, a Web link (if requested in writing), maximum of three people at a members rate for conferences and workshops, reduced cost of add space in *Pathways* and display space at conferences.)

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COEO membership is from September 1–August 31 of any given year.

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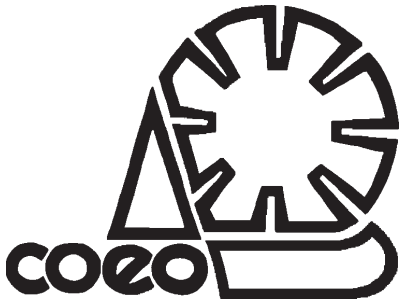

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