The Canadian Cowboy

New Perspectives on Ranching History, Sept. 26-28, 1997

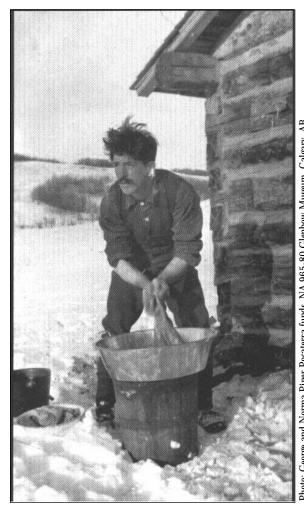
The Glenbow Museum, The University of Calgary and Parks Canada sponsor a conference

Graham A.MacDonald

The current state of ranching history, research and related studies was the focus of an international conference in Calgary attended by 80 scholars, ranchers, park and museum professionals, and members of the interested public. The conference coincided with a major exhibit mounted at the Glenbow: "The Cowboy." The Canadian presentations, usually in slide-talk format, defined a spectrum of themes ranging from the specifics of ranch life to a more general consideration of the influence and adoption of cowboy images into modern urban life. At the outset, a question was planted in the minds of delegates: were things done differently in the American West compared to the Canadian West?

The keynote address was given by Dr. Terry Jordan, occupant of the Walter Prescott Webb Chair in Geography at the University of Texas. He set the stage by asking: "Do borders matter?" when considering ranching experience north and south of the 49th parallel. He concluded that the border was of little importance in the southern Alberta-Northern Montana cultural area. The climate, market, and environmental factors resulted in a certain similarity in the way things

were done, despite certain legal and ethnic differences in the social orders. This sentiment was echoed in the more contemporary reflections of Sherm Ewing, an experienced rancher and author with roots in both Montana and Alberta. He asked if the modern cowboy-rancher was "an endangered species?" In his view, a combination of tax and environmental laws worked against the maintenance of family traditions in ranching and favoured larger corporate forms of management. This was



George Pocaterra, Buffalo Head Ranch, ca. 1907

a condition he saw on both sides of border.

The widest lasso thrown was by Richard W. Slatta, a scholar from North Carolina State University, well known for his studies on ranching phenomena throughout North and South America. In addressing the topic of "Social history in the saddle: problems in frontier research," he suggested that the behaviour of cowboys and ranchers varied widely, often for cultural reasons. There is an apparent need for researchers to explore

and find suitable sources in this area.

Many papers had a tighter focus. Professor Simon Evans, familiar to Parks Canada staff for his extensive contributions to the development program at the Bar U Ranch National Historic Site (south of Longview Alberta), offered the results of his recent research in "Tenderfoot to rider: learning 'cowboying' on the Canadian range during the 1880s." Peter Wesley, in a presentation which drew upon personal family history, reviewed the importance of traditional horsemanship among the Stoney Indians and how this drew many Natives into the cowboy labour force at places such as the Bar U Ranch. Parks Canada historian, Alan McCullough, considered the career of Fred Stimson, a manager and investor in the Bar U Ranch between 1882 and 1902. His paper sought to elucidate the relationship between Stimson and successive ranch owners and to evaluate the frontier skills of a man who has remained somewhat in the shadows of Alberta ranching history. A somewhat parallel approach was provided in Joel Bulger's analysis of the relationship between the well known owner of the a7 Ranch, A.E. Cross, and his foremen. Joy Oetelaar, in discussing "George Lane: from Cowboy to Cattle King"

provided insights into the working career of a central figure at the Bar U and in Alberta Ranching history generally, as well as being a sponsor of the first Calgary Stampede.

The economics of ranching in twentieth century Alberta came under discussion in papers by Max Foran of the Western Heritage Centre, Cochrane, Alberta, and by Dr. Henry Klassen of the University of Calgary. Foran provided an interesting view of the depression years when Federal and

- continued on page 4 -

Tesearch Links

Volume 5 • Issue 3 • WINTER 1997

FEATURE ARTICLES

1	The Canadian Cowboy Graham A. MacDonald
3	Bernard Charles (Bernie) Lieff Gail Harrison
5	Romancing the Dudes David Finch
6	Preseving Resources at Neubergthal National Historic Site Frieda Klippenstein
7	Stirling National Historic Site: Stirling, Alberta
8	What is Commemorative Integrity? Bill Yeo
11	Interpretive Education: An Underrated Element of Park Management? Robert Wolfe

DEPARTMENTS

	Graham MacDonald and Patricia Benson
3	Updates
13	Research Links Authors Ind Compiled by Patricia Benson
14	Research Links Subject/Key Word Index Compiled by Patricia Benson
16	Meetings of Interest

Editorial

FRANCOPHONES

Le texte de cette publication est offert en français. Vous pouvez l'obtenir en écrivant a l'adresse dans la p.24

SUBMISSIONS WELCOME FOR THE SPRING ISSUE. THE DEADLINE IS FEBRUARY 16, 1998.

EDITORIAL

Since it's inception in 1993, *Research Links* has enjoyed great stability on its Editorial Board during a period of Parks Canada's history remarkable for its instability. Most readers of this journal will be aware of the death last October of Dr. Bernie Lieff, a main founder of *Research Links*, a positive and critical force on the Editorial Board, and the principal contact with Senior Management. In November 1997, Patricia Benson, Editor of this journal, accepted a new position at Waterton as Townsite Manager.

With many organizational changes at Parks Canada over the last few years, including new relationships west of the Ontario border and the development of a Western Canada Service Centre with offices in Winnipeg, Calgary and Vancouver, it is clear that change is in the air. The current members of the *Research Links* Editorial Board recognized that this may be a time when a "changing of the guard" may be appropriate. It is a time to bring in new blood, seek new ideas and shake things up a bit!

Since 1993, the content focus of *Research Links* has been on completed or on-going research in the Alberta-British Columbia region. Although there is always an open invitation to all wings of the Parks Canada programme, the new organization of Parks has a definite mandate for *Research Links* to consider research for all of Western Canada: Manitoba, Saskatchewan, Alberta, British Columbia the Northwest Territories and Yukon. With this new focus in mind, the current Editorial Board would is interested in broadening its editorial structure to reflect that new geographic reality. Article submissions from across the country are, of course, still welcome!

Four members of the *Research Links* Editorial Board are based in Parks Canada: a representative of Senior Management, a representative based in a National Park, a cultural/historical representative, and a representative connected to ecosystem management. A few years ago it was decided to include a fifth member, an external person drawn from the academic community, a policy which will continue.

Ideas from readers from within and without the Parks Canada establishment have always been welcome, and they are particularly welcome now, when geographic expansion provides us with the opportunity to redefine the roles and responsibilities of the Editorial Board.

Graham A. MacDonald and Patricia Benson

Bernard Charles (Bernie) LieffMay 31, 1942 to October 25, 1997

UPDATES

One of Parks Canada's foremost experts in ecosystem management, Dr. Bernie Lieff, died of cancer October 25, 1997 in Victoria, B.C.

It is with great sadness that we mourn the loss of a friend, colleague and dedicated advocate for the protection of Earth's wild places. Bernie Lieff took giant steps to ensure the protection and enhancement of Canada's National Parks and Historic Sites.

Bernie began his service with Parks Canada in 1971 in Ottawa. Over the next 26 years, he was dedicated to managing, advocating for, and ensuring the protection and enhancement of Canada's National Parks and Historic Sites. Within Parks, Bernie worked nationally, regionally and locally to establish science as an integral part of park decision making. He held positions as the Superintendent of Pukaskwa, Wood Buffalo and Waterton Lakes national parks as well as Chief of Visitor Service, Chief of Park Science and Manager of Ecosystem Management Services. In all these positions Bernie worked to enhance resource protection and establish multi-disciplinary teams to manage ecosystems and enhance biodiversity.

His expertise resulted in international recognition and work with the World Commission on Protected Areas. For that organization he travelled to Sweden, Russia and Pakistan, evaluating the international significance and management of protected areas.

Bernie was a strong proponent of working with others to enhance science and its use in decision making. He worked actively with universities and graduate students and was an adjunct professor at the University of Calgary. This spring, Bernie co-chaired the Third International Conference on Science and the Management of Protected Areas which was held in Calgary.

Bernie was an active representative on the Canadian Biospheres Working Group which sets strategic direction for Biosphere Reserve work in Canada. While superintendent in Waterton Lakes National Park, he was instrumental in moving the idea of Biosphere Reserve from a concept to reality, creating a functioning and diverse team of ranchers, politicians, communities, industry and environmentalists dedicated to sustaining a functioning ecosystem, named the Crown of the Continent, in the land surrounding the park. For his work he was honoured in 1984, along with the Superintendent of Glacier National Park in Montana, by the Man and Biosphere Committees of both countries for advancing the program in North America. Bernie moved to Victoria in August of this year to assist in negotiations for the establishment of a Biosphere Reserve in Clayquot Sound.

Readers of *Research Links* will remember Bernie as being instrumental in the development of this publication as a vehicle to enhance awareness and debate on issues of science in Parks Canada in Western Canada. He served on the Editorial Board from its inception until his untimely death.

In all his work, Bernie demonstrated a passion for science, a dedication to protected areas, and an untiring love of his work. He brought enthusiasm, humour and compassion to all he did. He lead by doing and more importantly by encouraging others to participate. He will be sorely missed by his colleagues. In his honour, the Bernie Lieff fund has been established through the Canadian Parks and Wilderness Society. This annual award will be open to a senior university student who shows an interest in the management of protected areas and a particular interest in ecosystem management and the maintenance of ecological integrity. Donations are welcomed to enable this tribute to be realized. Contributions should be sent to:

The Bernie Lieff Fund, c/o Canadian Parks and Wilderness Society 401 Richmond Street West, Suite 380, Toronto, Ontario M5V 3A8 Canada

CONGRATULATIONS

Congratulations to Patricia Benson on her new position as Townsite Manager in Waterton Lakes National Park. Patricia was a founder of *Research Links*, and she has been the publication's Editor from its inception. We wish her well in her new position and hope to hear from her often regarding research activity in southern Alberta.

WELCOME

Welcome to Gail Harrison who is taking over the reins as the Editor of *Research Links*. Gail is quickly becoming familiar with her role as Editor. Her expertise and enthusiasm are valuable assets to the Editorial Board, and we look forward to her ideas and advice as we explore new directions in future issues.

THANK YOU

Thank you to Graham MacDonald for his long-standing contributions to *Research Links* as an author and our cultural/historical representative on the Editorial Board. Graham is stepping down from the Board to devote his energy in some new directions, and to open the door to some "new blood" and "new ideas." Your efforts for the past few years are very much appreciated, Graham.

The Canadian Cowboy

New Perspectives on Ranching History

- continued from page 1 -

Provincial land use officials tried to come up with suitable adjustments to the grazing lease policies of the day, in response to rancher requests. Professor Klassen provided insights on how a family ranching business was conducted, based on an analysis of the financial records of the Rocking P and Bar S ranches. This paper was interesting for the way it described one family's efforts to keep abreast of economic change by means of relevant education.

Other forms of evidence were drawn upon. Professor Brian Dippie of the University of Victoria presented delegates with a feast of photographs illustrating the work and influences of the noted "cowboy" artist, Charles Russell of Montana (who spent some time in Alberta as well). Much has been written about Russell over the years, and Dippie's command of the sources was impressive, along with his careful tracking of Russell's progress as an artist. In "Hello Will James" Allen Jensen of the Medicine Hat Museum and Art Gallery provided new insight on a frontier artist and writer better known in the United States than in Canada, but who was in fact born in Quebec. Young Ernest Dufault left Quebec for the Canadian West in 1907 where he cut his teeth on ranch life in Saskatchewan and Alberta. By 1911 he departed for Montana. Of various aliases he adopted there, the name "Will James" stuck, and by the 1920s he was becoming famous for short stories such as "Smokey, the One Man Horse" which appeared in Scribners' and other popular magazines. Jensen reported that a 1926 edition of the Smokey stories went into ten printings and was translated into Danish, Russian, Japanese, Yugoslavian, Swedish and Dutch.

The other major theme of the conference bore a connection to these last-mentioned topics of art, poetry and literature. This theme dealt with the image of the cowboy in modern popular urban culture. The roots of popularization were considered by John Varty in his paper: "Pioneers of Civilization: images of the Canadian Cowboy, 1875-1925," and by Warren Elofson, in: "The Canadian Cowboy, 1870-1907: the image and the reality." In these papers, echoes could be heard of a well known question in Canadian history: just how peaceful was the settlement process in the Canadian West as opposed to American experience?

The urban cowboy theme surfaced strongly in the papers by Tamara and Robert Seiler, who explored the changing visual identity and ideological assumptions of the Calgary Stampede since its inception in 1912. The curator of the Canadian Cowboy Exhibit at the Glenbow, Lorain Lounsberry, put the stampede idea into historical context by exploring the connection of the main promoter of the original Stampede, Guy Weadick, with Buffalo Bill Cody's famous Wild West Show. Finally, the urbanization of the cowboy came full circle in David Finch's discussion of the emergence of Dude Ranching at the Buffalo Head Ranch on the Highwood River. These last mentioned papers helped to point to issues of policy emerging for museums and park systems which seek to promote a version of the historically authentic, and balance such efforts with the new (and not so new) claims of 'heritage tourism.'

ACKNOLWEDGEMENTS

The delegates appreciated the efforts of all the organizers. The conference was ably chaired by Donna Livingston of the Glenbow Museum and Dr. David Breen, the author of a seminal work in Canadian Ranching History.

Graham MacDonald is an historian with Parks Canada West, Calgary, AB. Tel: (403) 292-4466; e-mail: graham_macdonald@pch.gc.ca

READINGS OF INTEREST

Breen, David W.

The Canadian West and the Ranching Frontier: 1874-1924. Toronto: Univ. Of Toronto Press, 1974.

Dippie, Brian W.

Looking at Russell Fort Worth: Amon Carter Museum, 1987.

Evans. Simon.

The Pasing of a Frontier: Ranching in the Canadian West, 1882-1912. Ph.D Thesis. Calgary: Univ. of Calgary, 1976.

Jameson, Sheilagh,

Ranchers, Cowboys and Characters: Birth of Alberta's Western Heritage. Calgary: Glenbow, 1987.

Jordan, Terry, G.

North American Cattle-Ranching Frontiers: Origins, Diffusion and Differentiation. Albuquerque: Univ. of New Mexico Press, 1993.

Ewing. Sherm.

The Range. Missoula: Mountain Press Publishing, 1990

Ewing, Sherm,

The Ranch: A Modern History of the North American Cattle Industry. Missoula: Mountain Press, 1995.

Slatta, Richard, W.

Cowboys of the Americas Princeton: Yale Univ. Press, 1996.

Glenbow Archives. Ranching History Collections.

Romancing the Dudes

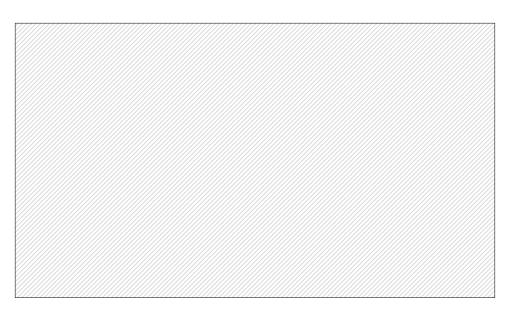
David Finch

Ranching involves hard work and long hours, but many outsiders have a romantic view and yearn for a chance to experience cowboy life. George Pocaterra and Raymond Patterson, the first two owners of the Buffalo Head Ranch in southwestern Alberta, sensed an opportunity in this romantic view. From 1924 to 1946 they successfully entertained city folk and made a profit from the honourable western tradition of hospitality. As a case study, the Buffalo Head Ranch on the Highwood River in southwestern Alberta provides an opportunity to study the early hospitality industry. Drawing on a variety of sources, this preliminary review of dude ranching in the Canadian west shows how many forces created a niche for the hospitality industry. This story also shows how the efforts of the first two owners of this dude ranch helped create several protected spaces in the Canadian west.

Research from various projects converge on the Buffalo Head Ranch. The Bar U Ranch National Historic Site and the Turner Valley Gas Plant National Historic Site interpret the early ranching and oil and gas story in southern Alberta. While I was pursuing the history of large corporate ranching and petroleum exploitation, it became apparent that individuals also created successful niche ventures and provided an important window into the Canadian west. Using primary records in the Pocaterra papers at the Glenbow Archives and the Patterson papers at the British Columbia Archives and Records Service, I have expanded Raymond Patterson's story into a forthcoming biography. Other research included conducting tape recorded interviews with relatives and friends as well as first-hand research canoeing the South Nahanni River in the Northwest Territories and accompanying a cattle drive on the Buffalo Head Ranch.

"Guest ranches" entertain "visitors," today to shed the stigma attached to the terms "dude ranch" and "dudes"—with good reason. The 1883 *Prince Albert Times* of Saskatchewan defined the dude "as one of those creatures which are perfectly harmless, and are a necessary evil to civilization."

Since the 1920s, paying guests have provided an important ranch income, a cow to be milked for immediate cash. Raising animals and sending them to market



Buffalo Head Ranch on the Highwood River in Southern Alberta

involves a considerable risk, but guests deliver themselves to the ranch gate with cash in hand, ready to take on the challenge. Ranchers like Pocaterra and Patterson opened their homes to guests for both financial and social reasons—many ranchers were recent immigrants to Canada and gregarious types that loved to entertain. Pocaterra's and Patterson's antics made the Buffalo Head Ranch so famous that letters addressed to The Buffalo Head Ranch, Canada, easily reached their destination.

George William Pocaterra (1882-1972), an Italian, emigrated to the Canadian west through Winnipeg in 1903 and arrived with \$3.75 in his pocket. Working on farms, he saved \$78 by the next summer. With his cousin, Arturo Talin, he moved to Alberta in 1904 and fell in love with land in the Highwood River valley. "All there was on the place then were several sets of tepee poles, standing up, ready to have the tepees rolled around them." They built a 14 by 16-foot cabin in 1906 and named the unfenced land the Buffalo Head Ranch after the many bleached bison skulls that littered the meadow. While cutting trees across the Highwood River, Pocaterra met the local Stoney natives who readily accepted his gifts of tobacco and friendship.

Pocaterra was educated in England and learned to build log cabins from a Swede, so he quickly adapted to western Canadian society. Pocaterra was not a cattle man: horses were his passion. Throughout the 1920s he believed the demand for horses would return but the automobile ended the North American reliance on horsedrawn

transportation. Luckily, in 1924, Allen Seymour of the Canadian Pacific Railway tourism department approached Pocaterra and his neighbour Guy Weadick at the Stampede Ranch and asked them to entertain dudes on their spreads. By the late 1920s, European dudes were paying up to \$50 per week to stay with the multilingual Pocaterra, who spoke five languages fluently: Italian, French, Spanish, Portuguese and his heavily accented English. American dudes stayed upstream at the Stampede Ranch.

Poet and writer P.K. Page visited the ranch as a child. "It was an absolutely extraordinary ranch, with the most incredible collection of people. Adolf [the ranch foreman] was a Prussian. Pocaterra was a real character." Pocaterra and Adolf built a boat on the landlocked ranch in the early 1930s and christened it the Velitta. A team of horses then dragged the sailing ship through the bush to a slough. With Miss Page and her girlfriend along as spectators, the launch went well, until the boat reached water. "Pokey put on a bathing suit that was enough to make a girl of sixteen blush. It was an old-fashioned one that came down to about his knees but because the moths had eaten all the crotch out of it, he had to put a sort of a pair of canvas drawers underneath it. I've never seen such a sight in all my life. I was slightly in love with Pokey until that event and that put me off him. He and Adolf got into the boat and the boat promptly sank. They ignominiously came

- continued on page 10 -

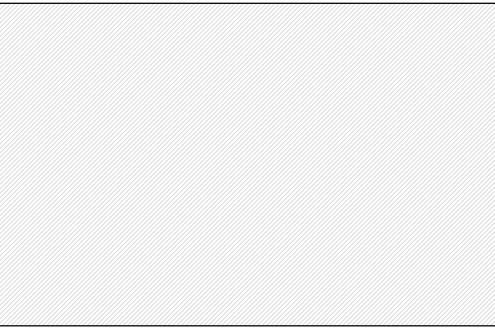
Preserving Resources at

Neubergthal National Historic Site

Frieda Klippenstein

BACKGROUND

Six to eight thousand Mennonite immigrants arrived southern Manitoba in the early 1870s, shortly after the creation of the province and the signing Treaties 1 and 2. These newcomers were the first of many largegroup migrations to the prairies from overseas, solicited Canadian



commemoration was first proposed, the village itself has undergone marked changes, such as the natural deterioration of some of the older, empty buildings, the renovation of private residences, and the loss or reordering of other resources. this situation, planning to preserve and present the village resources urgent.

Housebarn in Nuebergthal, Manitoba

immigration officers. They were also the first to successfully settle on the wide open prairies, a feat previously considered impossible because of the scant water and timber resources. To survive the harshness of prairie winters and claim a "place" on the seemingly endless, unwelcoming flatlands, the Mennonites carved out their homes on the landscape and recreated a form of settlement developed over centuries in northern Europe and the steppes of south Russia.

More than a century later, this landscape remains evident in southern Manitoba where, west of the Red River, some 18 Mennonite street villages can still be found. In November 1984, the Historic Sites and Monuments Board of Canada recommended that "the agricultural settlement of the Canadian prairies is a theme of national significance." Four years later (February 1989), the Board recognized one of the surviving villages, Neubergthal, Manitoba, as a good example of the distinctive form of group agricultural settlement known as the "Mennonite street village":

Mennonite Street Villages are prairie settlement forms of both national historic and architectural significance and they should be commemorated at Neubergthal, Manitoba, which not only possesses a considerable amount of resource integrity but a unique "sense of place".

Last fiscal year (1996-1997), active research and planning began on the Neubergthal National Historic Site project. A community liaison person was contracted to introduce Parks Canada employees to the village residents, to communicate intentions, and to help devise a research and planning strategy toward a future cost sharing agreement. Initiatives of the past two seasons include aerial photography / village survey, heritage recording of two of the eight surviving housebarns, and a village-wide photographic inventory. An oral history project, archaeological survey, and cultural landscape history are also near completion; and a commemorative integrity statement (CIS) workshop is planned.

Neubergthal was designated a national historic site because of its "considerable amount of resource integrity" and the "apparently unique sense of place." However, in the time since the

TRADITIONAL ELEMENTS OF NEUBERGTHAL

In Neubergthal the entire landscape is designated as a national historic site and identifying the "level one resources" (that are a priority to preserve) is quite challenging. We began by defining the central distinctives of the historic Mennonite street villages in an attempt to determine what specifically gives the village the sense of place noted by the Historic Sites and Monuments Board. One feature is the single street along which carefully ordered yards were arranged in measured distances. Rows of planted cottonwood trees, fences and shrubs provided shelter and marked boundaries in a seemingly endless tall grass prairie. Vegetation thrived on the black soils of the Red River valley, and the village yards were predictably measured off into flower gardens, "tree gardens," vegetable gardens and pasture lands. Vestiges of a distant Dutch-German past, housebarns of a uniform size and layout sheltered families and farm animals under a single roof. Most villages had a school and a centrally located church, reflecting a long tradition of self-sufficiency. Village government was made up of an appointed "Schultze" (mayor) and a committee of "Wirte" (landowners) who met regularly and made decisions on the running of the village. Communally owned farmlands were divided into narrow strips of approximately 10 acres and distributed by lot among the village farmers so that the most and least productive lands would fall equally. This deliberate uniformity, along with egalitarian traditions, guarded against individual economic failures and worked toward the overall success of the village.

Mennonite street villages were vibrant communities of people connected by a common history, shared worldview and close kin ties. The villages had a strong element of self-sufficiency, and many current residents remark nostalgically about the adequacy of their previous mixed farm economy in which shopping trips were a rare

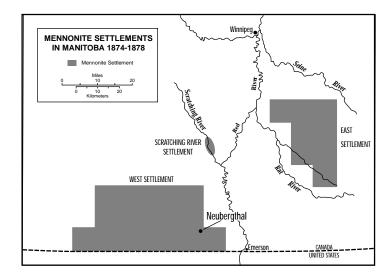
- continued on page 7 -

and novel activity. Such seemingly mundane activities as threshing, hauling water, butchering and food preservation were raised to the level of community social events.

NEUBERGTHAL TODAY

Time in Neubergthal does *not* stand still. Lifestyles, occupations and the functional purposes of many of the villages' physical elements have changed. The communal system of farming has long since been replaced with farming on individually owned land, mixed farms have given way to specialization, and in many cases wage labour has made the size of yards and many of the buildings obsolete as residents commute to outside workplaces. The uniformity of the earlier village formation has given way to diversity. Yet, many of the elements of the Mennonite village remain evident at Neubergthal—some by purpose, some by default. Clearly, if we do not deliberately resolve to continue this work, preserving of some of the older built resources will become increasingly difficult, and the natural evolution of the village will not necessarily keep the traditional elements intact.

Parks Canada is not *introducing* the idea of heritage preservation at Neubergthal. If the concept was not already firmly in place, there would be little evidence of the village's 120-year-old traditions left to preserve! Parks Canada is an interested partner in efforts to protect and present the village as a heritage resource, and to develop strategies for defining, facilitating, and monitoring the process. Until last year, very few Neubergthal residents were even aware of their village's designation. They are now beginning to think of their village in terms of a national historic site, and what the implications of this might be. They are asking such pertinent questions as what is the "village"—a physical pattern on the ground? a particular collection of people? or a way of doing things? As evidence of their willingness to explore the possibilities presented by the designation of their village, the residents formed a community heritage organization, created a periodic newsletter on our collaborative work, and enthusiastically attended various Parks-village meetings and workshops. Working together to preserve and present the cultural landscape of Neubergthal promises to be a joint learning experience. We expect to gain much from the village residents, who have deliberately shaped and adapted to the landscape so well for over a century.



Frieda Klippenstein is an historian at the Western Canada Service Centre in Winnipeg. Tel: (204)983-5841, fax: (204)983-8187.

STIRLING VILLAGE NATIONAL HISTORIC SITE Stirling, Alberta.

The Neubergthal National Historic Site is just one of several agricultural settlement traditions being commemorated on the prairies. The Stirling Village National Historic Site was designated in 1989 as an excellent representation of land use and irrigation practices of Mormon settlers who between 1887 and 1910 established seventeen communities in southern Alberta. As with Neubergthal, the final selection was based on a combination of factors supported by background research undertaken by Parks Canada historians. With the designation of Stirling as a National Historic Site joint efforts at planning and research have proceeded with a view towards developing certain sites in the town for eventual public access and programming and for enhancing the general cultural landscape of the town as a whole. The current site focus is on the Michelsen Farmstead, which was the focus of more systematic research by an architectural firm. 1 The more general aspects of the town landscape have also been subjected to additional research and the features considered significant include: the large town lots, the shelter belts, the roadside irrigation ditches and much of the local historic architecture.² The essence of a cost-sharing agreement for long term National Historic Site development is the concept of partnership, and in the case of Stirling, the main patterns are the Town of Stirling, the Province of Alberta and Parks Canada. Each will undertake appropriate elements of research and development costs in the context of a general guideline plan.

NOTES

- Of. Lyle Dick, A History of Prairie Settlement Patterns, 1870-1930. A Report Prepared for the Historic Sites and Monuments Board of Canada. (Winnipeg: Historical Services, Environment Canada, Parks. 1987); and Lyle Dick and Julie Harris, Prairie Settlement Patterns: Resource Analysis (Ottawa: Environment Canada, Parks, 1989)
- ¹ Hirano and Heaton Architects Ltd. Michelsen Farm Conservation Study (Lethbridge: 1996)
- ² Cf. Elise A. Corbet, A Cultural Landscape History of Stirling Alberta, (Calgary: Canadian Heritage: Parks Canada, 1993); Stirling Agricultural Village National Historic Site: Conservation and Presentation Report (N.P. Canadian Heritage: Parks Canada, 1996); Hirano and Heaton Architects Ltd. Cultural Landscape Survey for the Village of Stirling. (Lethbridge)

What is Commemorative Integrity?

Bill Yeo

In the Fall 1997 issue of *Research Links*, Doug Hodgins describes the function of an ecosystem secretariat in a national park. He lists a number of focal points, which include "ecological and commemorative integrity objectives and their achievement." In the same issue Garry Scrimgeour, Dan Wicklum and Shelley Pruss address the question "What are Ecosystem Health and Integrity?" Both articles are informative and thought-

provoking, but many readers may ask: what is commemorative integrity?

Although commemorative integrity is analogous to ecological integrity, it is not an identical concept. The most obvious difference is administrative: one applies to national parks and the other to national historic sites. The statement: "In the establishment and management national parks, Parks Canada will strive to maintain ecological

integrity," is found in the National Parks Policy, while one of the National Historic Sites Policy's three objectives is "to ensure the commemorative integrity of national historic sites administered by Parks Canada".

To explain the similarities and differences between ecological and commemorative integrity, let's refer to the article by Scrimgeour et al. The authors state that "the notion that ecosystems can have both health and integrity" is key to the ecosystem approach. While describing the debate and defining ecosystem health and integrity they ask whether it is possible to speak of and measure, an "optimal state" for an ecosystem. In comparison, when we speak of commemorative integrity we need to consider the "health or wholeness" of a national historic site.

The National Historic Sites Policy prescribes three commemorative integrity indicators:

"(a) national historic site possesses commemorative integrity when the resources that symbolize or represent its importance are not impaired or under threat, when the reasons for the site's national significance are effectively communicated to the public, and when the site's heritage values are respected by all whose decisions or actions affect the site."

Like individual national parks, individual national historic sites differ. Yet the three generic "indicators" listed above apply to them all. Conceptually, it is better to think of each indicator as an element of commemorative integrity, one of three essential pieces. For each national historic site three questions must be answered:

 Which resources symbolize or represent this site's importance, and what threats practices for the conservation and presentation of cultural resources," which in Parks Canada are "founded on principles and carried out... so that the historic value of cultural resources is taken into account in actions that might affect them". The Cultural Resource Management Policy applies to all cultural resources administered by Parks Canada.

CIS IN ACTION

The statement of commemorative intent

for Batoche National Historic Site says that this place is of national significance because of the armed conflict of 1885. Resources at Batoche include some landscape features known as the rifle pits and the Zareba. Research indicates these features were used by the Metis combatants and the Canadian Militia. This link to commemorative intent is an *associative attribute* which gives them the highest level of

historic value. Their characteristic shape and spatial relationship to the scene of action are *physical attributes* which support this evaluation. More than a century's exposure to erosion and weathering has reduced these once functional defensive works to vestiges (surviving traces). At what stage will these attributes be impaired? The application of cultural resource management principles and practice allowed us to prescribe a benchmark condition which has become an objective in

the CIS.

The Cave and Basin National Historic Site has a very simple yet powerful statement of commemorative intent: The Cave and Basin is of national historic significance because it is the birthplace of Canada's national parks. It is also the location of one of Banff National Park's Classified heritage buildings and a place where generations of Park visitors came for recreation. However, the main message is that certain events happened at this place between 1883 and 1885, leading to the hot springs reserve. The cultural resource management policy applies to presentation as

The concept of commemorative integrity is used to describe the health or wholeness of a national historic site. A national histoic site possesses commemorative integrity when the resources that symbolize or represent its importance are not impaired or under threat, when the reasons for the site's national historic significance are effectively communicated to the public, and when the site's heritage values are respected by all whose decisions or actions affect the site.

or impairments must we deal with to make sure those resources are protected?

- What messages must be presented, and in what way, so the reasons for this site's national significance are effectively communicated?
- What management practices must be in place so that all of this site's heritage values are respected?

The answers to these questions will provide most of the site-specific ingredients of a commemorative integrity statement (CIS).

A CIS is analogous, but not identical, to an ecological integrity statement. Both types of statement are supported by research, but a CIS has additional ingredients: the application of *commemorative intent* and the principles and practice of *cultural resource management*.

Commemorative intent is site-specific and derived from advice given by the Historic Sites and Monuments Board to the Minister responsible for Parks Canada (who has the legislated authority to designate national historic sites), and reflects the reasons for a site's designation. Cultural resource management consists of "generally accepted

- continued on page 9 -

What is Commemorative Integrity

- continued from page 8 -

well as protection, and its application helped us set presentation objectives for the Cave and Basin, stating that the main message is to be delivered with integrity, not overwhelmed by secondary messages.

For many years Rocky Mountain House National Historic Site has provided a picnic area for public use. The picnic area is accessible from the main site entry road and is located near the banks of the North Saskatchewan River, overlooking the Brierley Rapids. The national historic site's commemorative intent makes reference, in part, to this place's

Ecosystem

Secretariat

role in the history of the Canadian fur trade, and "exploration to the westward". In 1799 the river brought the men who established the first post here, where the rapids marked the end of navigation. Many visitors to the site today come not to learn about the fur trade, or the role of the rapids in choosing the site of the first fort. They come to use the picnic area as a base for kayaking on the river, and the rapids are the main attraction and heritage value of Rocky Mountain

House National Historic Site. A management objective in the CIS states that picnicking and kayaking should continue, provided recreational users recognize and respect the commemorative purpose of the site.

Commemorative Integrity Statements are approved by the Assistant Deputy Minister for Parks Canada. The sum of the commemorative integrity objectives in a CIS represents the "optimal state" for a site; and in nearly all cases this goal is not yet achieved. The first step in any level of planning activity, be it management, business or work planning, is to compare where we are now with where we need to be, to compare the current state with clear objectives. This is the first test of a CIS: does it articulate clear objectives? An approved CIS is now required for national historic sites which are not administered by Parks Canada, but are candidates for cost-sharing agreements, and will articulate Parks Canada's program objectives for each site.

A sound knowledge base is part of assembling a CIS, and the specific objectives in the statement itself may indicate research gaps. Priorities for business and work planning should address these gaps. Is there a need for historical research to support the

development of a commemorative message, archaeological investigation to establish the extent of a burying ground, a conservation study on a group of historic buildings, or a condition assessment to determine the state of historic objects in an exhibit?

The upcoming State of the Parks Report includes detailed reports on the state of eight national historic sites across Canada, based for the first time on commemorative integrity statements. This report will challenge our sense of stewardship in a way we have not experienced before. It will also challenge Parks

Strategic Focus

Ecological and Commemorative Integrity

Service to Clients

Wise and Efficient Use of Resources

Operational Focus

Responsibilities Model for the Ecosystem Secretariat as presented in Doug Hodgins' article "What is an Ecosystem Secretariat?" (Research Links 5[2] p. 8)

Canada to address research needs on a program basis, as well as on a site-by-site operations and maintenance basis.

ECOSYSTEM SECRETARIATS AND COMMEMORATIVE INTEGRITY

Doug Hodgins manages the Ecosystem Secretariat in Jasper National Park. If commemorative integrity applies only to national historic sites, should he drop it from his list of focal points? Certainly not. Jasper administers five national historic sites, only one of which has a draft CIS. There is clearly much to be done, and we know from experience in other national parks that careful groundwork is needed to integrate commemorative and ecological integrity objectives. The numerically greater part of the Jasper's cultural resource inventory is not of national significance, but still has historic value. These are what the Cultural Resource Management Policy refers to as Level II resources, and the Policy applies to them as much as it does to Level I resources. (The "Responsibilities Model for the Ecosystem Secretariat", part of Doug Hodgins' article, includes Level II

resources as part of Ecological Integrity.)

National historic sites often include Level II cultural resources, and are dealt with in a CIS as part of the third element, or "management practices". In our national parks, however, most, if not all, cultural resources are of Level II historic value. In the Scrimgeour et alarticle, the authors argue that the adoption of an ecosystem approach to environmental resource management marks a shift "from approaches dominated by chemical and physical monitoring to one that recognizes the complexity of ecological interaction, the

intrinsic importance humans within ecosystems, and the need for sustainable resource use". In the simplest terms, cultural resources in national parks are physical evidence of human interaction with the natural environment. In many cases they are witnesses to an occupation of traditional territory, over thousands of years, by present day and ancestral Aboriginal peoples. They also speak of resource use, sustainable and otherwise, and the modification of the landscape as part of national park development. These as-

sociative and physical attributes give them historic value, and contribute to our understanding of the ecosystems we are managing.

Some Parks Canada staff confuse commemorative integrity with cultural resource management. This misconception can lead to an oversimplified interpretation of Doug Hodgins' "responsibilities model": commemorative integrity means looking after the cultural stuff, and ecological integrity means looking after the natural stuff. In reality, the differences are more profound. Where no national historic sites exist, as in most of our national parks, the model is inappropriate. But for parks like Jasper, Glacier, Banff, Waterton Lakes and Yoho the model definitely applies, and in these places the similarities between commemorative and ecological integrity offer ample opportunities for mutual reinforcement and the achievement of these key program objectives.

Bill Yeo is an historian with The Western Canada Service Centre in Calgary.

Warden

Romancing the Dudes

- continued from page 5 -

out covered in leeches."

Pocaterra's successors at the Buffalo Head Ranch in 1933 were Raymond Patterson (1898-1984) and his wife Marigold (1903-). Born and educated in England, they seemed likely prey for Pocaterra's attempts to entice wealthy investors to finance his coal mine in the Kananaskis Valley. The Italian befriended the newlyweds in 1929 and hosted them at his famous ranch several times in the early 1930s. Any chance the Pattersons might invest in Pocaterra disappeared when their sheep ranching ventures near Cochrane went sour and the stock market crash rendered their investments worthless.

Always a dreamer, Patterson rebounded, borrowed money from his mother and bought Pocaterra's Buffalo Head Ranch in 1933. He and Marigold miraculously transformed the decrepit horse ranch into a successful cow/calf operation in the midst of the Depression. The dudes helped make the ranch viable.

Patterson certainly understood the perspective of the newcomer to the Canadian west and his own experiences made him a perfect host. A World War I veteran with a modern history degree from Oxford and experience as a clerk in the Bank of England, Patterson emigrated from the United Kingdom to a Peace River homestead in 1924. In the summer of 1927 he visited the mysterious Falls of the Nahanni (later named Virginia Falls) on the South Nahanni River in the Northwest Territories. Believing he had found gold, he returned and overwintered from 1928 to 1929, nearly starving to death at least twice. Although gold eluded him, his love for the Canadian northwest endured.

Luck smiled on Patterson and his dream of owning and operating a civilized ranch came true: he managed to "eat his cake and have it too." With the backbone of the Rockies behind them, the Buffalo Head disguised its relatively small spread by showing their guests a

back yard that stretched to a spectacular horizon.

Hosting dudes at a working ranch is not unlike running a daycare. Guests seldom know their way around the out-of-doors and often lack the common sense to avoid trouble:

- Ambitious visitors joined Patterson for long rides to the base of Mount Head, the highest peak in the front range.
- One rider arrived at the Hansons' Chinook Ranch with the bit upside down in the horse's mouth, the shanks of the bit sticking up from the corners of its mouth, making the poor mount look like a wild boar.
- Patterson partially recreated his South Nahanni canoe trip for one dude, taking her through a section of the canyon on the Highwood River that bordered the ranch. They dumped twice.

Adventures such as these added to the outrageous nature of the flamboyant ranching community and helped the Highwood Valley earn its nickname: Loony Lane.

Corporate ranching killed the Buffalo Head guest ranch. When the Pattersons sold the ranch to the Burns Company in 1947 and moved on to retire on Vancouver Island, the meat packing company only maintained the cattle ranching tradition at the famous ranch.

It took a special mixture of people, talents, background and location to turn guest ranching into a profitable and worthwhile occupation. Hosts and guests alike benefited from the relationship and the dude ranching tradition has offered an increasingly urban population a taste of agricultural life. To this day, guest ranches provide an important income for a special breed of ranchers and they continue a tradition of hospitality that dates to the earliest days of ranching in the Canadian west.

David Finch is a consulting historian and author of several books on the history of the Canadian west.



Interpretive Education:

An Under-Rated Element of Park Management?

Robert Wolfe

INTRODUCTION

The two main goals of most park systems appear to be contradictory. Can parks realistically protect areas for future generations, while actively promoting their use and enjoyment by current generations? Park managers have struggled with this dilemma for nearly a century. To meet the goal of protection, park managers have developed rules and regulations to control human use within the parks. However, as the number of visitors to parks increases while the number of park staff remains constant or decreases, enforcing these rules will become more difficult.

By communicating management concerns to the public, interpretive education programs can effectively complement existing rules and regulations. Unfortunately, these same programs are often first to be cut during periods of budgetary constraints. There appears to be two main reasons for cutting these programs. First, the effects of interpretive education are not immediately realized. Interpretation is to a large degree a longterm management technique and thus the implications resulting from the cuts may not be apparent in the short-term. Second, the effectiveness of interpretive education as a management tool has to date been poorly studied, leaving many senior managers uncertain of the benefits. It is my hope that this article will provide evidence on the effectiveness of interpretative education as a park management tool and hence, eliminate many of these doubts.

INTERPRETIVE EDUCATION IN ACTION

Wildflower Interpretive Campaign

Kananaskis Country's wildflower poster campaign of the mid-eighties and early nineties was a huge success. One of more popular posters was the "Wanted ALIVE Not Dead" poster with pin-ups of wanted flowers such as the "Shooting Star" and "Western Red Lily". Within one year of implementing the poster campaign, the number of visitors reprimanded by park staff for picking flowers had decreased 50%. The following summer, in conjunction with

the poster campaign, the message was delivered during the interpretive programs. The end result over the two years was a 75% reduction in the number of observed incidents.

The Poplar Patrol

The Poplar Patrol was an interpretive program specifically developed for Kananaskis Country's Elbow District. This district had problems with people damaging poplar trees within the campgrounds. Campers were continually breaking branches off the trees, and chopping into the sides of trees. The Poplar Patrol led groups of kids through the campgrounds to teach them about trees. Under the guidance of an interpreter, the children visited campsites armed with paint brushes and tar. The children then went to work painting all the areas where branches were torn off and where there were axe marks. As the children worked around the campsites, campers would inevitably ask what they were doing, and the message was effectively passed on to the campers. This program was highly successful in three ways. First, the children developed a sense of ownership for the park through the work they had done. Second, the tar helped protect the scarred trees from disease. (Please note that use of tar is no longer a recommended horticultural technique.) Third, the number of trees damaged the following summer declined considerably.

Bear and Campers

During the mid-eighties, rangers from Peter Lougheed Provincial Park noted a significant rise in the number of bears frequenting the park campsites. These bears typically rummaged through food left unattended on picnic tables. Rather than distributing bear specific brochures to all park visitors (the majority of whom kept their campsites clean), the interpretive staff concentrated their efforts on their biggest concern - messy campers. The devised what they referred to as the "Bear Paw Program". As part of the rangers' daily patrols through the campgrounds, bear-paw-shaped cards containing a simple message from the bear's point of view, were left on tables of campers who left their campsite in an unsuitable manner. One year after the initiation of this

program, the number of problem campsites had decreased substantially.

Restricted Areas

In the early seventies, Dinosaur Provincial Park staff relied primarily on direct management methods to keep people out of fragile areas. Restricted area signs were posted in all fragile areas but the compliance was extremely low. Park managers felt that part of the problem was that the existing interpretive tours could not handle enough people. On some days, more than 800 people would sign up for interpretive bus tours, but the number of persons was limited to 80 per day. As a result, the solo interpretive staff member / tour bus driver decided that his time could be better spent in other ways, and he trained one of the rangers to operate the bus tour. The interpreter then began organizing a hiking tour of the area that took users into areas that were interesting and did not encroach on restricted areas. Results were nearly immediate. The number of visitors observed within restricted areas decreased nearly 90% in a matter of days.



- continued on page 12 -

Interpretive Education

- continued from page 11 -

The Bull Trout Crisis

In 1991, park researchers realized that only 30 breeding pairs of bull trout remained in Lower Kananaskis Lake in Peter Lougheed Provincial Park. The lake's bull trout had been pushed beyond their tolerance limits due to a combination of overfishing and the fluctuating water levels from the dam upstream (which decreases the numbers of small invertebrates, important food sources for bull trout). In response to this problem, Alberta Fish and Wildlife (AFW) introduced a strict catch and release program for bull trout in 1992. This was accompanied by a poster campaign highlighting the new fishing regulations and how to identify bull trout. To complement AFW's direct management techniques, the interpretive staff of Kananaskis made bull trout the highest profile management issue for 1992. An aggressive public education program was organized in response to this decision. Interpreters began a province-wide recognition program, promoting bull trout as Alberta's Provincial Fish. At the park level, all interpretive programs (hikes and presentations) incorporated information about the bull trout, and entire one hour evening programs were devoted exclusively to the species. Interpreters even pressured TransAlta, the provincial electrical company, to keep water levels stable during critical times

This highly organized campaign helped contribute to a nearly 100% compliance with the fishing regulation, a much greater level of compliance than typically observed where interpretive education programs are unavailable. In 1992, the number of constructed redds (spawning "nests", and an effective measure of the number of breeding females) was 32. The number of redds increased to 68 in 1993 and 187 in 1994.

A guided hike was created specifically to promote both the research and the success of the bull trout interpretive initiatives. This unique hike is extremely popular and takes visitors and school children directly to the location of the research. Once on-site, researchers and interpretive staff provide comments and answer

questions. Recent data from this on-going research study revealed nearly 1000 spawning bull trout heading toward the spawning grounds during the fall of 1997. The bull trout of Lower Kananaskis Lake are well on their way to becoming a recovery success story, thanks in part to an aggressive, well-organized interpretive education campaign complemented with a solid research base.

WHERE TO FROM HERE?

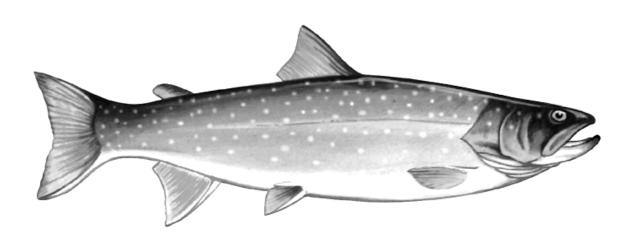
The examples above clearly show that interpretive education is capable of influencing the way people behave. However, in order for decision makers to fully support interpretative initiatives, further research is clearly required. This research should provide further evidence that interpretative education is effective and, particularly in times of fiscal constraint, how the benefits contribute to park management from an economic viewpoint. The development of research-interpretation partnerships holds a great deal of promise and these types of partnerships should be actively encouraged. Clearly, information gained through research is most valuable if it is shared with the public.

"Can parks realistically protect areas for future generations, while actively promoting their use and enjoyment by current generations?" I strongly believe they can and that interpretive education will play a significant role in achieving this goal.

ACKNOWLEDGEMENTS

I would like to thank the following staff from Kananaskis Country for providing me with excellent examples of interpretive education and its usage as a park management tool: Ron Chamney, Joel Christensen, Eric Kuhn, Claudette Landry and Scott Mair.

Robert Wolfe works with Corporate Management Service, Alberta Environmental Protection, Calgary, Alberta. Tel: (403)-297-5383.



Research Links Authors Index

				O. G.	0(0) 17
B	1(1) 0	G		Otway, Steve	3(2):17
Bailey, Renata et al.	1(1): 3	Galbraith, Paul A.	1(2):15	P	
Baker, Liz Banowetz, Michele	2(1): 1 4(3): 3	Galindo-Leal, Carlos	2(2):12	Pacas, Charlie	5(1): 7
Barnes, Suzanne	3(3):14	Garcia, Patrick F.J.	2(1): 3	Paetkau, David et al.	4(1): 1
Beach, Harry	3(3): 3	Gardner, James S.	4(1): 3	Parker, Brian R. et al.	3(3): 1
Bein, Peter	5(2): 3	Gibeau, Mike	2(1):14; 2(1):15	Pengelly, Ian	3(2):23
Benson, Patricia	1(2): 2; 2(1): 2;	Gilbride, David	3(2): 9	Penwarden, Hugh	2(3): 3; 3(1):10
	4(1): 2; 5(2):12;	Gourlay-Vallance, Janet	2(3):15	Pham, Anne-Marie	2(1): 4; 3(1): 7
	5(2): 2	Grill, Bob	2(3):15	Poll, David	2(2):15
Blyth, Charles	1(2):12;4(1):15;	**		Post, John R.	4(2): 2
	5(1): 8	H	0(0).10	Prenzel, Bjorn G et al.	4(2):19
Bradford, Wesley	2(2):10	Hallet, Douglas	3(3):12	O.D.	
Brewin, Kerry	4(2):23	Harmon, Dave Harrison, Gail	5(1): 4 5(3): 3	Q-R	2(2).16
Burles, Doug	1(1):12	Heathcott, Mark	3(2): 6; 3(2):14	Quenneville, Raymond Radford, Duane S.	3(2):16 5(2): 3
Burns, Shona	4(2):16	Hegmann, Sylvanna	1(2): 3	Rajora, Om P. et al.	4(1): 7
Burrows, Frank	4(3):13	Heitzmann, Roderik J.	1(2): 5; 2(3): 5;	Reader, Brian	4(2):18
С		1101231141111, 100 401111 01	4(1):15	Reynolds, Chris	2(3): 3
Campbell, Linda	4(3):11	Hems, David	3(1): 5	Rogeau, Marie-Pierre	3(2): 8
Campbell, Sandy	4(1): 3	Higgs, Eric	4(3): 8	Rollins, Jonathan	3(1): 1
Catt, Danny J	1(3):10	Hodgins, Doug	5(2): 8	Rollins, Rick et al.	1(3):12
Christy, Steve	2(1):13	Holliday, Barbara	3(3): 3		
Clark, Douglas	3(1):14			S	
Clarkson, Peter	1(1):14; 1(3):14;	I-J	0 (0) ~	Saurette, Evelyn	2(2): 7
	4(2): 8	Inglis, Pat et al.	3(3): 7	Schroeder, Erika	4(2): 3
Clevenger, Anthony	5(1): 1	Jamieson, Glen S.	5(2): 1	Scrimgeour, Garry J. et al	
Cook, Donna	5(2): 5	Jaques, Dennis et al.	1(2):11 3(3):13	Selleck, Jeff	2(3): 3
Cool, Norman L. et al.	1(2): 4	Jonker, Garland et al.	3(3).13	Snetsinger, Mary Alice Stuart, Richard	4(3): 5 2(3): 3
Cruden, David M.	4(1): 4	K		Sumpter, Ian	2(3):14
Czarnecki, Marzena	3(2): 2; 3(3): 2	Kay, Charles E.	3(2):20	Swinnerton, Guy S.	4(1):10
D		Klippenstein, Frieda	1(3): 4; 5(3): 6	5winiciton, day 5.	1(1).10
Darroch, Barbara A.	1(3):13	Krys, Sue	2(1): 5		
Davis, Perry	2(3):13	•		T-V	
Davis, Sandra B.M .	1(1): 2	L		Taylor, C.J.	1(2): 1; 2(3): 4;
Dibb, Alan	2(2): 4	Langemann, E. Gwyn	3(3): 4		5(1): 5
Dickinson, Anne	2(2): 1; 3(3): 5	Lauzon, Paul	1(1): 1; 2(2): 4;	Tremblay, Eric	4(3): 3
Dolan, Bill	5(2): 4	I D	3(1):10; 3(1):11	Van Tighem, Kevin	2(1):14; 2(2):11;
Donald, David B. et al.	1(3): 1	Leeson, Bruce	1(3):15; 5(1):14		4(2): 1
Dunn, Pat	4(3): 4	Lepitzki, Brenda	4(2): 3	Van Wagner, C.E.	3(2): 4
		Lepitzki, Dwayne AW Lieff, Bernie	5(1): 9 1(3): 2; 5(1): 2	Vandall, John	5(2): 3 1(3): 3
E	1.4(9), 4	Locke, Harvey	4(3):15	Vivian, Brian	1(3). 3
Elliott, Catherine T.J. et a Elverum, Carey	2(2):11; 3(3):11	Locke, Harvey	1(0).10	W-Y	
Evenum, Carey Evans, Simon	1(1): 4; 2(3): 1	M		Walker, Robert C.	3(2): 5; 3(2):18
Evans, Simon	1(1). 4, 2(3). 1	MacDonald, Graham	1(1):15; 2(1):10;	Weaver, Christopher	1(2):14
F		•	4(3): 1; 5(3): 1;	Westhaver, Alan et al.	3(2): 3
Fedje, Daryl	1(1): 5		5(3): 7	White, Cliff et al.	1(1):13; 1(3): 9
Feick, Jenny L.	2(1):11; 3(3):10	MacDonald, Ross	3(1):15	Wierchowski, Jack	3(2):22
Feick, Jenny et al.	1(1):10; 1(1):11	Magne, Martin	2(3):12; 3(3):15	Wiercinski, Mark	2(3): 3
Feniak, Christine	2(3): 7	Matthews, Jean	3(3): 3	Wilhelm, Frank M. et al.	
Finch, David	5(3): 5	Mayhood, Dave W.	4(2):21; 5(1):15	Willison, Martin	5(1): 3
Finlay, J. Cam	4(3): 3	McCauley, Edward	1(2):10	Willott, Dianne	4(1):14; 4(3): 2
Fish, Jeannette	3(1): 3	McIntosh, John Morris, Michael	2(2):14 3(1): 4	Wilson, Brendan	4(1): 5
Foisy, Luc	4(2): 3	Morrow, Casey	2(2):14	Wolfe, Robert Woodley, Stephen	5(3):11 3(2): 1
Francis, Peter D. Francis, Peter D. et al	2(3): 3 4(3): 7; 1(3):11	Munro, Neil	5(1): 3	Woods, John	2(2): 3
Fraser, Sandy	4(3): 7, 1(3):11 4(2): 5		- (-/-	Wynnobel, Cornell	2(3): 6
rasci, buildy	1(ω). υ	N-O		Yeo, Bill	5(3): 8; 1(2):13;
		Neufeld, David	2(3):11		2(2): 5
		rveulciu, Duviu	≈(0).11		$\omega(\omega)$. U

Research Links Subject/Key Word Index

Air Quality		Cultural Resource Management		Fire and Vegetation Management	
Should Campgrounds Have Campfires?	1(1): 3	Errata-Protecting National Collections		Guidelines and Principles	3(2): 3
		2(3): 7	3(1): 3	Fire, weather, and history	3(2): 4
Amphibians	0/0) 14	Editorial	2(3): 2	Science and Paradox	3(2): 5
Amphibian researchers rejoice!	3(3):14	Teaching cultural resource management	2(3): 6	Parks' Fire Information System	3(2): 6
The Need for Amphibian Monitoring in	4(2), 4	Protecting National Collections	2(3): 7	Sleuthing in the Mountain Parks	3(2): 8
Protected Areas	4(3): 4	A New Cultural Resource in the Yukon	2(3):11	Recent research	3(2):10
Aquatic Research		Replacement vs. Repair	2(3):15	Natural Region Highlights	3(2):12
Distribution of Lake Trout and Bull Trout		Replacement vs. Repair	2(3):15	Dean of Canadian Fire Behaviour Research	3(2):14
in the Mountain Parks	1(3): 1	The Bookrest Mine Claim Challenge	3(1): 3	The story of a prescribed burn in	0 (0) . 10
Organochlorine Pesticides in our Lake	2(2): 2	Preserving Resources at Neubergthal National	F(2), C	Eastern Canada	3(2):16
Aquatic Ecosystem Health in	-(-/-	Historic Site Stirling Village National Historic Site	5(3): 6 5(3): 7	Jasper wardens involve high school students in fire monitoring	3(2):17
Kootenay National Park	2(2): 4	What is Commemorative Integrity?	5(3): 8	Aboriginal Burning	3(2):17
Biotic Impoverishment	3(3): 1	what is Commemorative integrity:	3(3). 6	Fire Management: More than Fire Suppression	
Lakes Reveal Their Secrets	3(3):12	Cumulative effects		Pre-Columbian Human Ecology	3(2):20
Insects Hold Secret to Health	3(3):13	Editorial	1(3): 2	Same or Different?	3(2):22
Bull Trout and Aquatic Ecosystem Integrity	4(2): 1	Show-Down with the Evil	(- / -	Co-existing on a small planet	3(2):23
Editorial	4(2): 2	Seven: Banff National Park		Burning Bushes	3(3): 5
Mapping Kelp Forests in Barkley Sound	4(2): 4	Ecosystem Group Focus (1994-1998)	1(3): 9	ů .	
Preliminary study of Arctic Charr in	4(0) 5	Grizzly Bear Habitat - Endangered?	2(2):10	Fish	
Bluehill Pond	4(2): 5	Banff-Bow Valley: At the Crossroads	5(1): 7	Distribution of Lake Trout and Bull Trout in	
Life at the Top Harlequin Ducks	4(2): 7	Research Projects in the Banff-Bow		the Mountain Parks	1(3): 1
Harlequin Duck Research Statistics	4(2): 8 4(2): 9	Valley Area	5(1):10	Biotic Impoverishment	3(3): 1
Banff Water Under the Microscope	4(2):12	T 1 4 17 4 . W		Bull Trout and Aquatic Ecosystem Integrity	4(2): 1
Mountain Pine Beetle Ecology, Insight from	1(2).12	Ecological Integrity		Preliminary study of Arctic Charr in	4(0) 5
Lake Core Analysis	4(2):19	Montane Ecoregion: Banff's Key	1/1).10	Bluehill Pond	4(2): 5
Historical Transformation of the Fish	1(2).10	Ecosystem Management Challenge	1(1):13	Alerting Anglers Historical Transformation of the Fish	4(2):15
Fauna of the Central Canadian Rockies	4(2):21	Aquatic Ecosystem Health in Kootenay National Park	2(2): 4	Fauna of the Central Canadian Rockies	4(2):21
Catch-and-Release:		Ecological Integrity and Decision-making:	ω(ω). 4	Catch-and-Release: A Fisheries	4(2).21
A Fisheries Management Tool	4(2):23	Some examples from the Rocky Mountain		Management Tool	4(2):23
Toxaphene bioaccumulation in		National Parks	5(1):14	Whirling Disease Task Force	1(2).20
Bow Lake	4(3):11	Personal Profile	1(1):13	Announced in Alberta	5(2): 3
		An Outside-in View of	1(1).10	i i i i i i i i i i i i i i i i i i i	0(2).0
Archaeology		Park Management	1(2):15	Genetic research	
Gwaii Haanas: Archaeology and Palaeoecology	1(1): 5	Show-Down with the Evil	. ,	DNA Fingerprinting	4(1): 1
Uncovering the Past at the Bar U Ranch	1(2): 5	Seven: Banff National Park		Pine and Spruce Species and their Hybrids	
Reports: Archaeological Services	1(2):14	Ecosystem Group Focus (1994-1998)	1(3): 9	Provide Gene-Pool Information	4(1): 7
Archaeological Investigations in the High Country of Banff National Park	1/2), 2	Ecological Research Group Formed	2(2): 3		
Archaeological Fieldwork at	1(3): 3	Pukaskwa National Park's Ecosystem		GIS	
Ya-Ha-Tinda	1(3):11	Conservation Plan	4(3):13	Using Satellite Imagery Analysis to	
Evidence for Early Post-glacial Hunters in	1(3).11	Changes in Parks Canada: What is an	T (0) 0		1(2):11
Jasper National Park	2(3): 3	Ecosystem Secretariat?	5(2): 8	Mapping Kelp Forests in Barkley Sound	4(2): 4
Mysterious Graves	2(3): 5	Ecosystem management Reports:	1/1/ 14	al t	
Perplexing Housepits in Banff:	2(0). 0	Natural Resources	1(1):14	Glaciers	
who made them and why?	2(3):12	Ecosystems		An Overdue Clean-up at	3(1): 3
Startling Discoveries at Fort Langley	2(3):12	Individual-based Models of		Saskatchewan Glacier 30 years of research on Peyto Glacier	4(2):17
Bankhead's Staircase to Nowhere	2(3):13	Ecological Systems	1(2):10	30 years of research off reyto Gracier	4(2).17
Discoveries on the Pacific Coast	2(3):14	Using Satellite Imagery Analysis to	1(2).10	Heritage rivers	
Innovation at Motherwell Homestead	3(1): 5	Depict Coastal Ecosystems	1(2):11	Flowing into the Future	4(2):18
Cultural Depressions	3(3): 4	What are Ecosystem Health and Integrity	5(2):14	Touring Canada's Treasures	4(1):14
Protecting the Past	3(3):15	Bernard Charles (Bernie) Lieff	5(3): 3	8	. , .
The Jasper Archaeology Field School:				Highway	
Parks Canada and the University of Alberta	4(0) 7	Education		Highway Effects on Wildlife in	
form a Partnership	4(3): 7	Earthwatch Expedition	1(1):11	Banff National Park: A Research,	
Book reviews		The Fight with the Kicking Horse		Monitoring and Adaptive	
Wildlife Research and Management in		River - und der Fluss Siegte Doch!	1(2):14	Mitigation Program	5(1): 1
the National Parks	2(1):10	Teaching cultural resource management	2(3): 6	TT* .	
Stewardship essays inspire and provoke	2(2):14	Our Science, Their Education	3(1): 3	History The Bar U Community during the 1890s	1/1). 4
Appetizer of a book doesn't fill you up	3(1):14	1996 Biodiversity Protocols Course	4(2):17	Place names and Myths of Gwaii Haanas	1(1): 4 1(2): 1
Touring Canada's Treasures	4(1):14	Overview Parks Canada Research Adventures	5(2): 5	Preserving Oral History at Fort St. James	1(2): 1
Park Prisoners: Historical Account of		Silva Forest Foundation	5(2):10	Victorian science in Canada's first	1(0). 4
internment camps is more than a		Interpretive Education: An Under-rated	0(2):10	national park	2(2): 5
documentary	4(3): 1	Element of Park Management?	5(3):11	Horse Days at the Cow Ranch	2(3): 1
		8	- (-)-	Science and History at Elk Island	2(3): 3
Communication	0/1) 15	Environmental Assessment		Cultural Landscapes	2(3): 4
Communicating research crucial	3(1):15	Environmental Assessment:		Bankhead's Staircase to Nowhere	2(3):13
Editorial	4(3): 2	Talk to My Lawyer	1(3):15	Sleuthing in the Mountain Parks	3(2): 8
Conferences		NRCB Westcastle Decision Released	2(1):14	Oral Histories: Preserving Stories of the Past	
Third International Mining				Historians of the World, Unite!	3(3): 3
History Conference	2(2): 2	Environmental Citizenship	0/1) 0	Park Prisoners: Historical Account of	
History Comerence Historians of the World, Unite!	3(3): 3	An Overdue Clean-up at Saskatchewan Glacier	3(1): 3	internment camps is more	4(9): 1
Editorial	4(1): 2	Environmental Stamondahin		than a documentary	4(3): 1
SAMPA III	4(2):22	Environmental Stewardship Grass Roots Action in Yoho National Park	2(1):13	Exploring the Past: Travelers' Journals and Bog Cores	4(3): 5
Editorial	5(1): 2	Greening the Canada Games	2(2):14	Telling the Untold	4(3): 3
The West Welcomes SAMPA III	5(1): 3	Chemical-free gardens flourish at	≈(≈).1T	Defining National Parks: JB Harkin and	1(0). 1
SAMPA logo	5(1): 3	Wasagaming townsite	3(1):10	the National Parks Branch	5(1): 5
SAMPA III Wrap-up	5(2):12	0	,		- (-). 0
The Canadian Cowboy	5(3): 1	Ethics		International	
		Ethics and Wildlife Biology	2(1):15	Protected Landscapes: The British Experience	4(1):10
Contaminated sites		₩	•		4(1):11
Contaminated Sites: Yesterday's	1(9).19	Fire		· ·	
Solution/Today's Problem	1(2):13	Should Campgrounds Have Campfires?	1(1): 3	Interpretation	
Contaminated Sites Program:		Fire Management and Bird Communities	1(3):10	Reaching the Urban Constituency:	4 (4) :-
Environmental Decommissioning of Beban Camp	2(1): 1	Fire in Protected Areas	3(2): 1	Reasons for City-based park interpretation	1(1):15
Debuit Cump	~(1). 1	Editorial The Western Fire Management Centres	3(2): 2		
		The Western Fire Management Centre:	2(2), 2		
		development and implementation	3(2): 3		

Research Links Subject/Key Word Index - continued -

Joint Ventures	. 4(0) 0	Prairie Alberta Prairie Conservation		Toxic chemicals Contaminated Sites: Yesterday's	
The Culture, Ecology and Restoration Projec	t 4(3): 8	Action Plan (1996-2000)	5(2): 4	Solution/Today's Problem	1(2):13
Landscape Changes Transformed landscape patterns:		Profiles		Contaminated Sites Program: Environmental Decommissioning	
Cutting Edge Research	2(2):12	Personal Profile	1(1):13	of Beban Camp	2(1): 1
		Ecosystem Management Specialists	1(2): 8	Organochlorine Pesticides in our Lake	2(2): 2
Managing Change Critical Issues for the next Century	4(1):15	Victorian science in Canada's first national park	2(2): 5	Toxaphene bioaccumulation in Bow Lake	4(3):11
Critical Issues for the next Century	4(1):15	Meet the Western Parks' Wildlife Specialists	2(2): 8	Universities	
,		Natural Region Highlights	3(2):12	Links with Post-secondary institutions	3(3): 8
Maps	4(1), 9	Dean of Canadian Fire Behaviour Research University of Alberta	3(2):14 4(1): 8	Editorial	4(1): 2
On the Map	4(1): 3	Hello, Good-bye	4(2): 3	Vegetation	
Marine research		Errata - University of Alberta 4(1): 8	4(2): 3	Shrub Layer Dynamics: Elk Island National Park	1(0).10
Dungeness Crab in and around Pacific Rim National Park Reserve	E(9), 1	Defining National Parks: JB Harkin and the National Parks Branch	5(1): 5	Reclaiming Disturbed Sites: Release of	1(2):12
National Park Reserve	5(2): 1	Remembering Tanya Rintoul	5(2):10	AEC Highlander Wheatgrass	1(3):13
Monitoring		Bernard Charles (Bernie) Lieff	5(3): 3	Sowing the Seeds of the Past Banff's modeling system:	2(2): 1
Laskeek Bay Conservation Society: Volunteers Carrying Out Scientific Research	1(1):12	Protected Areas		predicting effects of disturbance	3(2): 9
Shrub Layer Dynamics: Elk Island	1(1).12	Do Protected Areas Work	5(1):15	Burning Bushes	3(3): 5
National Park	1(2):12	Dall at		Dynamics of Alpine Larch at the Timberline	4(1): 5
Jasper wardens involve high school students in fire monitoring	2(9).17	Publications Reports: Natural Resources	1(1):14	Pine and Spruce Species and their Hybrids Provide Gene-Pool Information	4(1): 7
Biodiversity Protocols	3(2):17 4(2):16	Reports: Archaeological Services	1(2):14	,	-(-/
The Need for Amphibian Monitoring		Reports: Strategic Information Division	1(3):14	Videos	0(0). 0
in Protected Areas	4(3): 4	Jasper National Park's Eco Library Reports: Socio-economic research	2(2): 4 2(2):15	Guest lecturer Video Series Guest lecturer Video Series	2(3): 6 4(1):13
Ecological Monitoring in the National Parks of the North	5(1): 8	Occasional Papers	3(1):12	dust rectard viaco series	1(1).10
		Describber of		Visitor survey	
Organizations World Wildlife Fund Releases		Ranching The Bar U Community during the 1890s	1(1): 4	Managing for Wilderness on the West Coast Trail: A Case Study of	
Endangered Spaces Report	1(3): 5	Uncovering the Past at the Bar U Ranch	1(2): 5	Social Science and Resource Management	1(3):12
Ecological Research Group Formed	2(2): 3	Horse Days at the Cow Ranch Oral Histories: Preserving Stories of the Past	2(3): 1 3(3): 3	Measuring Client Satisfaction in Alberta and British Columbia	
The Aldo Leopold Wilderness Research Institute, University of Montana, USA	4(3): 3	The Canadian Cowboy	5(3): 1	National Park Campgrounds	2(1): 4
The Legacy of George Wright	5(1): 4	Romancing the Dudes	5(3): 5	Mount Edith Cavell 1993	0 (0) 0
The George Wright Society	5(1): 4	Regulatory review		Visitor Survey Summary Do Parks Canada messages have effect?	2(2): 2 2(2): 4
Research Links Receives Award From National Organization	5(2): 3	NRCB Westcastle Decision Released	2(1):14	Crowded in Jasper	3(1):10
Silva Forest Foundation	5(2):10			Happy in Banff?	3(1):11
D-ll		Research Links Editorial	1(1): 2	Volunteers	
Palaoecology Gwaii Haanas: Archaeology		Editorial	1(2): 2	Earthwatch Expedition	1(1):11
and Palaeoecology	1(1): 5	Editorial	2(1): 2	Laskeek Bay Conservation Society:	1/1).10
Exploring the Past: Travelers' Journals and Bog Cores	4(3): 5	Editorial Editorial	3(1): 2 3(1): 3	Volunteers Carrying Out Scientific Research The Fight with the Kicking Horse	1(1):12
Lakes Reveal Their Secrets	3(3):12	Hello, Good-bye	4(2): 3	River - und der Fluss Siegte Doch!	1(2):14
Mountain Pine Beetle Ecology, Insight		Expanding Our Focus Research Links Submission Guidelines	4(2): 3 5(2):12	Wildlife	
from Lake Core Analysis	4(2):19	Research Links Submission Guidennes	J(2).12	Harlequin Duck	1(1):14
Park Management		Restoration		Identifying Stressed Wapiti and Moose	1(2): 4
An Outside-in View of Park Management	1(2):15	Reclaiming Disturbed Sites: Release of AEC Highlander Wheatgrass	1(3):13	Fire Management and Bird Communities Harlequin Duck Update	1(3):10 1(3):14
Editorial Critical Issues for the next Century	3(3): 2 4(1):15	Sowing the Seeds of the Past	2(2): 1	Research on Bat Activities and Habitat	2(1): 3
Critical Issues for the next Century	4(1):15	G 13		Of Bugs and Bears	2(1):14
Pukaskwa National Park's Ecosystem	4(0).10	Snail The Status and Distribution of		Ethics and Wildlife Biology Grizzly Bear Habitat - Endangered?	2(1):15 2(2):10
Conservation Plan National Parks at a Turning Point	4(3):13 4(3):15	Physella johnsoni, the Rare Endemic		Deer Movements in Elk Island National Park	2(2):10
Ecological Integrity and Decision-making:	(-/-	Banff Springs Snail	5(1): 9	Emigrating Sheet	2(2):10
Some examples from the Rocky Mountain National Parks	5(1):14	Social Research		Coyotes in Urban Habitats International Wolf Project	2(2):10 2(2):11
Parks Canada Agency	5(2): 2	Vermilion Lakes Visitor Survey:		Charging Elk	2(2):11
Parks Canada Reorganization	5(2): 2	Asking First Saves Regrets	1(1): 1	Carnivore conservation a crucial issue	2(2):15
Changes in Parks Canada: What is an Ecosystem Secretariat?	5(2): 8	Canadian Attitudes Towards our National Park	1(2): 3	In the footsteps of the caribou One Bear's Story	3(1): 4 3(3):11
Field unit Superintendents in	3(2). 6	Reports: Strategic Information Division	1(3):14	DNA Fingerprinting	4(1): 1
Western Canada	5(2): 9	Reports: Socio-economic research Quota/Reservation Systems	2(2):15 5(2):10	Wolf/coyote photo - errata Harlequin Ducks	4(1): 3 4(2): 8
Interpretive Education: An Under-rated Element of Park Management?	5(3):11	Quota/Reservation Systems	3(2).10	Harlequin Ducks Harlequin Duck Research Statistics	4(2): 9
· ·	0(0).11	Sustainable Communities		Highway Effects on Wildlife in Banff	
Partnerships	0(0). 4	Revelstoke's Vision: Will It Help Achieve Sustainable Development?	1(1):10	National Park: A Research, Monitoring and Adaptive Mitigation Program	5(1): 1
Jasper National Park's Eco Library Links with Post-secondary institutions	2(2): 4 3(3): 8	Studying Sustainable Development in Action	2(1):11	and Malphive Midgation Program	0(1). 1
Protected Landscapes:		Sustainability or Status Quo?	3(3):10		
The British Experience The Jasper Archaeology Field School:	4(1):10	Sustainable Development			
Parks Canada and the University		Taking a Change Toward a Better Solution	2(1): 5		
of Alberta form a Partnership	4(3): 7	Waste Stream Analysis helps Jasper recycle Responsible Power Source	2(2): 7 3(3): 7		
Performance Measurement		•	J(J). 1		
Measuring Performance	3(1): 7	Sustainable Management Banff Bow Vallay: At the Crossroads	5(1). 7		
Physical sciences		Banff-Bow Valley: At the Crossroads	5(1): 7		
Caves of the Rocky Mountains	3(1): 1	Tourism	F (0) F		
Unstable Ground	4(1): 4	Parks Canada Research Adventures	5(2): 5		
Policy					
Policies and Partnerships	4(1):10				



Research Links Fall 1997 Volume 5 • Issue 3

EDITORIAL BOARD

Gail Harrison **Ecosystem Services** Western Canada Service Centre

Graham MacDonald Project Historian Cultural Resource Management Western Canada Service Centre

John McIntosh

Ecosystem Management Specialist Pacific Rim National Park Reserve

Lawrence Harder

Professor Biological Sciences University of Calgary

PRODUCTION

Dianne Willott **Production Editor**

> Dean Parker Graphic Artist

EDITOR, PARKS CANADA

Patricia Benson Research and Information Specialist Parks Canada, Calgary

WRITE TO

Research Links Parks Canada #520, 220-4 Ave. SE Calgary, AB T2G 4X3

Internet Address RESEARCH_LINKS@ PCH.GC.CA

MEETINGS OF INTEREST

February 19-20, 1998

Landscape Management for Pacific Northwest Forests: Exploring **Techniques and Tools, A Workshop for Practitioners.** Olympia, Washington. The Washington State Timber/Fish/Wildlife Program and others are organizing a workshop to close the gap between the theory of conservation biology and the practice of landscape management. This workshop will bring together land managers, modelers, theorists and others who share an interest in conservation planning on working landscapes. The workshop is to be interactive and will concentrate on computer demonstrations and posters, supplemented with oral presentations. A synthesis of final papaers will be published as two chapters in "Wildlife Habitats and Species Associations of Oregon and Washington—Building a Common Understanding for Management." Contact: Timothy Quinn or David Johnson, Washington Department of Fish and Wildlife, 600 Capitol Way North, Olympia, WA 98501-1091; Tel: (360)902-2414/2603; e-mail: quinntq@dfw.wa.gov or johnsdhj@dfw.wa.gov

August 30-September 3, 1998

Community-based Integrated Coastal Management—Sharing our **Experience—Building our Knowledge.** Coastal Zone Canada '98. (CZC'98) Victoria, BC. CZC'98 will build on the results of the first two CZC conferences (1994 and 1996), and create a working forum where a broad cross-section of stakeholders in the coastal zone will define issues, share experiences and identify the range of alternatives for addressing Integrated Coastal management at the community level. Interactive workshops, round tables and some not-so-traditional communication sessions. Sessions will be supported by technical papers, posters and outreach and training opportunities. Representatives of community groups, resource harvesters, First Nations, international agencies, government organizations, natural and social scientists, landowners, business people, and other interested people are welcome. Contact: Coastal Zone Canada '98 c/o Institute of Ocean Sciences, 9860 West Saanich Road, Sidney, BC. V8L 4B2. Fax: (604)363-6479; e-mail: czc98@ios.bc.ca; website: http://www.ios.bc.ca/ czc98.html

Wilderness Science in a Time of Change. Missoula Montana. This conference will present research results and synthesize knowledge and its management implications. This conference should result in a stateof-the-art understanding of wilderness related research. It will also improve our understanding of how research can contribute to the protection of wilderness in the 21st century. Considerable attention will be devoted to the ever-changing role of wilderness in society and the need to better integrate diverse social and biophysical sciences. Plenary sessions will explore: the values of the transactions between science and wilderness, the need to precisely define "wilderness" so scientific process can be effectively applied to wilderness management, the implications of increasing technological development and external pressures. For information contact: Natural Resources Management Division, Centre for Continuing Education, The University of Montana, Missoul, MT 59812. Tel: (406)243-4623 or (888)254-

May 17-22, 1999



2544; e-mail: ckelly@selway.umt.edu