The Winston Churchill Memorial Trust of Australia

Report by - Jennifer Cunningham - 2011 Churchill Fellow

To undertake research into various community engagement strategies that promote sustained environmental stewardship – Canada and USA

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Signed Jennifer Cunningham Date 13 February 2012
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Introduction & Acknowledgments

This report paints the picture of what happened when I let my passion for environmental education and community engagement in National Parks drive my life for six months. Being awarded the Churchill Fellowship has allowed me to learn many more lessons in this chosen field than I could have possibly foreseen, and to be exposed to new and exciting possibilities within it.

Whilst my focus was on "community engagement strategies that promote sustained environmental stewardship", I chose to take an informal and open approach to my research. This was made possible by extending my Churchill Fellowship and taking extra time to let the limitations and opportunities that travel presents influence the depth to which I learnt about various programs, people and organisations. I trust my contribution is more valuable as a result.

My research joins that of other Churchill Fellows, academics and professionals working in the immensely important field of environmental based education. However, it goes much wider than that. It contributes in particular to those working in National Parks and other government based natural resource management organisations. It upholds the notion that more can be achieved in education in partnership than in isolation. It explores the unique dynamics of operating in remote locations (such as northern Australia and northern Canada), and the two-way learning reality of land based work with indigenous communities. It holds an emphasis on working with youth, and on incorporating experiential learning opportunities into the schooling of all young people. It also contributes to the important task of professional learning for teachers.

During my Churchill Fellowship travels I realize dearly that I would be asked to take on the role of a spokesperson for the Churchill Trust, Parks & Wildlife Service NT and Australia in general. I met this challenge with great responsibility, and dedicated many days to researching some basic facts and figures - on Australia, NT, Darwin and the Churchill Trust that hitherto I had not committed to memory. I also armed myself with multiple copies of numerous photos to help me paint pictures and tell stories when asked – many of these I imagine still hang on fridges across Canada and the USA. Several times I was asked to don my uniform and “talk about Australia”. I presented – through photos, stories, maps, and with great pride – to the following groups:

- Parks Canada Whitehorse Field Unit
- Parks Canada Iqaluit Field Unit
- Canadian Wildlife Federation Head Office, Ottawa
- Staff at North Vancouver Outdoor School, British Columbia, Canada
- Tsiigetchic School, Northwest Territories, Canada
- Students from Environmental Technology Program, Arctic College, Iqaluit, Nunavut, Canada
- Inukshuk High School, Iqaluit, Nunavut, Canada
In acknowledging those who have contributed to my Churchill Fellowship journey so far, I also **extend a commitment to sharing** what I trust you may be interested in, and an invitation to take from it what you want! **You are:**

**In Parks Canada:**
Melinda Gillis and Uncle Gerry from the Inuvik based team;
Kate Alexander, Rhonda Markel, Rene Rivard and others whom I shared stories with in the Whitehorse based team;
the tireless Elise Maltin out there in Yellowknife;
Leesee Papatsie, Garry Enns, Pauline Scott, Cindy Kudloo, Guru and others in the Iqaluit based team;
Cathy Gill, Tina Barzo, Dave Verhulst in the incredibly lucky (and friendly!) Banff team;
and the inspiring James Bartram and team (and my Xmas party family) from Palisades Environmental Stewardship Centre in Jasper.
Finally, to Genvieve Goggin for being open enough to forward my initial email to many of those I subsequently met and worked with – it may indeed have started with you.

**In the schools** ("the reality of it all"): Kate Keogh, Victor Elderton, Garry Cotter, Dawn Green and all the others who shared yarns and salmon at the North Vancouver Outdoors School; Tsiigetchic School, NWT; Inukshuk High School; the total dudes from the Environmental Technology Program, Arctic College, Iqaluit

Feeling proud with Uncle Gerry from Parks Canada, Inuvik, Northwest Territory, Canada

**In Canadian Wildlife Federation (CWF):** Natalie Gillis – for Project WILD training, a home base, and lessons in poutine and friendship

**In US National Parks Service:** Cate Bradley, Julia Sittig and Joe, for sharing valuable time, car space, thoughts and the amazement that we have such a common language in our quest to make a difference in the world

**In matters of providing a home base:** Bonnie Love and Rhonda Markel in Whitehorse; Natalie Gillis in Ottawa; Kate Keogh in Vancouver; the very special Pascale, Mathieu, Alexie and Loolie in Iqaluit; Cathy Gill and my other ice hockey coaches in Banff

**In Parks & Wildlife Northern Territory:** Kristen Appel for inspiring me; Robyn Delaney for eavesdropping!; Anna Cooke for supporting and referring; Mark Crummy for taking over; Ranger Michelle and Ranger Stretch for supporting via email

**In the broader NT community:** Kate Smith for referring and being my inspiring mentor always; Ben Humphries for believing it was and is possible; Mumma and Daddy-o for giving me roots and wings; all the other “Adventure Listeners” who, with small but positive comments on my numerous emails, kept encouraging me to “live the dream”, write all about it and who showed me that sharing stories can be inspiring and can make a difference – the true spirit of the Churchill Fellowship.
And most importantly, thank you to the Churchill Trust for managing the BIG vision of Sir Winston and giving me the opportunity to share it with my professional colleagues and new friends in Canada, USA and Australia

Executive Summary

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Churchill Fellowship Project:
To undertake research into various community engagement strategies that promote sustained environmental stewardship – Canada and USA

Main Sources of Information & Lessons Learnt:
Parks Canada:
- experiences in organizational shift and restructure toward greater community engagement and external relations
- models for partnerships and engagement with tourism, education bodies and many more
- experiences with citizen science initiatives, voluntourism and volunteer management
- models for formal and informal community education programs aiming on and off park
- experiences in joint management with indigenous land owners

Canadian Wildlife Federation (CWF) and Project WILD:
- model of a highly successful teacher training based environmental education program
- library of environmental education activities, school based competitions and ideas for engaging youth in wildlife conservation

Yukon All Teachers Conference:
- models and experiences in land based culture camps in remote indigenous communities (Old Crow School and Alaska)
- various vibrant professional communities of teachers and educators
- models of two-way learning in indigenous schools (Alaskan Native Knowledge Centre)

Various:
- community volunteering based youth program bringing youth from across Canada into various remote communities (Katimavik)
- building a land based learning program into school curriculum (Nunuvusiuitt Land Program Steering Committee, Iqaluit, Nunavut)
- models in camp development incorporating generational knowledge transfer (North Vancouver Outdoor School)
- partnerships with tourism to support wildlife management (Polar Bear International)

Dissemination & Implementation Plan:
1. Make available a collection of printed resources summarizing and presenting these projects/lessons/resources/models in a series of open meetings
2. Organisations and stakeholder groups who are likely to benefit from such meetings include but are not limited to:
   - Parks & Wildlife NT: Tourism & Visitor Services, Planning & Partnerships
   - Parks Australia and other state National Park managers, educators & outreach officers
   - NRETAS Executive Leadership Group
   - NT Department of Education & Training
   - Australian Association of Environmental Educators (AAEE)
   - Science Teachers Association of Northern Territory
   - Tourism NT and Savannah Guides Limited
3. Facilitate further discussion, through meetings, and participation in working groups and committees where relevant
4. Explore options for establishing an Australian version of the Katimavik youth program
5. Develop and maintain a professional affiliation with key industry, community and government groups both nationally and internationally using written journal and newsletter articles, web based forums and webinars, conference workshops and presentations.

6. Contribute to program design, research proposals, grant writing at various scales
Programme

On choosing destinations: please see notes in main body for further explanation

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<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Research Focus</th>
<th>Name &amp; Organisation</th>
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<tbody>
<tr>
<td>5–12 September</td>
<td>Inuvik, Northwest Territories, Canada</td>
<td>Parks Canada (PC) in-school program “EnviroStew” delivery in remote schools</td>
<td>Melinda Gillis, Public Outreach Education Officer, Western Arctic Field Unit</td>
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<td>12–23 September</td>
<td>Whitehorse, Yukon, (Yukon Field Unit)</td>
<td>EnviroStew bi-lingual delivery Parks Canada Mountain WIT Theatre Program</td>
<td>Kate Alexander, Public Outreach Education Officer, Yukon Field Unit of Parks Canada</td>
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<td></td>
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<td>Interviews w PC staff in External Relations, Aboriginal Career Development, Ecosystems</td>
<td>Elise Maltin, Education Specialist, Northern Canada Rhonda Markel, Partnership &amp; Engagement Officer</td>
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<td></td>
<td></td>
<td>Yukon All Teachers Conference</td>
<td>Kathleen McDade, Education and Youth Programs, Environment Yukon</td>
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<td>24–28 September</td>
<td>North Vancouver Outdoor School, British Columbia, Canada</td>
<td>Squamish First Nation cultural program Youth in long standing experiential camp program</td>
<td>Kate Keogh, Vice Principal &amp; Co-administrator Victor Elderton, Principal</td>
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<td>5 October</td>
<td>Ucluelet, Vancouver Island, Canada</td>
<td>Community participation in aquarium catch and release</td>
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<td>15–21 October</td>
<td>Tucson, Arizona, USA</td>
<td>National Parks Service US Rivers, Trails &amp; Conservation Assistance (RTCA) program – meetings with facilitators and attendance at project meetings</td>
<td>Cate Bradley, RTCA Facilitator, National Parks Service US</td>
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<td>Bioblitz – school involvement in park biodiversity survey (Saguaro National Park)</td>
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<td>Side trip to Grand Canyon and Zion National Park-information relating to park interpretation and visitor management</td>
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<td>21–25 October</td>
<td>Ottawa &amp; surrounds, Ontario, Canada</td>
<td>WILD Education program (CWF Education Facilitator Training Course )</td>
<td>Natalie Gillis, Education Coordinator, Canadian Wildlife Federation</td>
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<td>2–9 November</td>
<td>Churchill, Manitoba, Canada</td>
<td>Partnerships in wildlife tourism and management Community Engagement with Species at risk</td>
<td>David Reid, Frontiers North Adventures Various, Polar Bear International</td>
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<td>14–24 November</td>
<td>Iqaluit, Nunavut, (Nunuvut Field Unit)</td>
<td>Interviews with Parks Canada External Relations staff</td>
<td>Garry Enns, External Relations Manager Pauline Scott, Visitor Experience Manager</td>
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<td>Land Program Steering Committee workshop</td>
<td>Leesee Papatsie, Public Outreach Education Officer</td>
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<td></td>
<td>Land based education and training programs</td>
<td>Pascale Baillargeon, Teacher, Inukshuk Secondary School Jason Carpenter, Arctic College – Environmental Technology Program</td>
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<td></td>
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<td>Joint Park Management Committee (JPMC) meeting</td>
<td>Garry Enns</td>
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<td>Date</td>
<td>Location</td>
<td>Research Focus</td>
<td>Name &amp; Organisation</td>
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<tr>
<td>27 November - 6 December</td>
<td>Banff National Park, Alberta, Canada</td>
<td>Further overview of education partnerships, particularly with tourism and wildlife management</td>
<td>Cathy Gill, Alberta Education Specialist</td>
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<td>Parks Canada New Employee Orientation Week</td>
<td>Dave Verhulst, Fire Communications Officer</td>
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<td></td>
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<td>understanding of organisational structure</td>
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<td></td>
<td></td>
<td>Various Parks Canada volunteer programs and (including Citizen Science &amp; Park Ambassadors) co-ordination issues</td>
<td>Tina Barzo, Leader of Volunteer Engagement</td>
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<tr>
<td>9-13 December</td>
<td>Jasper National Park of Canada, Alberta, Canada</td>
<td>Palisades Stewardship Education Centre</td>
<td>James Bartram, Stewardship Education, Program Lead</td>
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<td></td>
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<td>Experiential learning programs, delivery contexts, partnerships and centre development</td>
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Main Body – Lessons Learnt and Ideas for Application

On being a travelling Churchill Fellow:

News of the Churchill Trust and Fellowships came to me completely by chance when a workmate overheard a Friday afternoon discussion in the tea room. As no doubt happens in many a workplace on a Friday afternoon, I was dreaming about the self-imposed long service leave I was granting myself the following year and asking a travelling colleague of mine about her Park Ranger contacts in North and South America. As much as I wanted a break from work, I love my job – environmental based education - like a passion and was not going to leave it behind. So on that Friday afternoon, I went back to my desk, Googled Churchill Fellowships and stayed at work way past the last bus taking the first steps of the truly amazing journey I am now on.

This report gives an overview of the places I visited, people I met and programs I was witness to. They were many, varied and very, very interesting. Whilst the decision to use my own time to extend my stay in each location allowed me a depth of experience I am absolutely grateful for, it also meant that my energy levels toward the end of the research were low. Although mindful of this – thanks to the incredibly helpful set of notes given to each travelling Fellow by the Churchill Trust – and despite my best efforts, I wasn’t able to draw as much from my final destinations as I would have liked. For this reason I’ve maintained a healthy email relationship with folks in Banff and Jasper! The lesson: 12 weeks of action-packed research is challenging!

The Churchill Fellowship experience to date has been one of immense professional and personal value. I now intend to work equally hard to uphold the spirit of the Churchill Trust – allowing the information and lessons learnt to reach audiences who may grow and strengthen with them. This job commenced with that first Google, and as I travelled as a Fellow the skills and confidence I needed to honour the Fellowship grew. The Fellowship is quite clearly a two-way learning experience, and I took every opportunity I could to contribute to discussions and share information from my own experience. Sometimes through formal presentations and sometimes through informal discussions, I shared as much as I could as often as I could.

Talking about the Trust, discussing the importance of professional growth, marveling at how similar the challenges of environmental education can be on opposite sides of the world, laughing at common frustrations, encouraging those feeling professionally isolated, openly appreciating fantastic work being done: these are the small but incredibly important skills I have developed and will take forward into my own work as a Churchill Fellow.
On choosing destinations:

Two main factors dictated my itinerary: working with Parks Canada field units, and working in locations comparable socially, culturally and geographically with the Northern Territory.

Parks Canada was identified as an organization through which I could learn about relevant community outreach programs, and also, and perhaps more importantly, the organizational and management objectives that support these. Not only were Parks Canada my main points of contact at each location, through their partnerships and association with the wider community I was able to contact other environment based organisations working in community engagement (more about Parks Canada on page 10 of this report).

The process of engaging communities is heavily influenced by geographical factors – size, location, accessibility and culture are particularly important dynamics in the Northern Territory and there are many similarities between Canadian and NT contexts. Many of the locations chosen to conduct research are comparable contexts to the NT. It made no sense to me to travel overseas and gather only ideas and models based in large urban areas – I assumed these may be harder to translate to smaller, remote locations and their likely level of success harder to investigate. Inuvik in NWT, Whitehorse in Yukon and Iqaluit in Nunavut were all locations where the social, environmental and cultural contexts seemed particularly relevant. This can be seen in the summary table below:

<table>
<thead>
<tr>
<th></th>
<th>Darwin, NT, Australia</th>
<th>Inuvik, NWT, Canada</th>
<th>Whitehorse, Yukon, Canada</th>
<th>Iqaluit, Nunavut, Canada</th>
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<tbody>
<tr>
<td>Population</td>
<td>75,000 in Darwin</td>
<td>3,484</td>
<td>22,000 (75% of total Yukon popn)</td>
<td>6,184</td>
</tr>
<tr>
<td>Growth rate</td>
<td>2.6% since 2006</td>
<td>0.3</td>
<td>7.4%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Distance to closest major urban centre</td>
<td>1500km to Alice Springs</td>
<td></td>
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</tr>
<tr>
<td>Main industry</td>
<td>Construction, defense, tourism</td>
<td>Tourism, oil &amp; gas headquarters, public administration, transportation, furs, transport</td>
<td>Public administration, tourism</td>
<td>Government, communications, transportation, fishing, tourism-services</td>
</tr>
<tr>
<td>% indigenous population</td>
<td>10% in 2006</td>
<td>64%</td>
<td>16%</td>
<td>85%</td>
</tr>
</tbody>
</table>

A visit with Parks Canada Education Officers delivering EnviroStew to Tsiigetchic School, Northwest Territories, Canada
Parks Canada mandate:

*On behalf of the people of Canada, we protect and present nationally significant examples of Canada’s natural and cultural heritage, and foster public understanding, appreciation and enjoyment in ways that ensure their ecological and commemorative integrity for present and future generations.*

Parks Canada (PC) is a national body operating across the nation of Canada. As well as the national office and four service centres, PC operates from 33 field units based near the national parks, historic reserves and marine conservation areas it manages. Obviously this makes Parks Canada a very different organization to those that manage national parks and reserves in Australia.

Over the course of my research, I came to use each field unit I visited as a comparable management unit to the most Australian contexts, particularly Parks & Wildlife Service NT (PWS). See programme for each field unit visited and research focus in each.

Of particular interest was the renewed focus of Parks Canada of community outreach since a social science survey report of 2009 suggested Canadians were increasingly separated from an understanding of Parks Canada and an appreciation of national parks and other PC estate. Since this report, Parks Canada have defined a new strategic outcome and associated structure to achieve this goal – see below.

Parks Canada Strategic Outcome:

*Canadians have a strong sense of connection through meaningful experiences, to their national parks, national historic sites and national marine conservation areas and these places are enjoyed in ways that leave them unimpaired for present and future generations.*
The main sources of information within Parks Canada came from people and publications operating in the External Relations and Visitor Services divisions of the organization – the columns highlighted in the diagram above.

External relations activities are defined as those “activities that reach Canadians at home, at leisure, at school and in their communities”. The aim of these External Relations activities is: “with these activities, Canadians will understand, appreciate and support Parks Canada, whether or not they visit out sites, parks and areas”.

External relations activities are classified into the following:
- external communications: ministerials, media stories and relations, feature articles
- outreach education: formal school programs, collaborations with universities, contests, informal guided organized events, web based articles
- New media, video and broadcast: research and development of social media, support to video production, updating web pages
- Engaging partners and stakeholders: develops and implements functional leadership in relations with stakeholders, strategic partnerships, support for creating volunteer opportunities

In the following sections reference will be made to several Parks Canada programs managed mostly by External Relations and Visitor Services. More information about the work of External Relations is available on request.
Lessons re engagement of teachers in environmental education:

Over the past few years Parks & Wildlife Service (PWS) NT has increasingly focused on partnerships with schools in order to deliver its commitments to education and long-term engagement with the NT community. The capacity of PWS staff to visit schools and be the main deliverers of education programs is limited – a significant portion of the population live remotely and are seasonally accessible. The following lessons may contribute to any education strategy seeking to maintain a partnership with schools without taking on the role of deliverers.

Teacher training in the WILD Education program:
Through participating in a 3 day Facilitators Workshop in Ontario, and through interviews with educators in Whitehorse, Squamish and Ontario, I learned about the popularity and respect held for this 15 year old program.

WILD Education is a professional development program for educators to become certified instructors of Project WILD and Below Zero. Through the use of curriculum materials and professional training workshops, Project WILD’s mission is “to provide wildlife-based conservation and environmental education that fosters responsible actions toward wildlife and related natural resources”. Originating in the US, it is administered and managed by Canadian Wildlife Federation (CWF) in Canada where it has been adapted and developed to suit the Canadian environment. Project WILD is now in its 15th year and has been used by an estimated 85,000 Canadian educators.

CWF is the main coordinator of a calendar of Project WILD training workshops across Canada, however in Yukon Territory, Environment Yukon, part of the Yukon Government, has taken over this role. In their own words:

“It’s a cliché but it’s true: it’s more effective to educate and change people’s behavior than to legislate and enforce. This approach is considered important enough to have several staff from various programs at Environment Yukon dedicated to education and outreach, including those in Conservation, Wildlife Viewing and Youth Programs sections.”

These 6-8 hour sessions allow participants to become familiar with Project WILD materials, activities and strategies. Only those who have completed a Trainers Workshop receive a copy of the immensely valuable Project WILD handbook, containing over 200 environment based activities. This handbook features hand-on, pedagogically sound activities themed into 7 sections. Participants are formal educators, naturalists, camp counselors (see section below), scout leaders and interpretive guides.

In WILD Education, teachers are the multipliers of lessons in environmental stewardship. Through teacher/educator workshops, the Project WILD resource is distributed to schools and strong professional support networks are established between teachers using this common resource (an example of this that I joined is operating in Yukon Territory). This is a useful model of resource development and delivery to schools, particularly where remote delivery provides challenges.

School and community based biodiversity surveying through Bioblitz:
Although unable to participate in the Bioblitz, I was able to gather lots of information about this popular annual activity whilst in Arizona’s Saguaro National Park. It was co-sponsored by National Parks Service and National Geographic Society, in collaboration with the Desert Museum and Friends group.

This Bioblitz is a 24 hour biodiversity survey focused on a different national park each year. Teams of scientists, naturalists, public volunteers, park rangers and schools undertake the survey. Schools are also offered other ways to get involved remotely such as a supported schoolyard bioblitz, Electronic Field trip broadcast, or attending the “Biodiversity University”: a festival type event held at the National Park bringing together science and nature themed activities by a variety of providers.
Lessons in camp models and experiential learning for environmental stewardship:

The Churchill Fellowship offered several opportunities for me to see exemplary environmental education occurring in a camp model. This is particularly relevant as camps in partnership with other organisations are one area that PWS NT has been experimenting with over the past 2 years. **Facilitation of camps is seen as one way to contribute to education delivery with schools.** Camp based education programs also have strong symbiosis with indigenous cultural land/country based learning – see discussion in a later section on page ** of this report.

It is worth noting that North America has a strong tradition of summer camps and school camps that is not prevalent in Australia. This is a significant point of difference in the contexts of these lessons, though it will not be discussed in this report.

**Solid grounding in formal education pedagogy, adventure guiding and personal development models:**

The link between experiential learning and environmental stewardship and behavior change was particularly refined in the work of Parks Canada’s Palisades Environmental Stewardship Centre in Jasper National Park. Established in response to Parks Canada mandate outlined above, Palisades designed and developed “programming to appeal to the minds and hearts and thus contribute to the delivery of transformative education and gateway experiences”. The work of this Centre can be summarised thus:

- program development and integration with curriculum: three three-year provincially approved high school courses in ‘Stewardship of Protected Lands’, ‘Water Experiences’, and ‘Winter Travel’ that contribute to graduation requirements and are fully assessed. These were developed through collaboration with local school boards.
- Multi stakeholder partnerships and relationships: fostered with organizations, businesses and other levels of government, including shared leadership of the Palisades through secondment of a teacher from local school Division.
- Focus on the pedagogy of the gateway experiences and transformative education: grounded in extensive research, Palisades develop programs that carefully incorporate a knowledge component, a skill or active component, and a reflective component. Opportunities are sought for youth to meet a cross section of the PC team.

Today, Palisades offer programs targeted to youth from across Canada and internationally. Lead by James Bartram, the Palisades Stewardship Education Centre are now faced with the following challenges:

- learn from and truly embrace youth engagement as a long term strategy contributing to the protection of our Parks
- explore ways to assist all levels of management in appreciating the value of such programs
- find ways to increase the capacity of oversubscribed programs
- secure funding as a legitimate component of the core business of parks
- encourage and foster inter and intra agency collaboration at all levels including beyond our traditional borders
The importance of collaborative partnerships to program development and implementation:
As outlined above, Parks Canada Palisades Environmental Stewardship Centre has partnerships at the core of its program development and delivery. As an education institution managed by an agency that has no mandate for formal education, Palisades role is complementary and this is encapsulated in partnerships and collaborations. Such partnerships include:
- local and regional educators in developing programs
- regional Public School Division in staffing and management
- intra-agency with Park Rangers, Ecosystem Scientists and other staff
- local businesses and organisations

The North Vancouver Outdoor School (NVOS) operates a school camp facility 1.5 hours from Vancouver. Whilst it has a long tradition of over 20 years service to schools in the North Vancouver schools district, financial pressures and the need for constant evolution has meant several key partnerships have been brokered. The most notable of these is with a local first nations Coast Salish family who deliver activities as part of a cultural immersion program known as Skw’une-was in the Big House. Other partnerships, many of which have contributed to a current multi-million dollar campus revitalistion to be used by community groups as well as the school, include Mountain Equipment Co-op, Parks Canada, Carbonicity, and 1% For the Planet.

Partnerships within land-based education programs, particularly for remote indigenous communities, are also discussed in depth later in this report.

The value of youth as “camp counsellors”
The NVOS has made the involvement of youth integral to the running of its programs. Approximately 3700 students annually visit the school, and many return as youth counselors in Grade 10, 11 & 12. All are assessed in their work as counselors, and undertake self-assessment. In recent years, youth counseling work has been recognized in school grades and counts towards graduation credits. The School has a well developed support system for counselors who take on important responsibilities for the visiting elementary school students. Further research and literature on the value of youth counselors is available on request.

Lessons in community engagement with wildlife education and stewardship:

Bear Safety
Human bear interaction and how it is managed was of interest to me due to the lessons it can provide for Northern Territory educators and PWSNT developing education programs around crocodiles and other dangerous animals.

Although crocodiles and bears are very different predators, and require different safety behaviours, ideas in how to promote this can be shared to great benefit for managers of both animals and their habitat. Whilst I collected a large number of different bear safety publications, some are of particular note and are included in the list of bear safety strategies outlined below:
- bear spray available for rent from visitor centres in bear country
- safety videos, outlining bear behavior and how to react in their presence, produced for YouTube
- walking trail permits include bear safety information
- stickers and fridge magnets with phone numbers for reporting polar bears
- response team operating in Churchill urban area – bears scared out of area and signs notify residents of bear presence
- “So You Want To See A Bear?” publication outlining safe viewing practices

Details of the broader programs that these are part of are available on request.
Tourism and Wildlife
(See also section on tourism partnerships below)
Parks Canada has produced several noteworthy publications targeted at visitors who want to view wildlife. These are generally aimed at giving advice on how to view wildlife (particularly bears), whilst staying safe and helping to protect the health of the animals. Copies of the following publications, which are particularly good and have ideas useful for translation to Northern Territory wildlife, are available on request:

- “Keep the Wild in Wildlife: How to Safely Enjoy and Help Protect Wildlife”
- “So You Would Like to See a Bear? Tips for Roadside Bear Viewing”

Across most of the areas visited, Parks and reserves had available birding checklists for visitors, mostly in the form of hard copy fold out brochures. Where possible I spoke with those involved in producing them and managing the data they collected. In the case of the Yukon Government, these were produced in an effort to have families continue to engage with birds following a community bird appreciation activity during busy bird migration months. In the case of the NWT – Nunavut Bird Checklist Survey Form produced by Canadian Wildlife Service, the aim was to have members of the community contribute to a national effort to collect scientific data.

The importance of wildlife in children’s environmental stewardship
Teaching and learning activities contained in Project WILD, Below Zero, Project Caribou and other WILD Education programs work on the premise that “young people and educators have a vital interest in learning about our natural world...emphasizing wildlife because of its intrinsic value, Project WILD addresses the need for human beings to develop as responsible citizens of our planet”. Animals are used as the hooks to teach about habitats, various environmental threats, and a multitude of ecological concepts – for example, the What’s That Habitat game has kids acting as various animals in a food chain in order to teach population dynamics. Whilst this is not a new activity, it is of note that Project WILD amalgamates hundreds of such activities and pointedly promotes the use of animal based props etc by teachers.
Community involvement - Ucluelet Aquarium

I heard about this small "community aquarium" during a side trip to Vancouver Island where the importance of the aquatic ecosystem to the lifestyle, economy (salmon farming and fishing in particular) and tourism was obvious. Marine animals on display are gathered from local waters, and are released back into the wild in locally publicized release days which attempt to involve the entire community including people in the fishing industry. The aquarium is located in the heart of the town of Ucluelet and has a nine person Board of Directors and a twenty person team of employees and volunteers, including Parks Canada staff, commercial divers, interpreters and aquarists.

After commencing the Ucluelet Mini-Aquarium Pilot Project in 2004, and continuing to 2008 with various fundraising, planning and education program initiatives, a new permanent aquarium is now being built just metres from the mini-aquarium. Approximately $350,000 in cash and in-kind donations have been raised through sponsorship programs, "Sponsor a Display" programs recognized with a plaque on the display and website, and – donations.

Lessons in volunteering and citizen science:

Since 2006, Banff National Park has developed a volunteer program under the management of an appointed Leader of Volunteer Engagement and with the following Mission:

“Volunteers participate in research activities, which help protect the ecological integrity of the park and surrounding areas. They promote the stewardship of natural and cultural heritage. They enhance visitor experience through complementing Banff National Parks programs and services with their time, energy, skills, knowledge and passion for parks.”

Over this five year period, the following results have been recorded by Banff National Park:

- 2057 volunteers
- 29,014 hours
- 940 Park Ambassadors reports
- 653 Citizen Science reports
- 628 Trail Conditions reports
- 40 different Helping Hands activities
- 42 Stakeholder Groups at various levels
- 52 Parks Canada staff from various departments developing leadership skills through engagement with volunteer activities

Parks Canada shared a library of resources relating to the professional best practice of managing volunteers, indicating the extent to which these programs may be valued as models in this field.

Most of the following programs are Parks Canada initiatives. They provide potential models for volunteer type programs. Other initiatives outlined elsewhere in this report that also have strong volunteering lessons are Ucluelet Aquarium, Bioblitz, and some Tourism and Wildlife initiatives.

Park Ambassador Program

There have been over 45 Park Ambassadors trained in Banff NP since 2006. These people are trained in partnership with Interpretive Guides Association (IGA) – a Banff based affiliation of professional interpretive guides. The aim of the program is to provide visitors with a Parks Canada presence on popular trails and locations. Park Ambassadors also provide trail reports and provide visitor feedback to Parks Canada.
**Helping Hands Events**
These events are run annually - eg. Annual Highway Clean-up during Environment Week, and events that are part of the Great Canadian Shoreline Clean Up. Others are run weekly during peak visitor season (summer) and are also open to Park visitors – eg. Trail Tuesdays, Weeding Wednesdays, Thistle Thursdays. All activities are advertised as “give back to the park” opportunities and “are fun, hands-on ways people can be stewards”. Parks Canada keeps record of litter collected, amounts of weeds removed, vegetation replanted and fencelines checked.

**Parks Canada Citizen Scientists**
Through this program volunteers assist with a variety of research projects including Shrubwatch, Bear DNA Project, Wildlife Tracking, Douglas Fir Tree Fire Impact Project, Water Quality Monitoring, Wolverine Project, Invasive Plant Monitoring and Removal.
Key elements of one such project – the Canadian Biomonitoring (CABIN) program - are summarized thus:

- proposal to apply this program sought to meet Park Management Plan objectives by including Citizen Science (volunteer) element
- proposal to run for 3 years with 1 year considered a pilot
- a volunteer job description was posted to all registered Banff NP volunteers with specific qualifications and skills required
- 9 Citizen Scientists were selected, seven completed training
- **training** comprised four Environment Canada Canadian Rivers Institute on-line modules, several inhouse operational and safety workshops, and a two-day field certification workshop
- field work was completed in teams lead by Parks Canada Aquatic Scientist
- twelve sites were sampled. Citizen Scientists were involved in the entire fieldwork process from planning, packing equipment, sequence of measurements, and data analysis
- feedback from all participants was included in reporting – available on request

**International Park Steward Pilot Program**
Banff NP Management Plan sets out a goal to increase voluntourism products. This program was the first attempt to do this and key elements include:

- 13 volunteers for four weeks at a time
- mostly young adults
- the appointment of a 2-month full-time volunteer program co-ordinator
- partnership with GO International: a company that works with partner organisations around the world to develop and deliver work and travel abroad programs. GO International packaged, priced, promoted and conducted the first level of screening of applicants, administered paperwork related to international volunteers, and prepared pre-arrival packages. Go International received program fees.
- partnership with local tourism company to provide accommodation
- Parks Canada participated in initial phone interviews of applicants and provided training, gear and work programs for volunteers. Parks Canada received the volunteer's time and skills.

**Bioblitz– US National Park Service and partners**
See outline in previous Lessons re engagement of teachers in environmental education section.

A collaborative biological survey conducted in a National Park. As well as providing ecological data for Park Manager, the program emphasizes learning opportunities for schools and provides volunteer opportunities for scientists, youth, and visitors in a single, large event.
Lessons in land based education in indigenous communities:

Parks Canada, like Parks & Wildlife NT, operates in locations where indigenous culture is strongly connected to the land/country that makes up the Park estate. Particularly in many remote Field Units in both organisations, staff work across cultures when engaging the community in park management and in the pursuit of the broader mission of external relations.

As an educator, my focus is on how park management agencies – in their unique position as depositories of ecological knowledge - can contribute to education, particularly in remote communities where there exists a strong connection to land/country. This section outlines how Parks Canada has contributed, and also outlines several other land based education programs that have or could benefit from partnership with park management agencies.

Old Crow Experiential Education Project

This program was presented with great pride by school staff at the Yukon All Teachers Conference – Kerri presented whilst Stanley shared his skills in skinning a beaver! The project is part of the Northern Strategy: A partnership between the Vuntut Gwitchin Government (VGG) and the Yukon Government and funded by these bodies. The project has 4 main objectives:

1. Resource Development:
   Camp programs; students guide booklets for local places and local activities (examples available)
2. Field Trip Inventory:
   A summary of various local traditional and western educational land based opportunities for teachers
3. Incorporating local resources into experiential education projects
   Developing resources particular to local school communities often by local departments eg. “Who were Ch’eeghwalti, Shahnuuti’ and Shahvyah?” developed by the Vuntut Gwitchin Government’s Heritage Department.
4. Facilitate community involvement with students, School Council and parents to be involved in the planning and implementation phase along with sharing out the project results:
   In the second year of the culture camp, the following people participated: elders, the VGG Chief and council, VGG Heritage Dept, VGG Recreation, VGG Natural Resources Dept, Parks Canada, local musicians, police/RCMP, youth from Whitehorse

Whilst the content of the resources themselves may hold valuable ideas and models, this community wide approach to camp development is of particular value.

Assembly of Alaska Native Educators / Alaska Native Knowledge Network

The work of these organisations was presented at the Yukon All Teachers Conference. Most of those at this presentation were First Nation teachers and school staff, many of whom knew the work of these organisations and/or had studies under the presenter Ray Barnhardt, from the Centre of Cross-Cultural Studies, University of Alaska.

These organisations hold a library of academic literature on cross-cultural teaching and learning strategies. They have also developed the Alaska Standards for Culturally Responsive Schools.
Nunavusiuitt Land Program Steering Committee meeting in Iqaluit

Whilst interviewing the Parks Canada Education Officer, I was invited to attend this 3 days meeting. The committee is made up of representatives from Nunavut Department of Education, several teachers from schools already running land programs, elders from these communities and Parks Canada. The meeting was fully bi-lingual with two translators present at all times. The Steering Committee meeting holds a model for how to progress what may have been started with country camps/land programs/culture camps in the NT and elsewhere. The committee went through the following strategic planning steps by considering the following questions:

- Purpose of a Land Program in Nunavut: Why is a land program for grade 7-9 important? How will a land program make a positive difference in the lives of our students? How will having a land program make a positive impact on our schools? How will having a land program make a positive impact on our communities?
- Collating our Positive and Negative Land Program Experiences
- Individual Hopes and Wishes: curriculum, planning, resources, relationships
- Envisioning the Dream: what will the ideal land program for Grade 7-9 look like in 2020?
- Articulating the Possible: What do we want done by 2017 and who do we need to do it?
- Immediate Goals: What do we want to accomplish as a committee this year?

A poster displayed in the meeting room of the Nunavusiuitt Land Program Steering Committee – note the message “The Purpose of Schooling: To Create An Able Human Being” in two indigenous languages

Nunavut Arctic College Environmental Technology Diploma/Certificate Program

This post-secondary diploma incorporates field-work (including several multi-day field trips), classroom and lab work to develop skills necessary for graduates to find work as environmental practitioners. Many government agencies in Nunavut, including Parks Canada, employ graduates from this program. The program has been running for 25 years with an average of 14-16 enrolments per year and 6 graduates per year. The operations of the Arctic College did not form part of this
research, however the College and this program appear to have strong parallels with Charles Darwin University and the Conservation & Land Management VET sector in particular.

Lessons in partnerships to achieve environmental stewardship:

Tourism based partnerships
Parks Canada conducted a Stakeholder and Partner Engagement Survey in 2009 with the intention of resurveying every two years – it is designed to understand and assess how PC is doing in the eyes of it’s stakeholders and partners. Partners are divided into 13 categories, the largest being travel, trade and tourism (40% of all the 3000 stakeholders).

Some Parks Canada partnerships include:
Banff National Park and Interpretive Guides Association (IGA):
- IGA provides training for all Parks Canada staff working in Banff NP
- IGA provides training for Banff NP volunteers, including Park Ambassadors and Citizen Scientists
- Parks Canada offers specialized training in fire management and other science fields as part of various IGA professional guiding courses.
Parks Canada and VIA Rail
  “ and Canadian Association of Zoos and Aquariums
  “ and Mountain Equipment Co-op:
- provision of gear for the Parks Canada “Learn-to-Camp” initiative where New Canadians are targeted for an overnight experience.

Polar Bears International:
This organization was very easy to spot whilst in Churchill, Manitoba. It’s mission is:
“Polar Bears International is a nonprofit organization dedicated to the worldwide conservation of the polar bear and its habitat through research, stewardship, and education. We provide scientific resources and information on polar bears and their habitat to institutions and the general public worldwide.”
This organisation has a large network of Corporate Sponsors,- contributing cash or in-kind contributions more than $10,000 – Arctic Allies, – contributing cash and in-kind contributions less than $10,000 – and Partner Organisations – non-profits working together, including Parks Canada.

Education based partnerships
Many of the education programs mentioned in this report rely on partnerships to achieve their outcomes. Of particular note is the network of partnerships which Parks Canada are involved in. These are varied and numerous and more information is available on each on request. The Palisades Centre for Environmental Stewardship is particularly active in the use of partnerships to achieve its aims in providing education programs.

Partnerships and collaboration with communities is central to both the Old Crow culture camps, and the Land Program in Nunavut.
On the future - Conclusions and Recommendations:

The Churchill Fellowship experience to date has been one of immense professional and personal value. In this regard I suspect my experience is not unique and is as Sir Winston intended. What lies ahead is perhaps the most important task in upholding the spirit of those intentions: sharing the lessons learnt within my community, my Territory and Australia.

I feel that it is prudent to present these findings openly at first, and without assumption that organisations and individuals have the interest and/or capacity to then act further. Personally, my intention is to see 2012 as a year of making these lessons/findings known and to make myself available to put the energy necessary into supporting further action.

Conclusions can be summarized in the following dot points, with the table on the following page outlining actions that can be taken to disseminate information and ideas for improvements from the local scale to the national scale.

Conclusions:

- Parks Canada provides a number of lessons in structural change towards greater community engagement in their business including partnerships and voluntourism

- Natural resources management, environmental stewardship and tourism can all be enhanced by a well managed volunteer program

- Land based education programs are becoming recognized as being inherent in culturally responsive education. There are several working models to learn from.

- Partnerships are central to community engagement. Through partnerships with business, other government departments, other levels of government and philanthropic organisations more can be achieved, particularly in education initiatives.

- School camps provide opportunity for experiential, transformative education that is increasingly important in building sustained environmental stewardship

- Teachers are multipliers: education programs (as part of community outreach generally) are made more valuable with a strong teachers training component.

- Tourism and natural resource management can be enhanced through partnerships.

- Active use of professional communities can provide great personal and professional satisfaction and the use of social activities should not be discounted.

Please refer to the table on the following pages for proposed actions to further these conclusions.
## Locally (Darwin and Top End)

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Possible Action / Recommendation</th>
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| Parks & Wildlife Service Northern Territory | - Present summary of overall findings to Executive Director and seek advice on further meetings with Tourism Visitor Services, Planning and Partnerships, and others  
- contribute to program design and community outreach development strategies where possible  
- facilitate collaborations between Australian and Canadian professionals  
- promote partnership with local business to achieve outcomes in various community outreach programs |
| Various industry relevant stakeholders eg. NT Environment Centre | Seek opportunities for involvement in industry relevant projects through sponsorship, school education programs, industry inclusion on Board of Directors, community events and a high profile development |
| Dept of Education | - discuss current school camp programs and provide research findings that may enhance these – contribute to program development  
- present findings related to land programs (particularly models) and contribute to program development |

## Regionally & Territory Wide

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<th>Stakeholder</th>
<th>Possible Action / Recommendation</th>
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| Parks & Wildlife Service Northern Territory (PWS) | - Present summary of overall findings to Executive Director and seek advice on further meetings with Tourism Visitor Services, Planning and Partnerships, and others in Katherine & Alice Springs  
- encourage strong partnership with DEET (and possibly others) to develop an NT based EE resource that is delivered to teachers through annual educator training workshops. Participate actively in planning and steering committee where possible  
- encourage education and interpretation staff within PWS to maintain links with professional communities through memberships, journals and conference attendance  
- share notes from land programme steering meeting and contacts with the committee with PWS staff participating in the development of a similar program in East Arnhem |
| Dept Natural Resources, Environment, Arts and Sports | - seek to present research findings to the Executive Leadership Group |
| Science Teachers Association of NT (STANT) | - present summary of overall findings to members via annual meeting; follow up newsletter article  
- encourage PWS to work in collaboration with DEET, CSIRO, NTSTA to hold an annual bioblitz in an NT national park |
## Nationally

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<th>Stakeholder</th>
<th>Possible Action / Recommendation</th>
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| Australian Association of Environmental Educators (AAEE)                   | - present summary of findings  
|                                                                             | - contribute key findings and promote Churchill Fellowships through journal and newsletter articles                                                             |
| National Parks & Wildlife Service NSW                                      | seek to present research findings to education and community outreach staff                                                                                      |
| Parks Australia                                                            | seek to present research findings to education and community outreach staff                                                                                      |
| various                                                                    | Develop a plan to undertake a cost/benefit analysis of an Australian version of the Kitimavik program – possibly seek academic research candidate                     |

## Personally

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<th>Involvement in various industry relevant projects</th>
<th>Seek opportunities for involvement through sponsorship, school education programs, industry inclusion on Board of Directors, community events and a high profile development</th>
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</table>
| Professional communities                                                   | - encourage education and interpretation staff within PWS to maintain links with professional communities through memberships, journals and conference attendance  
|                                                                             | - maintain a relationship with various professionals in Canada and US, including providing research outcomes                                          |
| Professional learning                                                      | - Seek membership with Canadian Association of Volunteer Resources (CAVR) or Australian equivalent  
|                                                                             | - Seek registration at conferences, webinars, seminars offering opportunities to develop skills in volunteer management                                  |
| Promote the Churchill Trust and Churchill Fellowship                       | - disseminate information relating to the Churchill Fellowship to likely candidates  
|                                                                             | - acknowledge the Churchill Trust in all discussions of this research  
|                                                                             | - participate in the Churchill Fellow’s Association (CFA)                                                                                              |