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FIELD JOURNAL

Spring/Summer 2004

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Northwest Connections is a non-profit organization working to involve local people and students in the conservation and restoration of habitat linkages across rural landscapes in northwest Montana.

Local Opportunities on Grizzly Project

During the summer of 2004, crews will be working across the entire Northern Continental Divide Ecosystem — from Canada to Lincoln, from Choteau to Polson — to assess the resident grizzly bear population. Northwest Connections has hired a number of local people and we're now looking for volunteers to assist with this important project.

Like other DNA-based wildlife monitoring efforts, this project requires that crews navigate to predetermined sites, set up a one-strand corral of barbed wire, put a scent lure in the middle, and return two weeks later to collect hairs left on the barbed wire when bears pass through to investigate the scent. Crews will also be collecting hair from natural bear rub trees that had short strands of wire affixed to them last year. All of the hair samples will then be sent to a genetics lab and analyzed for identity, sex, and relatedness to other bears. The results will include a minimum count of bears, a population estimate and a map showing the distribution of grizzly bears across the ecosystem.

The US Geological Survey, the lead

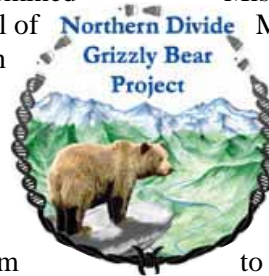
organization on this project, has taken the creative approach of partnering with a non-profit wildlife monitoring group such as Northwest Connections. By doing so, the project is able to involve people with local knowledge of the land and the wildlife in ways that otherwise would be impossible.

In addition to hiring NwC staff such as Tom Parker and Steve Lamar as leaders on the project, we've been able to hire local residents in the Swan, Blackfoot and

Mission Valleys as field crew members.

Many of these crew members are young people with years of outdoor experience and a strong interest in wildlife conservation. "My dad's a dairy farmer here, and we have grizzly bears come down across our place all the time. I'm excited to get a chance to work on a project like this," say Emily Schock of St. Ignatius.

Now, the project is looking for local volunteers. We need people to assist with logistics — moving gear around by car, horse and foot. We also need some avid hikers to get trained on retrieval of hair from rub trees and sign up to 'adopt a trail.' Anyone interested in these and other volunteer opportunities should call us at 754-3185.



NwC Receives 2004 Wildlife Conservation Award from The Wildlife Society's Montana Chapter

"We are grateful that so many diverse people and agencies have been willing to support and work with us," said Tom Parker, NwC Conservation Program Director, who accepted the award at the February 25th Bozeman, Montana ceremony.

The award is given to recognize an organization who makes a significant contribution to wildlife in the state. It was presented at the annual meeting of the Wildlife Society, which this year was organized around the theme of restoration ecology.

Lessons from Savannah

By Melanie Parker

Northwest Connections grew out of a need for local knowledge to be integrated into wildlife and land management decisions. We saw the potential for rural citizens to be partners in, not victims of, environmental conservation. We saw young people graduating from conservation-related degrees with little or no knowledge of natural history and field ecology and almost no appreciation for rural livelihoods. We set about to develop conservation and education programs to meet these needs.



Last Fall, I was invited to attend a meeting on collaborative natural resource management (CNRM) held in Savannah, Georgia. How amazing it was to encounter groups from across North America and Africa with similar stories to tell! The event brought together practitioners from two continents to share decades of learning. It was a rare opportunity to look at our own work at Northwest Connections in the context of a global movement to develop – or redevelop – cultures of environmental stewardship.

We heard from fishermen in Canada working collectively to monitor and set harvest limits on their fishery in Nova Scotia. We heard from private landowners in Namibia working cooperatively to manage wildlife

habitat and set harvest quotas for safari hunting on their lands. We heard about collaboration among private and public landowners to put fire back onto the grasslands of New Mexico, and we heard from villages in Tanzania whose communal land management was having a better net effect on wildlife populations than adjoining national park management.

From all of the stories and discussions, I resolved three take home messages for this place in which I live and work. First, in the Northern Rockies, trees are not the only asset on which we should be banking a restoration economy, and yet mostly what you hear our communities talk about are wood-based economic strategies. But, with our short growing season, and arid conditions, trees are likely not the highest value (economically or culturally) natural resource we have. We are much more like our friends in southern Africa than like our friends in coastal Oregon and Washington in this respect.

In the Northern Rockies, *wildlife* is a greatly overlooked asset. We have wildlife species here – grizzly bears, wolves, cougar, lynx, elk, and many others -- that have become

"We have wildlife species here... that have become a rarity across the rest of the nation..."

a rarity across the rest of the nation and therefore have values for both consumptive and non-consumptive uses that are quite high.

We need to increase the ability of our rural communities to reap the benefits from these high value assets, rather than being the economic victims of wildlife conservation. There are many opportunities for Northwest Connections to take a leadership role in these kinds of changes in the years to come.

Second, we need new forms of land

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Perspectives: Weasels, Salamanders & the Limits of Science

by Tom Parker

This last fall, I had two experiences, that upon reflection, underscore for me the problems with traditional science and its understanding of nature.

While guiding hunters in the Swan Valley, a landscape across which I have guided and lived for over a quarter of a century, I came across an unusual sight. It was a cold, windy, mid-November day in the middle of a hard-hitting fall storm. There was close to eighteen inches of snow on the ridge where we were hunting. Glancing down, I spotted a lone long toed salamander crawling across the surface of the snow pack crossing an exposed road cut. Its moist skin was covered with golden larch needles, which were being blown out of the trees by gusts of wind. I took a photo to document this rarity and then



moved on.

A few days later, we had a beautiful bluebird day, the kind that's not much good for hunting, but lends itself to quiet appreciation of the beauty and magnificence of the Swan Valley. My hunters were interested in visiting Holland Lake, so we quit hunting early and drove to the outlet to hike along the lakeshore. The water was as smooth as glass. Something moving across the surface of the water caught my eye.

At first I wondered, is this some small diving duck? No, I thought, the movement isn't right. It almost looked to be some sort of motorized child's toy, with its steady pace and trajectory. The little critter was crossing the width of the lake and it was hard to fathom just what it could be. Taking out my binoculars and resolving the image, I realized that this was a short-tailed weasel, swimming like mad across the icy-cold waters. I had never seen a weasel swimming like this, and the sight did not at all conform to my expectations. The weasel was incredibly buoyant in the water, and for a critter with spindly legs and feet, its speed was remarkable. Hmm...*salamanders on snow and weasels on water.*

I had the feeling that there was some deeper lesson I was meant to comprehend. These were important observations, yet they may seem meaningless to a mind that is trained to look for trends, to find occurrences that are statistically significant. I thought about this day in and day out, how these two experiences were like so many others that I have had. Observations that I and others have made about animal behavior and ecology that did not conform to the accepted scientific understanding of these creatures and so were often dismissed.

This recurring experience underscores for me the need for new disciplines of ecology that appreciate the full, interconnected natural history of place, and honor and acknowledge the unique as well as the norm.

About two months later, while guiding a group of university students on a winter range survey, they told me of Christine Schonewald, a geneticist who has come to exactly the same conclusion. As a geneticist, she recognizes that it is the bizarre, uniquely adapted individuals that chart whole new genetic paths and

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(Weasels, Salamanders – Continued from page 3)

therefore buffer a species' resilience. Her critique of contemporary scientific processes is sharp, arguing that our search for statistical norms, by design, ignores those aspects of ecology that likely drive change and adaptation.

Reflecting on all of this, it is marvelous to consider that I might have been privileged to witness several individuals who contain the genetic material necessary for the future of their species in a dramatically changing world. A long distance swimming weasel, a blizzard braving salamander. They may hold not only the key to their own species' survival, but to that of others, including human beings.

Even seemingly small and insignificant insights into the complex and diverse ecology – made collectively and individually – adjust our notion of both the power and the limitations of the available science as it relates to nature and ecology. Our understanding of natural systems, particularly ecological interrelationships, are on average far less developed than they should be. This is why in the presence and application of the best available science we continue to rapidly collapse the primary foundations of our natural systems.

NwC Staff @:

Tom Parker will participate as a panel member at University of Montana's 2004 Public Lands Conference, "Science & Democracy in Public Lands Conflicts: Forests, Fish and Fires". The event will be held September 28th thru October 1st in Missoula, Montana.

(Lessons from Savannah – Continued from page 2)

tenure in the United States. This is one of the core issues that we locally based watershed initiatives have been hitting up against for some time now.

This is because ecological processes mostly operate on a scale that neither small private landowners, nor national scale public lands can meaningfully address. Processes like fire and flood typically operate on a scale that is difficult to address by aggregating decisions on small private lands (unless you are, perhaps, Ted Turner). They are equally difficult to address, and become mere abstractions, when looked at from a scale that is far too large to appreciate variations across the landscape. Witness a congressional hearing where members debate the appropriate diameter limit for trees cut on national forests. Place-based conservation practitioners know that the answer to issues such as this almost always come down to 'it depends.' Watershed scale ecological processes require watershed scale management.

Fortunately, we have an amazing opportunity to experiment with new ideas right now in this country. With corporate timber companies like Plum Creek Timber Co. divesting of significant portions of their ownership, we may be able to obtain lands in and around watersheds with years of experience in collaborative management, and put into place communal ownership areas that blend the best of public lands management, with the best of private lands management. I came home excited for the opportunities facing places like the Blackfoot and Swan Valleys of Montana, and the innovations upon which we are about to embark.

Finally, I realized that the strength of our movement is that it is rooted in the real needs of specific places. We are bottom up, not top down. We are more practice than theory based. In doing our work, we bump into common economic and political obstacles that have to be addressed, and so we gather together in nation or state capitols to address these problems. Such problems may be centralized, but the solutions are always place-based. And so it was that I was happy to go to Savannah, share stories and identify common issues, but it was with a happier heart that I returned home to put my newfound insights to work here in the Northern Rockies.

Proceedings from "Turning Natural Resources into Assets" held in Savannah, Georgia can be found at: <http://www.sandcounty.net>.

Field Notes: *A Unique Discovery* by Zach Wallace

On an early September backpacking trip in Montana's Swan Range, the students and instructors of the Northwest Connections Landscape and Livelihood field semester encountered four whitebark pine trees with tall oval-shaped scars in their bark. At first we assumed the incisions to be the past work of hungry bears, as bear-stripped trees of several species were a common sight on our trip. The oval uniform shape of the scars, however, led us to look closer. In place of the typical pattern of vertical tooth marks, we found precise incisions at the bases of the scars: the evidence of tool use. The height and shape of the scars combined with the fact that the trees were located along a historic Native American trail, led us to conclude that we had found a unique example of "cultural scarring" - the peeling of bark for food practiced by some tribes. To our knowledge, this is the first ever documentation of such Native American activity in high elevation whitebark pine forests.



Pointing out tool marks at the base of one tree.

The trail on which the trees are located leads over the Swan front into what is now the Bob Marshall Wilderness. Northwest Connections' co-founder Tom Parker learned of the trail from the late Joe Wilhelm, a lifetime resident of the Swan Valley, a knowledgeable



A field semester student helps document this "culturally scarred" whitebark pine tree

woodsman and a mentor to Mr. Parker. Wilhelm, who possessed a photographic memory, traced the trail in the early part of the last century with his brother-in-law Russ Haasch. Parker retraced the route himself in the late 1970's. The field semester students follow a portion of the trail each year both to appreciate the historical human presence in the wilderness area, and to comprehend the skill and courage of native people in their navigation of the trail's winding route and harrowing descents. The trail was likely used by the Flathead people on their way to hunt buffalo on the prairie. It may have been used in the early summer, after spring snowmelt rendered its steep path navigable.

The peeled trees are located in a lake basin along the trail. All four of the trees, now dead or nearly dead, display similar 5 to 6 foot tall, 8 to 12 inch wide, oval-shaped scars.

(Continued on page 6)

Intriguing Information

by Steve Lamar



According to wildlife biologist and writer Doug Chadwick in his new book, True Grizz, the army cutworm moth is “the richest source of energy a grizzly can tap in the ecosystem.” He states that when the moths migrate from the prairies to the tops of the mountains they are 40% fat. After feeding all summer on plant sugars, these insects with jelly bean sized abdomens become nearly 75% fat. Grizzly bears converge on the crests of the mountains to lick up congregations of army cutworm moths. Chadwick states, “Pound for pound, these nougats provide more calories than roots, berries, nuts, or, for that matter, straight red meat.”

The McDonald Peak area, in the Tribal Mission Mountain Wilderness, is a known army cutworm moth feeding area for grizzly bears. This large area has a seasonal closure to humans so that the bears can feed without disturbance.

Another rich source of energy for the grizzly bear are whitebark pine seeds, commonly called “pine nuts”. These seeds can contain 50 to 60% fat and historically were a major late summer and early fall food source for the bear before denning for the winter. Due to a variety of factors, including disease, insects, and fire suppression, the numbers of whitebark pine trees have been severely reduced.

The Wildlands Volunteer Corp, a program of Northwest Connections, planted 2000 whitebark pine seedlings in the Jewel Basin area of the Swan Range in 2003.

(Field Notes — Continued from page 5)

Tool marks are visible at the bases of the scars where native people cut into the bark, peeling it upwards to access the sweet inner cambium layer for food. The trees are between 10 and 20 inches in diameter and are part of a stand suffering high mortality from white pine blister rust and recent mountain pine beetle activity.

Towards the end of the field semester, while completing my final independent study project on whitebark pine, I encountered several bear peeled trees in lake basins along the Swan front. I also read documentation of other tree species being peeled as a source of food by native peoples all over the world, including in Northwestern Montana. However, to my knowledge, these scarred trees may be the first evidence of the cultural use of whitebark pine. As a brief visitor to Montana, and a new student of whitebark pine ecology, it was fascinating and exciting to discover yet another dimension to the ecological and cultural value of these extraordinary high elevation forests.

Zach Wallace was a Landscape & Livelihood student in the fall of 2003. He wrote this for the Whitebark Pine Ecosystem Foundation as part of his Independent Study.

It's time to say THANK YOU!

We had a great response to our wish list last fall. Thanks so much for helping to supply our office and field crews. Thanks to

**Steve Sulser
Dan Holland
Peter Pronko
Paul Osting
Gary and Deanna Palm**

It's also time to say thanks to **Maureen (Mo) Hartmann** who came on last fall as NwC's Landscape and Livelihood intern. Mo has stayed in Swan Valley through winter/spring working on her Master's Thesis in Environmental Studies. Thanks Mo, you're the best!

Events Calendar

Volunteer Trackers Mtg.

May 18

Bear Information Night

May 26

Wildlands Volunteer Corps

Amphibian Surveys

June 21-25

Whitebark Pine Monitoring

August 8-14

Board Meeting & BBQ

July 23

Wetlands Workshop

July 29

Landscape and Livelihood

Field Semester

August 30 - October 27

Community Firewood Day

September 25

Wild Game Feast

December 4

Call us for more information
on these and other events.

406.754.3185

Wish List

Digital Projector

Filing Cabinet

4x4 Passenger Vehicle

Adobe PageMaker Software

GPS Photo Link Software

Hip Waders

Mountain Bikes

Surveyor's Rod and Transit



Yes, I want to support Northwest
Connections' efforts in community
based conservation and education.

I'm sending ...

to be used for...

\$10

Monitoring and

\$25

Restoration

\$50

Education

\$100

Community Involvement

\$500

\$1,000

General Support

P.O. Box 1309

Swan Valley, Montana 59826

nwc@montana.com

www.northwestconnections.org



P.O. Box 1309
Swan Valley, Montana 59826
(406) 754-3185 ph/fax
nwc@montana.com
www.northwestconnections.org



All things are
connected:
the land,
the animals
and
the people.

