Camas

Volume 6 Number 2 *Spring 2003*

Article 1

Spring 2003

Camas, Spring 2003

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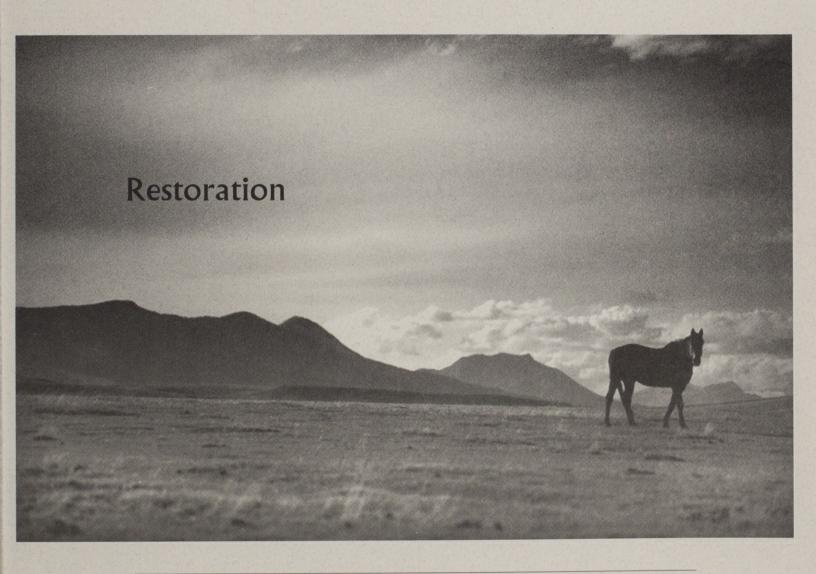
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Camas



Kathy Marieb

Katharine Hyzy

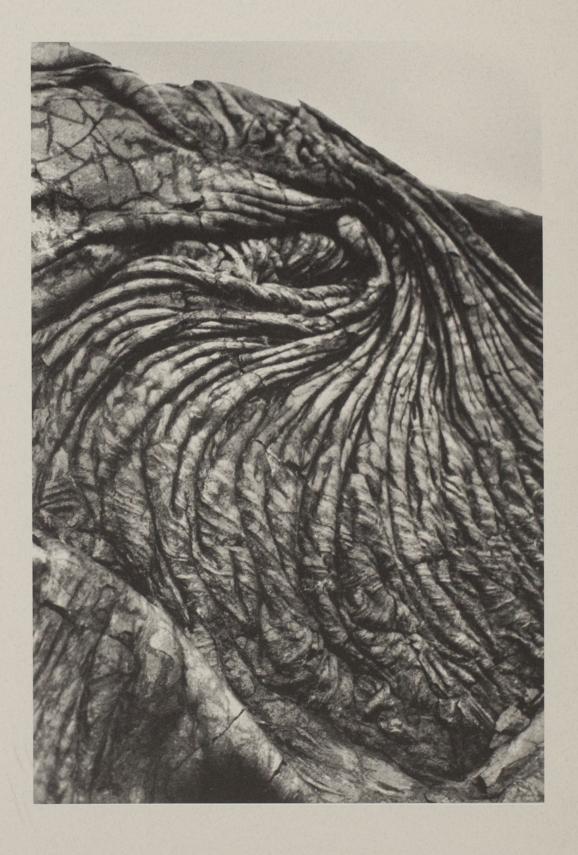
Poetry by Kim Stafford

spring 2003

volume 6 number 2

three dollars

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The Restoration Issue

Spring 2003



I turn to watch Bill and the man, bobbing up and down over small wind waves. Their weathered skin, their gray blond hair, they have become driftwood.

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Features

Snaring Ghosts

Kathy Marieb looks for grizzlies in the North Cascades

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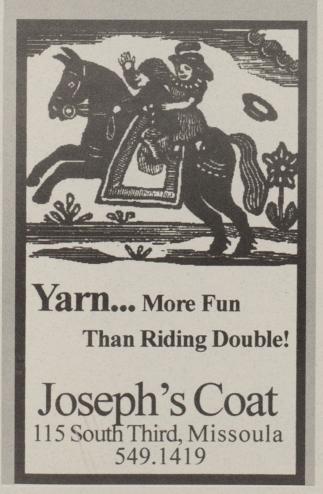
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We invite submissions of article ideas, prose, poetry, and artwork. Please S visit our website for details.

Thanks.

Camas

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At 22, **Dan Berger** went to a fancy hair salon to have his dreadlocks removed. A week later, he graduated from a decent East Coast university (that had a championship basketball team) and caught a ride West. Since then, he's been teaching himself to write and understand the world, among other things. Dan is a former editor of *Camas* and now works as a freelance journalist and river guy in Missoula.

A recent graduate of The University of Montana's MFA Creative Writing Program, Travis Burdick will soon be returning to the coast of California.

Tom Crawford is the author of four collections of poetry, including Lauds and The Temple on Monday. Winner of the 2003 Pushcart Award for Poetry, he has received fellowships from the National Endowment for the Arts, and he has lectured and taught throughout the United States, Korea, and the People's Republic of China. He is currently building a poet's cabin among the bull pines in Montana's Blackfoot River Valley.

Danielle Gardner is a recent graduate of UM's Environmental Studies Masters Program. She will be spending her summer as the photography intern at the La Crosse Tribune in La Crosse, Wisconsin."

Katharine Hyzy completed her undergraduate degree in Oregon and is currently pursuing a Masters of Science in Environmental Studies at UM. Of all places, she loves the Pacific Northwest best.

Kathy Marieb is a graduate student in UM's Environmental Studies Program. She is currently working on international conservation issues, focusing on panther conservation in Central America. She will spend time this summer working in Peru.

Ryan Newhouse will study environmental writing beginning this fall in UM's Environmental Studies Program.

Amy Ratto recently received the Merriam Frontier Chapbook Prize, and will be publishing a chapbook (yet untitled) this summer. She is currently finishing her MFA and MA at The University of Montana. Ms. Ratto would like to thank the Soapstone Writing Retreat for providing time and space for her to complete her poems.

Rob Schlegel was raised in rural western Oregon and graduated from Linfield College in 2001. Since then, he has been involved in teaching outdoor education to elementary school kids and is currently finishing an MFA degree at The University of Montana.

Kim Stafford is director of the Northwest Writing Institute at Lewis & Clark College in Oregon. His most recent books are Early Morning: Remembering My Father, William Stafford (Graywolf Press, 2002) and The Muses Among Us: Eloquent Listening and Other Pleasures of the Writer's Craft (University of Georgia Press, 2003).

Mending Line

Here in western Montana, after a number of dry years, the mountains rest under the weight of a snow pack measuring well above normal and the wet weather keeps coming. The rivers are brim full of rushing, roiling melt off, and promise to stay that way until past the first of summer.

Not long ago, in a brief, weeklong lull in the flows, I made my way to the Bitterroot River near my house a few times to fish. Spring fishing on this river can be an experience as close to the bursting center of life as one can ever hope to get. Big fish rise to March brown mayflies and stoneflies; some jump, trout close to two feet long arcing clear out of the water as if for the sheer joy of it. These are the prized times and they

don't stay very long. The last fish I caught, though, a week or so ago, has stayed with me. I went out on a whim, on my way to an appointment with a half hour to spare. hoped for a single fish. At a spot near the confluence of the main river and one of its many feeder streams, I cast my fly into a promising piece of water and hooked a good-sized

rainbow trout. It went deep instead of skyward, as rainbows often do, and when I coaxed it to my wet hands several minutes later I held onto it for just a moment and admired it. Rainbows, like the native westslope cutthroat, spawn in the spring, and this female had fresh scrapes and scratches across her body from burrowing into the riverbed, hollowing out a place in the small cobbles for her eggs.

This is a good year for water in western Montana. Things are happening, things that will cause water to flow through our rivers freer and cleaner than it has in decades. Though Montana hosts the nation's largest Superfund site, stretching 170 river miles downstream of Butte, there's real hope of beginning to untangle that mess, despite all of the money and politics involved. The EPA has approved a plan to remove Milltown dam, just upstream of Missoula, and its century's worth of contaminated sediment. In time, along the Clark Fork and the Blackfoot, Norman

Maclean's river, bull trout and cutthroat will once again enjoy an unimpeded run.

Milltown is a huge, complicated problem that will take years to sort out, but in countless other, smaller projects, real work is getting done. On feeder streams in the Bitterroot and elsewhere—creeks like the one where I came up with that rainbow—landowners, conservationists, and government agencies are coming together to address the problem of dewatering. Because of such work, more water will stay in the streams to benefit the life that depends upon it.

All such projects, large and small, proceed in some inexact, best-guess fashion. By restoration, the

act of restoring, we s usually mean the effort to return something to its original Fform. In looking around at any landscape, any natural system on earth, it's hard to argue against the urge to bring things back to some semblance of balance. But knowing what a pristine condition is, identifying a baseline, is often the hardest part. Biologists are dealing with

systems in constant flux, dynamic continuums that can't be pinned down.

Most of the pieces in this issue of Camas arise from an urge toward or act of restoration, both of the natural world and of ourselves as members of it. Several of the essays deal with scientists at work in the field, in the complex thicket of action and reaction that plays out in our environment. In Katharine Hyzy's piece, the subject of the restoration is an island ecosystem—the most fragile type in the world—and the threats to it are everpresent and overwhelming. What does restoration mean in that context? Kathy Marieb, in her essay, grapples with the restoration of a creature that can no longer even be found.

It is with the rational, intellectual side of our brains that we most often approach ecological problems. Science is a necessary tool through which we may hope to understand and repair the physical world. But there's another side to both our psyche and the

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that got us here.

world, and the poetic mind is how we engage the ineffable flow of feeling, that, to most, is as important and undeniable as water. We need to call to mind the possibilities of what can be achieved through heart-

felt intention, the desire to make things right.

Which brings me back to the meaning of restoration. What is it, exactly? As humans, we notice and can even measure some of the effects we have on the environment, but change is a constant, built-in feature of ecosystems. After all, the world goes on with or without us, and it is we who perceive the damages and the losses, we who feel the need to heal.

One of the oldest, and no longer much-employed usages of the word 'restore' denotes an act of compensation, making amends. Despite what we may have done right in our history, as a species and—perhaps more pertinent to the moment—as a nation, we have made an incalculable mess of things. In the oldest

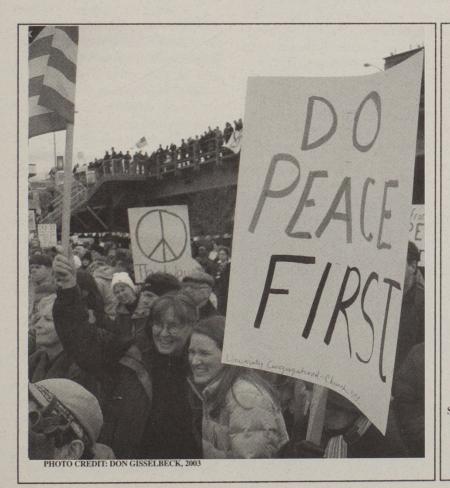
sense, part of restoring ourselves to the world is to first realize the situation and our part in it. Then, little by little, we can make some small acts of amends, each as measureless as the acts of heedlessness that got us

> here. For each person, inevitably, this will look a little different than it will for someone else.

For me, kneeling in the water with that improbably wonderful, scraped-up fish in my hands, I had the brief feeling that things were alright in the world. Perhaps rainbow trout are not exactly native to this water but there was something right about encountering that fish in the Bitterroot, just after its spawning. In the abundant

spring flows, that trout was doing what it does best. As Richard Hugo, Missoula's late, beloved poet wrote, the fish was 'making certain it goes on.' If we put a little of our mind to it, and all of our heart, maybe we can do the same.

-John Bateman



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Huckleberry Wine (a little sweet, a little sour)

Want Salmon? Go Wild

Salmon is salmon, right? Think again. Farmed salmon and wild salmon, while rarely marketed differently at grocery meat counters, are hardly the same creature. Shoppers now have an easy way of distinguishing between the two. A lawsuit recently filed by environmentalists in Seattle has spurred grocery-chain giants Albertson's, Safeway and Kroger to label farm-raised salmon as artificially dyed. As farmed salmon pose a threat to both the health of humans and wild salmon, this is an important new tool in consumer choice.

Salmon farming along the coast of British Columbia is proving to be as much a threat to wild salmon as are dams and deforestation. These "farms" are net pens that float in the open ocean, typically in protected bays, containing dense populations of exotic Atlantic salmon. Atlantics are favored because they grow bigger in a shorter period of time than their Pacific cousins.

These farms have caused a wealth of problems for wild salmon. Because farmed salmon don't eat the open ocean micro-organisms that turn wild salmon its rosy hue, farms feed

them a special, PCB-laden, food that adds color to the flesh. The pens are feedlots of the sea, sending plumes of high-nitrogen, PCB-tainted feces into the ocean, spreading disease to the wild salmon and robbing the waters of precious oxygen. The output of a decentsized salmon farm is comparable to a city of 65,000 people dumping its raw sewage into the ocean. Spawning runs of native salmon in B.C. commonly suffer severe infestations of sea lice. transmitted from the farms as the runs pass through the bays. In addition, Atlantic salmon, when they escape from the pens, outcompete the native fish for resources and threaten to dilute their genetic integrity.

The salmon farms are also wreaking havoc with fishermen, coastal communities, and native tribes who depend on wild salmon for their livelihood. Multinational corporations control the bulk of salmon farms across the globe, and while they may provide a few jobs for locals, the profits are leaving small coastal communities that can't afford to lose the money. It's also far cheaper to raise salmon in pens than it is to harvest the wild stocks. Tribal fishermen have watched helplessly as the price for salmon plummets, dropping so low at times that turning a profit

becomes impossible.

As consumers, we can do our part to help protect wild salmon simply by looking for those stickers or asking where the salmon comes from before purchasing it—and not buying the farmed stuff. Sure, the farmed salmon might only be \$2.99 a pound, but are the costs borne by native peoples, small communities and the environment worth it? Ecotrust, a non-profit environmental organization based in Portland, has launched a campaign to raise regional awareness of the harms caused by salmon farms. For more information about their campaign and the impacts of salmon farming, visit www.salmonnation.com.

—Katharine Hyzy

Hundred Year Leap

Montana's endangered bull trout now enjoy a permanent step up—literally.

A fish ladder has been constructed around the old Mountain Water Company dam on Rattlesnake Creek north of Missoula, which will provide both bull and cutthroat trout access to the upper reaches of the creek for the first time in decades. And thanks to a bit of ecological irony, Mountain Water's strict control of the creek—including a longstanding fishing closure—has resulted in miles of textbook spawning habitat above the dam.

According to fisheries biologist Ladd Knotek, only four spawning streams remain in the long reach of the middle Clark Fork. The most pristine of these is Rattlesnake Creek, once the tap water supply for the entire city of Missoula.

But times have changed—Missoula now quells its thirst from an underground aquifer. Although Mountain Water continues to protect the creek as an emergency municipal water supply, the Rattlesnake's primary importance these days is to an altogether more ancient community.

Several years ago, biologists noticed bull trout blocked below the concrete

The new fish ladder on Missoula's Rattlesnake Creek



dam, stalled in the ancient urge to make it upstream to the piscine equivalent of a maternity ward. Knotek and a few others moved several dozen fish around the dam by hand, likely marking the first time bulls reached the upper creek since the dam's construction in 1905. Though the upper creek had always supported a remnant resident population of bull trout, the introduction of the migrating fish sparked an immediate, profound increase in that season's spawning success.

This resulted in a temporary experimental fish ladder around the dam last autumn, and now replaced with a permanent structure. Thanks to a grant by the Bureau of Reclamation, assistance from Montana Trout Unlimited, and lengthy research by Knotek, one of Montana's rarest natives have the means to make it home again by next autumn's spawning season.

-Malcolm Brooks

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Digging The Gold Dust

HomeWORD, an affordable housing developer in Missoula, is combining environmental principles with social justice. Their most recent project, the Gold Dust, offers 18 apartments at affordable prices on Missoula's Northside, within walking distance to downtown amenities and public transit. This new housing development has integrated many of the ideas of green building, including resource and energy efficiency, waste reduction, smart land use, healthy indoor air, and community-sensitive design.

Why is this so important? Last fall, in a visit to The University of Montana, author and teacher David Orr, who is Oberlin College's Environmental Studies Department head, provided a glimpse of the extensive impact of construction on our environment. Currently, one quarter of the wood harvested in the world is used in the construction of buildings. Overall, construction consumes more than 40 percent of the world's energy and raw materials, and accounts for 44 percent

of the waste in our landfills. Buildings account for approximately half of the greenhouse gas emissions and nitrogen oxides, which cause acid rain. While corporate and institutional buildings like Oberlin's state-of-the-art Joseph Lewis Environmental Center, which Orr helped design, are providing examples of how to apply green building principles on a large scale, there are few examples in affordable housing.

HomeWORD is leading the way. The Gold Dust has the largest inter-tied photovoltaic system in Montana, providing over one third of the electricity to residents through a benign, free, renewable resource—the sun. It also has rooftop gardens, which allow residents to grow their own vegetables while also reducing storm water runoff.

So, while Missoula seems far removed from the green building visionaries, it has its own visionaries who understand that an important component to building sustainable communities is paying attention to social equity. The Gold Dust offers the nation an example of how to take the vision of holistic design and apply it for the good of the entire community.

—Betsy Hands

Forest Summit

The Western Governors Association (WGA) will meet in Missoula, Montana, from June 17-19 for a "Forest Health Summit." The main focus of the meeting will be its ten-year wild-fire proposal developed last May, "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Envrionment: 10-Year Comprehensive Strategy Implementation Plan." This plan reinforces the fundamental principle that resources for wildfire prevention and suppression should be concentrated near communities.

As stated on the Web site for the event, goals of the summit are:

- —To evaluate progress under the 10-Year Comprehensive Strategy and identify what additional policy issues government needs to consider.
- —To hear and dialogue with Governors, Congress and Administration

officials on their views on resolving the forest health crisis.

- —To evaluate how science and technology might be better used on the ground to address forest health issues.
- —To improve the network for communication and collaboration among governments and forest health constituencies

The Bolle Center for People and Forests and the Sierra Club have teamed up to bring the discussion of wildfire issues to a more publicly accessible forum the day before the WGA Summit kicks off. On the evening of June 16 in Missoula, there will be a free public panel discussion titled "Close to Home: Protecting Communities from Wildfire."

Dr. Jack Cohen of the U.S. Forest Service Fire Sciences Laboratory. along with Mayor David Gerth of Roslyn, Washington, and the Fire Marshall of Kittitas County, Washington are among the panelists that will be discussing the science of community protection. With a more scienceheavy and community-focused perspective than the governors' summit, this event offers a chance for people to get informed and to have their voices heard. Field trips are planned the following day to see work that has been done and work that needs to be done.

The timing of these events virtually ensures that they will set the stage for conversations, in the press and politics, for the rest of the 2003 fire season.

Will the governors listen to the science that shows that the best way to protect homes is to clear flammable brush and trees close to communities, not in the backcountry, and act accordingly? Will public participation in public lands management planning be curtailed? Much depends on who shows up and who speaks out.

For more information or to register for the WGA Forest Health Summit, visit www.westgov.org/wga/meetings/forest_health_summit.htm. To learn more about the panel discussion, "Close to Home," and field trips, contact the Sierra Club conservation organizer at 406-549-1142.

—Jan Scher

What Civilization Costs

When moon comes up, and we sleep outside, just there in the aspen grove a lone coyote cuts loose with abandon banging all the silver pans of its voice, raveling

the spiral cry up like smoke at the moon's command. Shiver all you want, tame human — feel the hint of what it must be to sing

like that, squander your whole life in a single breath, again and again, from growl to soprano in one long glissando toward stars.

We pay dearly for all we have. In the morning, instead of biting song into air, like pilgrims we go down there, bent over, seeking a print in the dust.

by Kim Stafford

Climbing South from Santa Fe

Up a gully of broken stone where pilgrims climb toward dawn and flash floods tumble down, I met raven traveling — east to west — and he said, "Ach, what do you want, for death is coming. Choices are few."

And he traveled on.

Lichen loved rock, and piñon pine a cleft between. I climbed by stepping attentive stone to stone, my heart in frenzy. And there I met hummingbird traveling — west to east — and she said, "Is, is, is dawn what you desire? It is? It is." And she traveled on.

Mica glittered and distant rain was walking south. On top I prayed to four directions — for privation and good ending, abundance and beginning. A young piñon caused me to kneel there, until day.

by Kim Stafford

Last Wish

In the desert when I was a child I found a seam in rock where moss grew, a green thread wet, and bees came over my shoulder to thrust their tongues deep into the spirit.

In the desert when I was a child I found a flag of flowers hidden below the lava flow where a rabbit and I savored dawn.

In the desert when I was a child the moon smelled of juniper, and stars were my own shivering, and deep in its canyon, a river came from where I would have to go sometime before I died.

Many pleasures – civilization, love, family - but then, old man hitchhiker, I would say "Let me out here." "Here?" "Here." I would go listening my way to silence – weeping, unrepentant, a set of tracks, the wind.

by Kim Stafford

12

Retreating

On the trail above the coast, ferns spring from mossy tree branches, spill over themselves in clumps on the forest floor. I find their names: sierra wood fern, common lady fern, licorice fern.

but no matter –

they are still only
the plants my sister danced beneath
on my grandmother's porch.
Then a break in the trees, open sky
and waves clawing the black sand,
drawing it back into the rolling cauldron
of the fog settled Pacific. Each surge
leaves a lacey veil of foam streaking
the sand, sewn white and sewn again.
Below, on the beach myself, I slip
in the coin slush of rocks shining still
from receding waves that climbed
the pebbly incline

to fall back in echo of applause thick and distant. Listening for it, I was struck by the words: lace for water, coins for rocks, and here, absorbed by the sea's sounds, imagining thousands of hands clapping, converting it all to the smaller language of the city. Lace on a veil, on the edge of a girl's pink dress, the wealth of a bastion of coins so thick I can walk upon it. The more I try, the more that language is eclipsed by a life of places so far from here. Is true distance only measured from our own beginnings? Walking back between ferns, I say their names, bend fronds back, count pollen gathered there. They are dripping with old rain, their roots confident in the forest floor.

by Amy Ratto

Snaring by Kathy Marieb Ghosts

I ignore the sweat beading on my forehead and focus on the ground in front of me. My breath labors from the grade of the slope and weight of my pack. My legs feel heavy. As I climb, I keep count of the number of plants that I know to distract myself from my burning calves. I count 32 thus far, a low number, I think, for this lush west-side forest of the Cascades. My focus on the ground is interrupted by a solitary snowflake falling through the afternoon light. I blink, not believing that it is beginning to snow, but when I open my eyes again the flake is still in front of me, dancing in its battle between the buoyancy of the air and the pull of the earth.

Looking up, I see more flakes following this one and soon I am in the first snowfall of the season. I smile, wipe the sweat from my brow, and take off my pack to dance with the snow. This welcoming ceremony is a reprieve from the day's disappointments. The snowfall surrounds me, wet and heavy, turning the large trees into ghostly silhouettes and swirling the landscape into obscurity. I follow the movement of the snow, spinning around and around, feeling the flakes land and melt, one at a time, against my warm cheeks.

Dizzy, I stop my revelry and let them soak into my skin.

It is October and I am three days into the backcountry, and well into my second summer of looking for the grizzly bears of the North Cascades. Many believe the bears are gone from these mountains, that their populations became too small to survive after extensive hunting and the subsequent human encroachment into their essential lowland habitats. But there are many who believe the bears still exist. Inspired by stories of grizzly sightings the believers highlight occasional evidence of expansive digging and large boulder moving that is more characteristic of a grizzly bear than a black bear. In habitat teeming with grizzly food and larger than Yellowstone or Glacier National Parks, how can there not be grizzlies? Between the believers and the nonbelievers, the grizzly of the North Cascades has taken on the elusiveness of Bigfoot, a creature that knows how to exist so quietly and carefully removed from the human world that it is shrouded in myth and legend.

Regaining my balance, I shoulder my pack and sigh, remembering, that my hair-snare site yielded no

bear hair today. I feel I have wasted my time in this valley, and in the last year of the project, with a scant E three weeks left to the field season, time is precious. Far from any trails, nestled between huckleberry bushes under the canopy of an older forest and an avalanche chute filled with mountain-ash berries, the site looked like bear heaven. I was sure bears would be roaming through this area searching for the calorie-laden fruit to prepare for hibernation.

Two weeks ago, when the berries were just beginning to ripen, I set up the 'non-invasive' hair-snare



site with a field partner. These sites all look the same: a single strand of barbed wire placed a few feet off the ground and pulled taught around a ring of trees. A bait tree in the middle of the circle—oozing with the lure of decayed fish juice, elk blood, and skunk scent—is meant to attract the bears. To get to the bait tree,

the bears either have to step over the barbed wire or crawl under it, losing some hairs on the barbs in the process. We then collect and test the hairs to determine if they belong to a grizzly bear or a black bear.

The last official sighting of a grizzly in the Cascades was in 1991, a single one by the border of Canada. That particular bear was thought to be a transient, not part of a resident population. If the project with which I was working found a bear, two bears, a family, we might have a card to play in the highly political game of carnivore conservation. The evidence would be a leverage point for more education, more protection, and possibly more land to ensure the survival of the great bear. Without irrefutable proof that grizzlies still live in the Cascades, their tenuous situation will only worsen, driving the few that might be left to

extinction. It is hard to ask for more measures for the benefit of the bears when the response of politicians, park officials, and wildlife biologists is always, "grizzlies, what grizzlies?" The Endangered Species Act makes no provision for phantoms.

I continue my ascent toward tree line where my dry tent and warm sleeping bag wait. Snow is quickly covering the plants whose names I was hoping to remember. The rhythmic and familiar sound of my boots drops away with the new-fallen snow; the normally dripping green forest has been muted to stillness, and a hush so audible I feel as if I can hear silence settle over the landscape. The transformation seems magical in that something as small as one snowflake can, with its family, recast the landscape.

I find myself envious of the power of snow, wishing I could harness it to bring the grizzly back to the Cascades. I have traversed over a thousand miles through these wildlands and my fellow project members have traversed thousands more. The lack of sign and consistently negative results from the hair sample tests are beginning to wear on me. At the outset of the search, I believed we would find something, some definite sign of a grizzly bear. I had to believe we would find one because I did not know if I could endure the loneliness of humanity if the bears were gone. To me, the presence of the grizzly means that wildness is not lost, that the place I call home is not tamed by man, that it is not too late to stop the loss of species and the destruction of ecosystems. If the grizzlies are here, there is hope that the ecosystem and the piece of my soul that depends upon it will survive.

But now, at the end of the search, after helping to collect over 800 bear hair samples, not a single strand of which belonged to a grizzly, my belief in their existence is wavering. My body is tired from hiking difficult terrain with the weight of 10 days of supplies, bait, and barbed wire on my back, my mind is tired from

Without irrefutable proof that grizzlies still live in the Cascades, their tenuous situation will only worsen, driving the few that might be left to extinction. It is hard to ask for more measures for the benefit of the bears when the response of politicians, park officials, and wildlife biologists is always, "grizzlies, what grizzlies?"

organizing, planning, packing, and convincing my body to go on. But most of all, my heart is weary of holding out the hope that the turning of the next corner will bring a grizzly track, or that at the next site, a bunch of thin silver hair glistening like tinsel on the wire will, for once, not belong to a light colored black bear.

Lost in thought, wading through a new world unified by whiteness, I am surprised by a depression in the snow. Two summers of searching have tuned my mind to recognize this size and shape – it's a bear track. I continue past it. Why bother stopping, I think, when every track I examine inevitably turns out to be of a black bear? But, stubborn desire makes me stop and turn back. Squatting over the quickly disappearing depression in the snow I wonder if my eyes are tricking me, playing on a final thread of hope to create the mirage of a grizzly track in the snow.

I look harder, trying to make out the details in the ever increasing snowfall. The toes are arranged in such a way that they make more of a straight line than a curve, all far above the depression of the paw pad. I lay my pencil across the top of the pad and can not believe what I see: this time, all the toes lay above the line of my pencil – a grizzly track! I quickly drop my pack and search for the camera and plaster of Paris to record the evidence, necessary documentation for this to count as an official sighting. I extract these, a ruler, and my field notebook only to turn and see the toe marks covered in snow.

Awestruck, not wanting to believe the terrible irony, I watch the track as it continues to disappear

I lay my pencil across the

top of the pad and cannot

believe what I see: this

time, all the toes lay above

the line of my pencil - a

grizzly track!

beneath the falling snow, until even the depression no longer remains. After a few moments where time seemed to hover weightlessly, I find myself staring at nothing but smooth snow, and I smile, realizing the secret the bear has just shared with me. That grizzly

must have been at this spot only minutes before my arrival, but now there is no way to follow its trail. I wonder if it consciously decided to get so close because it knew the snow would cover the evidence of its travels, if it was a gesture of thanks acknowledging my belief in its existence, if its mother had taught it how to live in a human world.

In order for the bears to

have survived, to still be here under our seeking eyes, I believe they have adapted to people. Living away from humans and their structures, altering their travels and home ranges to avoid us, must have become instinctual. This bear's mother must have taught it to move through the forest like an 800-pound ghost. The grizzly bears that remain in the North Cascades have learned over the years, from errors and a careful awareness, to persevere in our altering, alarming, and overwhelming presence. Maybe it started with one bear, maybe a momma and her cub, maybe a few that were already in the most remote places learned not to venture fa. Maybe it was a collective action. However

it happened, this learned elusiveness must have sprung from a need to survive, an instinctual need to work to persist, a duty to ancestors and future generations to keep their subspecies of the grizzly alive.

That track was evidence for me that there are

grizzlies that have adapted and learned to live within the limits we have placed upon them. In that, I find hope. Not because species might be expected to adapt to a planet we are continually altering and degrading, but because humans are an animal species with similar capabilities of adapting, surviving, and learning to live in a world with limits.

The snow continues to

fall as I crawl into my sleeping bag. Peace blankets me this evening, the hand of Mother Earth on my shoulder assuring me that my work is not merely a gesture of an impossible desire for her salvation. The grizzlies are still here, still enduring, and by doing so they are giving us the gift of time, time to learn from our errors, time to become more aware of the effects of our actions on the earth, and time to realize that survival—ours and the bear's—requires living within the earth's bounds. I no longer wish for the power of the snow. I lay down beside the bear's secret, adding myself to the family of flakes that gently, but surely, recasts the landscape.



Holiday

The disclosure of our radical equality seems native to the simplicity and innocence which there may be in us. —Henry Bugbee

Beyond the Admiralty Islands where planes met mid-air and boys will die forever —

thirty-four soldiers, and you Henry, rest on deck while gulls swarm the south horizon.

Wash of sea is push and pull below the bow, withdrawal, push and pull.

Radio crackles Tagalog, men talk quietly, as if the eastern sky were listening —

as if the kamikaze planes had been too much. And then, as if approached

by something small, one steady, quiet voice begins to sing.

by Rob Schlegel

(Henry Bugbee was a professor of philosophy at The University of Montana).

The Largest Shadow

The California Condor Looks For Home In Arizona

They spend their days chasing birds. Whether it's driving to the Kaibab, or the South Rim, or the Navajo Bridge, the crew of The Peregrine Fund cover much of northern Arizona in search of California Condors. Thanks to the Peregrine Fund (known locally as the "P-Fund,") 35 condors now fly in Arizona and southern Utah. The P-Fund California Condor Restoration project is headed by Chris Parish and Sophie Osborn, who are assisted by their crew of up to eight volunteers.

In early March, 2003, I accompanied Chris Parish and Sophie Osborn, and a handful of volunteer condor watchers as they got ready to release three young birds into the wild. The condors had been transported to Arizona three weeks ago from the P-Fund headquarters in Boise, Idaho, where one of them was puppet-reared since birth. "These guys have been eager to go since we got them," says Osborn. The release pen sits nestled in the face of the deep-red Vermilion Cliffs National Monument, 1,000 feet above the viewing area. In it are three glossy, black condors with gray fuzzy heads, a sign of their youth; as adults they'll go bald and have red, fleshy heads, giving them the look of the condor we recognize. Less than five minutes into their freedom, the three awkward juveniles land on a nearby ledge. "That's as good as it gets!" exclaims Parish.

Bringing the condors to this stage was not an easy task.

Opposition to their capture came from the most unlikely groups. Both the Audubon Society and the Sierra Club opposed taking the drastic measure of capturing the last few wild condors for the creation of a captive flock. For them the condor was doomed to extinction. They thought that there were too few birds left to create a stable genetic line of condors, and that condors reintroduced from a captive population were no longer wild condors.

In response to such controversies, Parish offers a simple answer: "When one flies over your head, you tell me whether it's a condor or something else. To me it's a condor." Seeing these massive birds close enough to read the numbers on their transmitters makes it hard to disagree. "Another question you'll have," according to Parish, "is 'Why are we doing this?" Are condors essential to the circle of life? No, they're not necessary. But dang, look at them."

The P-Fund crew has a two-fold, and seemingly contradictory, mission: to harass and to leave alone. To encourage a young condor to roost safely, a crewmember will track and chase a bird if it has landed in an unsafe area and haze it until it finds another inaccessible spot. "When they get it right, we leave them alone," explains Osborn. Osborn and her crew want to limit their direct contact and interaction with the birds as much as possible. They only want to "suggest" a way of life to the condors.

It was Osborn who, in 2001, discovered the first confirmed condor egg laid in the wild since 1986 in a nearby cave overlooking the Colorado River.

Condors are amazingly curious creatures—they depend on their curiosity to live. Unlike ravens and turkey vultures, condors hunt by sight, not smell. A condor looks for the activity of other scavengers and then flies down to investigate. But a condor can sometimes confuse a group of people for a group of scavengers. "One of the major threats these birds face is the South Rim," says Chad Olson, the head Raptor Biologist for Grand Canyon National Park. Humans should be avoided and feared by condors, not befriended.

The P Fund released the three young condors in Arizona to see if they could survive under existing conditions. In other words, no additional regulations can be placed on current land-use practices. If they can't, the project will end.

The goal of their release is to work toward a reclassification as a species from endangered to threatened. It is hoped that the Arizona population will be the nucleus of a healthy non-captive population. In order for the reclassification of condors to succeed, there must be three geographically distinct populations—one captive and two noncaptive. With the first already in Boise and one of the second in California, Arizona is the last best hope for meeting the criteria.

There could hardly be any better place for these prehistoricsized flying giants. It is believed

that the Vermilion Cliffs area was once included in the condor's historic home range. Condor fossils dating back 10,000 years have been found in the Grand Canyon, merely a blink in the life of the Canyon itself. But now Osborn and her crew are counting the minutes, not the millennia. For in another blink, the condor could have been swept straight into the history books. They reached an all-time population low of 22 birds in 1982, and now the condors have a worldwide population of 196. No one knows how long condors live; perhaps no one took the time to notice and write it down. Now nearly every move of every condor is observed and recorded and analyzed. The P-Fund isn't treating the condors like lab mice. "This isn't science," states Olson, "It's more like husbandry. Our job is to keep as many birds alive as possible."

For the first few days after the release, I tag along with Olson as he spends his time tracking the young condors. "It is important to know exactly where these birds go and what they do. They're extremely vulnerable right now," he says. It's hard to imagine a bird weighing up to 25 pounds and having a nine-and-a-half foot wingspan being vulnerable. But condors don't start reproducing until they are seven or eight years old, and even then they only produce one egg about every other year. Complicating matters further are power lines, shootings, predation by coyotes and golden eagles, and lead poisoning. Each condor is fitted with a transmitter with a unique frequency on each wing. If a bird does not move for more than twenty-four hours, a "mortality beacon" is engaged. So far the P-Fund has lost one bird to a collision with power lines, three to gunshots, and six to lead poisoning.

Power lines have become less of a danger since the crew installed a learning tool in the holding pen. A mock power pole has been erected in the pen, and is the highest point on which the captive condors can land. Naturally, the condors want to land on it. The pole is charged with a mild electric current, giving any bird that lands on it a mild shock. Since the mock pole was first implemented, no condors in Arizona have died from a collision with power lines. As far as shootings and lead poisoning go, there is only one course of action—informing people. There are some hunters on the Kaibab who aren't even aware of the condors' presence.



In the years since the condors' capture, the positions of the Sierra Club and Audubon Society seem to have changed. In the December 2002 issue of Audubon there is a feature article on the dangers of lead poisoning for California Condors and a campaign that is seeking to inform hunters about the problem. The bilingual campaign, Project Gut Pile, is led by Anthony Prieto, an avid sportsman whose hunting trophies hang on the walls of his home. Prieto is trying to save the condors by asking hunters to use lead-free bullets, like the Barnes

X copper bullet, or bury the discarded portions of their game to discourage scavengers from finding it. Like Parish, Prieto believes the key to this battle lies in one's experience: "If a hunter ever saw a condor fly over—got to feel the wind and see something so big, so long-lived—that would do it. That would save them."

Hunters and condors can and do get along. Like Prieto, some hunters are also the most active conservationists. Most hunters do take necessary precautions discarding their game. But when there is even one carcass with lead in it, many condors can pay the price.

continued on page

The Peregrine Fund's Chad Olson uses a radio telemetry device as the author looks on.



Driftwood

"I want to educate with sensation"

—Kim Stafford,

A Thousand Friends of Rain

In class, in Montana, I cover the ruled paper of my notes with obsessive dark lines, forming waves. My hand draws out sensations: surges of curling water, foaming lips, rippling water covering my skin, sculpting my memory. Descartes' dream that our minds can live bodiless cannot account for my mind's longing to drift back to the cove to the afternoon just before I left. I am carried there in my imagination. This is how I feel it:

cove can't be heard on this late summer day from the house. My girlfriend Sage once told her dad, a carpenter, that she wants to live in this house; he told her he'd tear it down first and put up something better. She replied, "you're missing my point."

I know her point—I would not want to replace the sea-worn house for something the cove does not know. I could watch the cove forever, clinging now

I begin with the flotsam temple: the salty gray house made from an old redwood water tank. I see the rain-blackened wood—constantly touched by rain, salty Pacific wind, seagull feet—it is a steady holdfast in my memory. Empty flowerpots on the deck face the cove. Windows-all of them except the boarded one that faces the road—look to the ocean. Near the trail that cuts through the ice plant and leads to the small sand dunes sits a crooked outhouse, its door ripped off. Black and orange signs in the dirt-frosted windows warn against trespassing. A plastic grocery bag waves in the wind: a prayer flag. The summer day, flapping prayers, and salt breeze to trespass freely.

H-coal Data!

This is redwood country. Redwood boards, perhaps hewn by the Louisiana Pacific Mill up the highway, rot where they meet the sand, where sea rockets and iceplant grow. Yellow California poppies stand singular where they set down roots in shifting sand. Paper cups, plastic lids, potato chip bags, and cigarette butts rest at the base of the house among groupings of nasturtiums; coffee, grease, and tobacco stenches are perfumed by the peppery orange flowers.

The two creeks that roll into the Pacific during high flows that shape the north and south walls of the

in memory like a limpid to the cliffs continuously massaged by waves and tides.

The tides never reach the porch, never that I've seen. A man who parks his rusty maroon Toyota van here every day would know. He parks close to the back of the house where the sand is most compacted. Standing next to the van, he smokes a cigarette and watches the waves, if there are waves. He keeps a longboard in the van—a red one just over nine feet long. I see him every time I am at the cove or passing by on the windy drive. He is always there, always raising a hand-rolled cigarette to his lips, watching waves.

People

by Travis Burdick

Osprey and turkey vultures circle over the cove. From the top of the sea cliff where I check the surf, I watch them circle below; they ride currents of air over the swells the man watches. The crests are slight curved lines advancing in rows toward the rocks and sand. Looking across the cove, to the cliffs, I see the cypress trees hold the shape of the wind. Messy looking chop: waist-to-shoulder high, strong onshore wind, medium low tide, overcast. Noon. I watch the man pull on his black wetsuit. One step ahead, he's always here—a fixture of the cove. He always knows the surf is good even when it looks terrible. I must get wet.

I walk down from the overlook toward the house, toward my car, and dress to surf. The man is already at the water's edge. My wetsuit, still soggy from yesterday, makes me shiver as I pull it up my legs, over my hips, around my arms, over my shoulders. Near my armpits I have rough red marks from the friction the wetsuit makes against my skin when I paddle. I place my surfboard near the base of the house against some sedges and iceplant and stand to watch the man stoop at the foamy edge of the ocean to Velcro his surfboard leash to his ankle, splash water on his face and wade into the waves. I enjoy watching this private, deliberate ritual. He doesn't hesitate as he begins to paddle through the icy water. From here I can see his puff of white-gray hair waving in the wind and floating over the water like a small storm cloud.

The beach is different every day. Today, walking to the water, I navigate around small pieces of beached driftwood, coils of bull kelp, dead seagull—all sandy. Purple jellyfish are strewn across the beach like jewels. Living gulls hang out in one corner of the cove where I am not. These outposts of gulls ignore me; resolute and stoic, these aren't the kind of gulls that beg for potato chips. I look at the gulls and note that their bills pierce the wind straight on. I hold my board like an arrow forward into the wind. If I turn my board flat against the wind, even slightly, I am practically spun in circles—a human whirly-gig.

My ritual of velcroing my leash and stretching my arms completed, I wade and push my board into the cold waves. I hesitate a little and blow warm air He keeps a longboard in the van—a red one just over nine feet long. I see him every time I am at the cove or passing by on the windy drive. He is always there, always raising a handrolled cigarette to his lips, watching waves.

into my cupped hands.

Anyone who's anybody gathers here: sideways to the wind, a brown pelican surfs a wave, dragging the very tip of its wing along the face, a watery mosaic of lights.

In the water, a purple jellyfish, one among hundreds blown into the cove by the wind, slides across the sandy yellow wax on the deck of my surfboard, brushes my numb white hand and returns to the ropey, kelp-choked water. I paddle, gripping the kelp like ladder rungs to get through waves. My face, shaved yesterday, stings from the salt as I push through the breaking peak of a wave. My brain is drilled with an ice cream headache as water drips from my hair into eyes; my mouth does not taste sweet.

Black and orange pigeon guillemots send high squawking alarms from the cliffsides. The wind breaks the lips of waves into a cold mist.

We sit fairly close in the water, not because we are looking for company but because the sandbar today is only creating one peak, one place where waves form. We nod to each other—letting the other know, in a subtle, unspoken way, that "it's cool," we can share waves: permission granted.

"Pretty windy," I say to the man.

He replies, "Yeah, it's better early in the morning 'fore the wind picks up."

This is the extent of our conversation. We sometimes nod when we see each other catch a good ride; we point out ospreys with fish in their talons, circling the cove several times to try to straighten the fish for aerodynamic flight. I want to ask him if he thinks the osprey is giving the fish a bird's-eye-view-last-ritestour "see, this is where you once lived."

I look out at a point on our side of the deep-water trench to spot forming swell lines. The man and I concentrate on these lines, reading their repetition and their differences: poetry. Following the waves as they wrap around the farthest point of the sea cliff, I read the waves right to left like Hebrew. It's not just the direction in which the waves form around the point that make the water like a Hebrew text, but we read the waves contextually, between the lines, as with He-

waving sea weed, the dark eyes of the harbor seal—I hold on to these as I wanted to hold onto every Christmas morning when I was a kid; I hold onto this sensation.

Even in the cove, my body immersed in the water, I want to feel known by the cove. I want a harbor seal to brush up against my leg; I want the man to talk to me.

The man nods as a set of waves, bigger than those before, gather speed. We paddle toward them, and as we do, I think that I do not know of anything more devout than the

way we surrender every day to the waves.

I catch the first wave; without a breaking peak to push me one direction, I go right, my body facing the beach, make a soft bottom turn and run to the nose to gain speed. The whole world becomes water; water under and over—a dance with the cove. Perfect. Running back to the middle of the board as the wave bottoms out, I hear a high howl. I see a smiling face and a stocky black body paddling out toward the wave as I fall back into the churning froth.

We both greet Bill, a retired Army officer from Alabama, who surfs more often than anyone I know,

with the exception of the other man in the water whose name is a mystery to me. I like Bill—every time I surf with him he tells me not to join the army. He gives me all kind of warnings about the government and tells me to stay in school. "Nice ride, 'eh?" he says.

After a set of waves that none of us catch, I tell them I'm leaving tomorrow to go to school in Montana. Bill shakes his head when he hears this and the other man just looks out at the waves.

"Montana?" Bill asks.

I had uttered a foreign word. My feet dangle in the water as I sit on the board; I stir up light with my feet sending small universes spinning towards the gold colored kelp. I pick a length of kelp from my surfboard leash and run it through my hand, rubbing my fingers across Braille. I talk, looking around as if I'm trying to figure out the weather. I tell Bill I'm still figuring out why I'm going to school in Montana.

I watch a piece of driftwood—a chunk of redwood the size of my thigh and long as my forearm, sculpted smooth and worn to a soft gray—slip into a wave. The wood is sucked into the lip of the wave and thrown back to the bottom of the wave; the wave closes out, the wood disappears, then pops up spinning at the surface. Generally, I'm wary of surfing near driftwood—I've heard of serious injuries from wave-thrown pieces



brew, a language where vowels are not written and the reader must fill in the blanks. Shadows and suggestions of troughs between the lines of light that look like rippled gibberish or disorder to the non-surfer are paddled for, caught, and ridden. G-D is found in the reading; surfing is dancing with a ghost who becomes body through belief. We read the seascape with sunburned eyes.

Watching the man catch and ride waves is, for me, like watching a brown pelican ride the loft of wind inside a wave; he moves gently, walking deftly up and down the deck of his board and always moving the same speed as the crashing peak of the wave. Skinny and tall, he surfs just on the edge between awkwardness and grace like great blue herons when they're flying. Nothing fancy, but elegant.

I watch the ospreys more carefully, trying to remember, even now watching them, how they fly, how their black and white feathers cut the gray air over the cove. I relish the numbness in my hands and my body commits that to memory. Each sensation of water over my body, each sound of guillemots or kill-deer, the ice cream headache, each wave I catch and each turn I make responding to the wave, the way the house on the dunes would be a perfect place for me to witness waves and write, the driftwood carried on the

of tree branches and trunks. but today I watch and stay close. The wood floats easily, travels where the small currents pull it. It turns figure eights in white wash. Carried here from the forest by a storm, the wood returns to the beach at low tides and is pulled out into the waves when the tide moves in. I turn to watch Bill and the man, bobbing up and down over small wind waves. Their weathered skin, their gray blond hair, they have become driftwood.

The man nods as a set of waves, bigger than those before, gather speed. We paddle toward them, and as we do, I think that I do not know of anything more devout than the way we surrender every day to the waves.

Bill follows the man as he shifts forward to lie down to paddle, and I follow suit. We all paddle toward a set of waves forming farther outside. I paddle for the last wave in the set, my last wave before Montana.

The wave accepts me after a couple of strokes. I rise to my feet, drop to the trough at the bottom of the wave, lean towards the wall and dig the inside rail of the board into the wave. I turn up into the middle line of the wave where the light looks like a handrail; I trail my fingers across the line of light and send tiny suns to the lip of the wave and down into the shallow trough. I kick my board forward in the

wave and dive off the back of the board into the churning white water: surrender. With a tug of my leash my board springs back, and I wade to shore slogging through kelp, grateful and with a dripping nose.

I walk the beach over the sand dunes held together by bunch grasses and ice plant, advancing toward the abandoned house made from a water tower. My board is heavy under my cold arm, and I wish I could go inside

that house and look out those big windows.

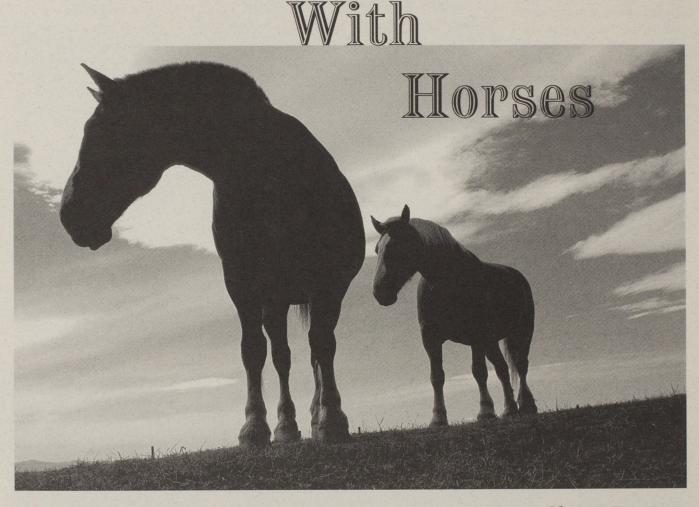
I think: I would wash those windows, remove the signs, fill the pots with flowers. I would hang a new door for the outhouse. I'd make strong coffee and invite the man inside sometime. We wouldn't have to talk—the cove needs to be witnessed. But his example, the way he's always there watching, tells me: this house, this cove, is not a place I can own or change. This place owns and changes me: a piece of driftwood picked up by the tides and sculpted by the sands and waves.

I draw the waves and I am there, body and soul; I am here stranded inland, stranded in the cove. I feel the pull of tides in my body.



photo essay

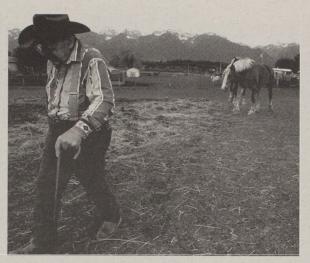
Teaming Up



Photos and Text by Danielle Gardner

Two summers ago, I stumbled onto a magazine strictly devoted to the farmer wielding the reins. The pages of *Small Farmers' Journal* are filled with anecdotes and information dedicated to farming with horse power. Perusing it, I discovered that, aside from the well-known Amish, many farmers still work in the old way—with animal power. Horses, mules, oxen and donkeys are bred and trained for the field, readied for a life in front of the plow. I had many questions about these farmers, but first and foremost was "Why?" I wondered what motivated them to farm in the old way. So, I set out to find my own answers. Through the summer and fall of 2002 I visited with and photographed two farmers in western Montana working in different ways with animal power on their farms.



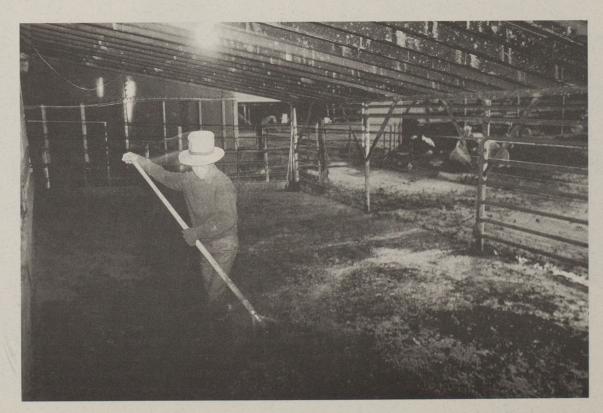


The stunning Mission Mountains loom high to the east of Forrest Davis' ranch. Born on his parents' horse-powered ranch in the 1920's, Davis never saw a reason to change. The economic and lifestyle benefits of horse power that afforded his family some measure of security during the Depression era kept Davis with his Belgian draft horses. In later years, while most farmers traded in their draft animals for tractors, Davis hung on to what he grew up knowing. "I love to work horses, it's a lot more interesting. It's a great satisfaction to take a pair of two-year-olds and turn them into a good honest team."











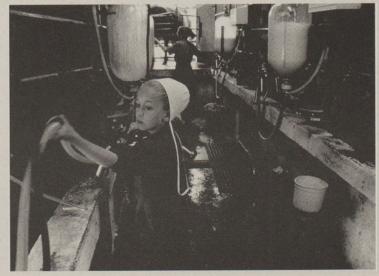
Animal power for hundreds of years. He grew up on a mule-powered farm in Illinois and now farms in the Mission Valley with a team of Percherons. Kauffman says, quite simply, that he uses horse power on his farm for spiritual reasons: "It's basically a choice, a way of life that we feel is in harmony with the way we believe in serving God—a way to maintain a simplicity of lifestyle." However, Kauffman says the benefits that horse power offers extend beyond their faith. He values an ecologically balanced farm, children well educated in the importance of hard work and respect for animals, quiet time for meditation behind the plow, and the pleasure of living in harmony with animals and plants fostered by the more gentle farm process of horse power.

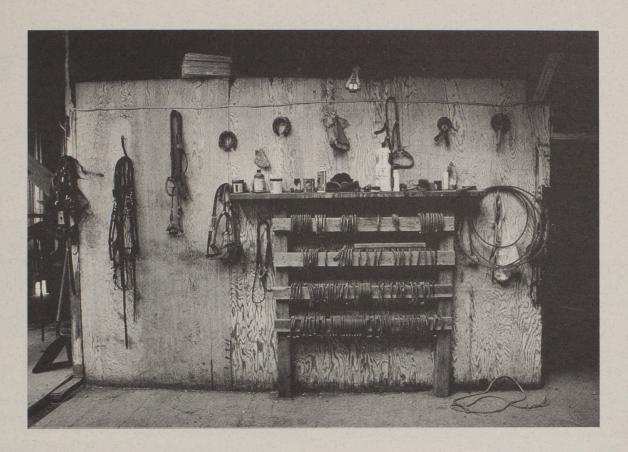


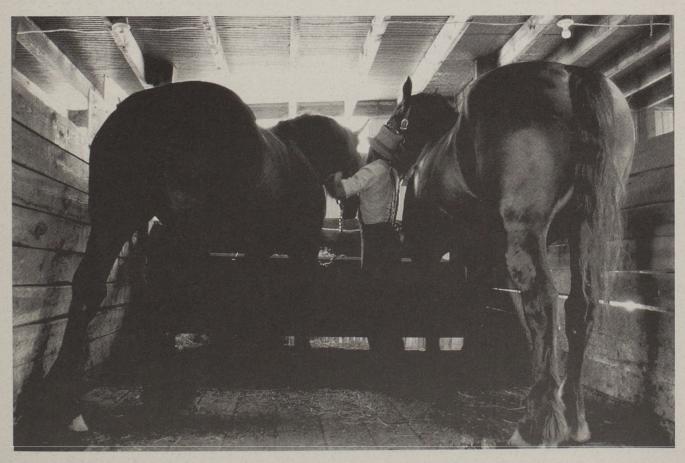
Camas Spring 2003











Camas Spring 2003
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Where Fire And

By Katharine Hyzy

The Hawaiian islands are a long way from anywhere else. They are, literally, the most isolated land mass in the world, with about 2,400 miles of Pacific Ocean between the island chain and any other significant chunk of rock. As such, the islands didn't receive many visitors until the advent of human tech-

nology. Of the birds, stray seeds, spores, and insects who made it ashore from the distant mainland—probably no more than one species every thousand years—scientists estimate only one in ten had the moxy to adapt, survive and flourish. Once here, they evolved into new forms, suited to the ocean breezes, mountain slopes, and volcanic soils.

Heading down to the coast in Hawai'i Volcanoes National Park for the first time, my mind struggled with the suspicion that I could see the curvature of the earth, looking out at a horizon that's over 180 degrees worth of ocean. "Vastness" took on a new meaning—a blue-tinged, ephemeral line in the distance that hinted at things I couldn't comprehend all at once. I was one of millions of visitors each year, here to adapt and flourish for a few months, working on native plant restoration projects in Hawai'i Volcanoes National Park.

"That's amazing..." was all I could muster, unable to tear my eyes away from the cliffside view long enough to actually converse.

"Huh? Oh, yeah, it's pretty clear today. No vog," Matt,

"When we see the human threat to the irreplaceable treasures of the Hawaiian environment, we may recognize that we are looking at the similar menace to the natural world everywhere."

-W.S.Merwin

the nursery manager for the park, said, referring to the mix of fog and volcanic gasses. He was driving and scanning the inland vegetation at the same time, and not much in the mood for conversation. Verena, my housemate and fellow volunteer, smiled politely but said nothing.

Matt was looking for a *wiliwili*—a native tree that grows in the dryland forests that once covered the leeward sides of all the islands. In the springtime, the spiny yellow-barked branches burst into clusters of orange-red flowers, each shaped like a parrot's bill. Many locals grow them as ornamentals in their yards, both for the flowers and for the shiny orange seeds, which are used in leis. When strung by a master of the craft, leis featuring *wiliwili* seeds can fetch hundreds of dollars. Perhaps for that reason, it's difficult to find the trees anywhere on public lands where people have easy access.

In order to grow more *wiliwili* for the park, we needed to find a local seed source. On Hawai'i, "local" has a pretty narrow definition. A few meters of elevation change or a difference in the direction a slope faces can create a distinctly difference

ent climate, and the plants are extremely adapted to their homes. Fetching *wiliwili* seeds from the neighbor's yard might lead to more trees in the park, but those trees would not be perfectly suited to the ecosystem and might be less likely to survive the trauma of transplanting. More importantly, we wouldn't be preserving and protecting the genetic treasure of thousands of years of adaptation to these particular cliffsides overlooking the sea.

Matt looked frustrated, a furrowed brow visible beneath the brim of the khaki visor that held both unruly blond curls and tropical sunlight in check. "Rhonda said we couldn't miss it, that it was visible from the road..."

"Maybe we've gone past it?" I ventured, too new to have any clue about the lay of the land.



Water Meet

Looking Ahead From Atop Hawai'i's Volcanoes

"Yeah, I'll turn around. But keep looking for it up there." Verena and I dutifully squinted up the slope at an unchanging sea of exotic grasses and shiny black lava flows. As we drove over a small rise in the road, I spotted a skeletal tree with golden bark about a half-mile away. "Wait! Could that be it?" I said.

"Could *what* be it?" Matt growled, stomping on the brakes and swerving for the shoulder.

"There, that tree way up there. See the yellow?"

"Up there? On top of that *pali*?" He squinted. "That's probably an *ohia*, but I'll look." Verena and I gratefully bailed

out of the truck and stretched our legs as Matt clambered on top, striking a pose worthy of Captain Cook as he pointed his binoculars far inland.

It was utterly silent, and hot, the heat rising in waves from the pavement-like black *pahoehoe* lava. After a few moments, he leapt from the roof, looking dubious.

"Maaaaaybe. I'll go check it out. While I'm at it, why don't you two do some seed collection down here?"

We all grabbed our packs and set off, Matt heading upslope along a rough flow of jagged, clinkery a'a lava, the two of us remaining on the coastal flats. After an hour or so of rambling around and gathering seeds, a distant whistle reached my ears. I turned toward the truck and saw Verena and Matt waving me back. My seed bags were both half-full, a decent enough haul for my first day out here. The sun and wind were giving me a headache, and my eyes felt as though they'd been professionally sandblasted. The shade of the truck was sounding more than welcome.

"Good eyes!" Matt exclaimed as soon as I was within earshot. "It was a wiliwili!"

I felt a warm blush of pride spread across my cheeks. "Hooray! Did you get any seeds?" Matt held up a small Ziploc bag containing about 20 red-orange seeds shaped like small kidney beans. We all grinned and toasted one another with our water bottles.

It takes a long time for a crack in the earth's crust to build up enough rock to reach above the ocean's surface—but once it does, the rocky mass can grow rapidly. Kilauea, a volcanic crater about six miles wide, was the most active source of new acreage until the 1980's, when Pu'uO'o, a lava-spewing vent straddling the eastern border of the park, began gushing toward the sea. But Hawaiians still honor Kilauea as the home of Pele—their tempestuous goddess of creation and destruction who tosses lava skyward when she is displeased.

Hawaiians believe that in long ago days, Pele was restless and moved from island to island, visiting her brothers and

sisters, getting into fights and throwing fiery tantrums that resulted in a lot of lava. Interestingly, though these islands have only known human habitation for a few thousand years, the story of Pele's migration perfectly matches the slow march of islands away from the "hot spot" in the crust that birthed them. Kauai, said to be her first home, is the northwestern-most island of inhabitable size. Hawai'i, or the Big Island, is several hundred miles to the

south and east—directly over the hot spot, and where she currently resides.

Perched overhead in an *ohia* tree, a brilliant red *apapane* chirped and whistled his appreciation to the sunset at the Kilauea Caldera overlook in Hawai'i Volcanoes National Park. As I watched, he poked his beak into a red, pompom-shaped *lehua* blossom, sipping nectar through his slender, pointy, curved beak, one dark eye returning my gaze. Scientists theorize that the *apapane*, along with nearly 30 other species and subspecies, descended from a common ancestor—possibly some luckless flock of finches blown off course a million or more years ago. Finches elsewhere typically feed on seeds and insects, with short, stout bills built to crush carapaces and husks. But on Hawai'i, they shapeshifted over the ages, transforming into an incredible array of life forms sprung from one small source, each tricked out in different beaks, colors and sizes reflecting the needs of their particular lifestyles. They are now so different

On Hawai'i, "local" has a pretty narrow definition. A few meters of elevation change or a difference in the direction a slope faces can create a distinctly different climate, and the plants are extremely adapted to their homes.

What we seek and find through the

process of restoration ecology is the

restoration of ourselves. . . it's the

next necessary step in our cultural

evolution. Without this humility,

our species is sure to find its place

as a thin band of the fossil record,

while exotic faya trees and cock-

roaches transform themselves into

something beautiful.

from the original finch that they constitute their own family the Hawaiian Honeycreepers.

The apapane continued to chirp and flit his tail overhead, dipping his beak into flower after flower on the scrubby ohia tree by the picnic table. Legend has it that the humble ohia and its beautiful lehua blossoms owe their existence to Pele. Long ago, a strong young man of royalty fell in love with a common girl. As it happened, Pele found this young man attractive herself. One day, she appeared to him as a beautiful young woman and asked him to marry her. He refused, although he knew she was Pele, saying he loved another. Pele was furious, and in her rage, she turned him into an ohia, with thin, knobby limbs and rough bark, bound forever to her through roots buried in her soil.

The girl, despondent at the loss of her lover, appealed to Pele's brothers and sisters to undo her work. Fearful of Pele's

wrath, they refused to do so but promised to unite her with her lover for all of eternity. She became the lehua blossom. Now it is said that if you pick a lehua, separating the lovers, it will rain as the gods weep for their part-

The source of this myth is unknown and a little dubious. Before the social upheaval wrought by the arrival of Europeans, it was a crime punishable by death for the shadow of a commoner to fall across royalty, so romance between the two was an unspeakable breach

of taboo and unlikely to be the subject of myth-making. Locals suspect it was a story the rangers started circulating to keep park visitors from picking the blossoms. Whatever its origins, the story keeps the flowers on the trees, feeding the apapane.

ost visitors from the mainland notice little of what is unique to the islands. They are overwhelmed by the tropical lushness of the rain forests, stunned by the perfect crescents of sandy beaches. The story of invasion and loss gets lost amidst everything else. Working in the park, that's the story I heard every single day.

"So, what are we looking for out here again?" I gazed helplessly at the brownish expanse of grass and shrubs.

"Um... we are looking for ze Dodonaea seeds. They are ah, bushes, like this? Ja, and the seeds, when they are ripe, are red." Verena's heavy German accent made the scientific name of the unimpressive-looking shrub sound far more musical than it did in English. "And we also need ulei, these here. Their berries are white when ripe." She used her foot to gesture at a woody vine studded with small white flowers creeping along a crack in the rock. "I'll go up thisaway," I said, gesturing inland toward a series of hillocks studded with the Dodonaea. She nodded and turned toward the coast, her long, blond ponytail catching in a sudden fierce gust of hot, dry wind.

I wandered off, zigzagging along the base of the bluff. Still unsteady walking on lava flows, my feet caught in crevices and stumbled over unexpected knobs hidden beneath grass. I quickly learned to keep one eye on the ground. The wind sang in my ears as I moved from shrub to shrub, plucking papery reddish clusters of seed husks from the Dodonaea, trying to stuff them into a Ziploc bag before the wind ripped them from my hands. It was easy to see how they'd arrived on the islands, and to understand why they grew everywhere here. The ulei, however, were more of a mystery. The blueberry-sized white fruits didn't seem like oceangoing vessels. I squished one open in my palm and found a heavy mass of hard, triangle-

> shaped seeds-a great Their ancestors probably some feathered traveler.

Today, the islands are home to a heartbreaking scale of loss. Though the plants I sought were not endangered, the coastal grassland ecosystem was. Only a few patches of the original plant community survived anywhere on the island. Native bunchgrasses, not adapted to live with grazing animals, were

mowed down by feral goats and herds of cattle introduced shortly after Captain Cook's arrival in the 1700's. Pigs caused further disturbance, eating any succulent native plants and rooting deep trenches in the shallow soil as they searched for grubs. All three helped to spread the seeds of exotic grasses and weeds, which rapidly replaced native grasses and flowers. In this gentle place, only the hardier woody shrubs are able to hold their own against plants originating in rough-andtumble places like Africa. The seeds we gathered were destined for plots in which we would attempt to determine the best way to get rid of the invasive species and re-establish what belonged.

Standing out on the plain, surrounded by miles of a virtual monoculture of exotic fountain grass, it seemed like an impossible task. Given that approximately 50 new plants, animals, and insects now arrive uninvited on the islands each year, it is an impossible task. The best hope for the natives of Hawai'i is for scientists to determine the most effective ways of slowing the spread of exotics—and how to protect the few remaining patches of pristine habitat. But we will never stop the transformation of these islands.

meal for a big bird. arrived in the gullet of That evening I walked out to Waldron's Ledge to watch the night skies. I don't know who Waldron was, but he had good taste in ledges. From atop a sheer cliff of fractured columnar basalt, I looked out across Kilauea's depths, the swelling bulk of Mauna Loa to the north a shadow against the stars. The ancient truth of the Milky Way was undeniable, the vast, velvety, blue-black sky split in two by a wild splash of stardust. Constellations were not where I'd left them a month ago in Portland—Orion wheeled directly overhead, and the last star in the handle of the Big Dipper was nearly obscured by the horizon. Lyra and Cygnus sparkled clear and bright, but other constellations were difficult to discern against the bright backdrop of all those other stars.

Most evenings, the vog from the crater obscures the skies, but it was a rare still evening and the vog hung low in the crater. Kilauea was transformed into a luminous, milky lake. I lay on a damp, chilly picnic table, watching as the headlights of an occasional car driving along the far rim caught in a few stray tendrils rising from the crater. The cold night air soothed my wind- and sunreddened cheeks.

It had been a long day, full of information, and I felt like a sponge nearing saturation. Between Hawaiian, English, and Latin, nearly every common object in Hawai'i has several names. Hawaiian only uses 13 letters—all five vowels and a handful of consonants, along with a confusing array of accent marks. Without the rough edges of

all those consonants to catch in my synapses, the Hawaiian names seemed to wash right through my mind. Since my work in the park consisted of helping to collect, propagate, and monitor native plants, this was a big problem. And, not being a botanist by training, using the Latin name instead of Hawaiian or English didn't help matters. But the cadence of the islands' native tongue seemed fitting somehow, as if the softer, vowelladen words with their sudden glottal stops reflected the gentleness of the place, interrupted frequently as it was by Pele's violent spewing of rock, tsunamis, and endless thunderstorms.

As one of Pele's newest neighbors (my house in the park was at most a quarter mile from the ledge), I was trying my best to learn her language. My stumbling recitation of names and words joined with the night's chorus of crickets.

"MOW-kah...Hah-lee-MAH-oo-MAH-ooh...ha-lah-PEH-pey...KEY-lah-WAY-uh...nah-OOH-looh...POOH-oohUH-oh..." Even though I was alone, the last one made me break into a self-conscious giggle that I quickly tried to stifle. Although Pele is honored as the goddess of both destruction *and* creation (after all, she's made the state of Hawai'i the only one in the union that's actually *adding* acreage), most stories feature her ability to incinerate anyone who mocks or even dares to disagree with her. Given that Pu'uO'o has been sending lava down to the ocean for over a decade now, it didn't seem like a good idea to indulge in sophomoric entertainment over the name. I didn't want to find myself in the path of Pele's wrath.

I thought about her a lot on my walks home from the nursery at the end of the day. She is everywhere on the island. Stories abound of Pele hitchhiking, canoeing across hidden

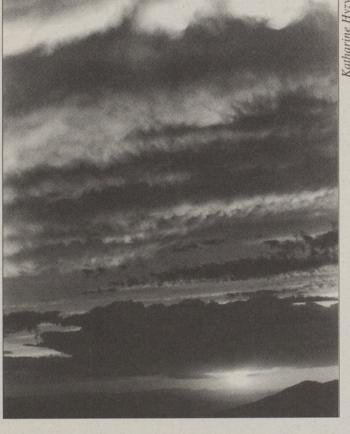
> coves, appearing on remote beaches. She is the power of molten rock incarnate, carrying both its insatiable appetite and the wisdom of the ages. Encounters with her are always a risk, but if she is pleased, she will tell her secrets, grant wishes, reveal the future. Somehow, the story of Pele's migrations accurately reflected five million years' worth of geological history. Sitting there next to the crater in the dark and feeling an odd sort of sentience in the shadows around me, I was convinced that Pele had told the Hawaiians.

I could see her, dressed in a loose skirt of red *kapa* cloth, seducing some handsome youth, her red lips whispering tales into his long, curly, dark hair as he struggled to find his way through the currents of terror and desire pumping

through his red, red heart. I wondered if she had told him too that they must treasure the beauty of the land, from the mountain to the sea, that she had made all of the beautiful birds and richly colored flowers, the foodstuffs of the forests and the fish in the sea—that all of it had been made just for him. Though he might chase the stars across the ocean, he would never find another place like this one, and such a gift from Pele should not be taken lightly.

Did she tell him of the coming of the great ships, of stars that would race across the skies and great, gleaming seabirds that would spit weak, pale-skinned men onto the shores? I think she did, for Pele is reckless in love.

Yet later, racing down to the sea, astonished at his luck for having survived Pele's ardor, her fleet-footed lover outraced his memories of their encounter. Trying to keep pace, these memories could not stop once they reached the shore and were continued on page 40

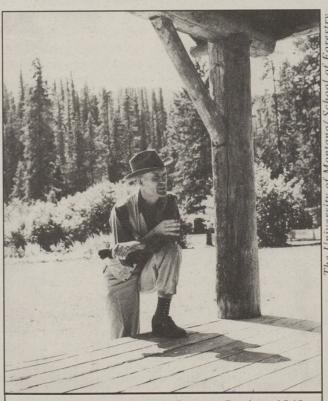


The Old Man of the Woods

A Conversation With Bud Moore

By Maureen Hartmann

B ud Moore is a 40-year veteran of the Forest Service and a native of Montana's Bitterroot Valley. Through his life spent hunting, hiking and working in much of the wild country of Montana, he developed a strong land ethic. In his 1995 book, *The Lochsa Story: Land Ethic in the Bitterroot Mountains*, Moore advances a new vision for forest stewardship—a strategy known as ecosystem management—that represents a departure from the compartmentalized, resource-focused, Forest Service regimes of the past.



Bud Moore at the Powell Ranger Station, 1949

In my visit with Moore at his home in Condon, a small town about 60 crow-flight miles northeast of the Bitterroots, he explained the implications of ecosystem management, in particular as it applies to his 80-acre home in the Swan Valley, which he affectionately calls the Coyote Forest. Bud maintains a brisk flow of wood products from his land while preserving its ecological integrity using a small, on-site sawmill.

Bud puts his vision to work in a broader context, too. He is a founding member of the Swan Ecosystem Center, a partnership between the Forest Service and local residents, whose current work is to prepare an Upper Swan Landscape Assessment. This large-scale assessment will illustrate how one landowner's management practices can affect the resilience of the entire ecosystem. Moore maintains that human communities are a part of, not apart from, the landscape.

In a time when many rural communities

in the West are facing economic, social, and environmental challenges, the need to bridge the gulfs between various interests is as important as ever. Bud Moore's vision for both the land and its inhabitants offers a way forward. **Maureen Hartmann:** Can you talk about your book, *The Lochsa Story*? What motivated you to share the history and story of the Lochsa country?

Bud Moore: I grew up in Montana's Bitterroot Valley, and at a very early age I began to probe from home and go into the mountain country. What motivated me to do that was my contact with and the stories told by the old timers: the trappers, the rangers and the people at our homestead. I had tremendous respect and admiration for those early Forest Service people—I thought they were the best people on earth and I just have never changed my

mind; I still think so. Later, I became a Forest Ranger and was in charge of the whole upper Lochsa. It was in that process that I became pretty much who I am.

Back then I never thought so much about writing a book; it came later. Every time I'd get ahold of one of them old timers, man, I'd grill 'em. I kept good journals. That helped me a lot in writing the story. I decided and knew that this was my place on earth. I was locked into it and I didn't want to see it lost. I was trying to capture it and get it into the forest history files. Although I spent time away from the Bitterroot country, the Lochsa never left me. It was my anchor point on earth, really.

I took a correspondence writing course and got a B! I thought well, by golly, I could do this. The idea started there. I knew it was a big deal for someone who is not really a writer. But I wanted to tell the story of the people and land in the Lochsa country—from first discovery on through.

I wanted to talk about what happened to the people and land and how they affected each other. Then I wanted to draw some meaning from that . . . something that we could learn. That was my theme.

MH: In your book, you advance the idea of ecosystem management. How does ecosystem management differ from traditional resource management?

BM: The idea of focusing on resources, well, it tends to compartmentalize policy. In other words, you manage for white-tailed deer, commercial forests, or you manage for some watershed, or some winter range. All of this is done in compartments. Specialists tend to but heads on the same piece of land . . . the same place . . . the same ecosystem! That is the mode of resource management; it is a compartmentalized approach.

Now when it comes to ecosystem management, the idea is to turn and give first attention to the land, the place. What makes the place work? What are the linkages—the things that hold this place together? When you do something here, how does it affect

something over there? If we are to use, enjoy, and sustain all of the parts—the compartments, which are the resources—we have to, as first priority, take care of the whole place. So now we are going to focus on the whole place and keep that place healthy and vibrant and maintain some of its spirit.

Where the resource management idea led us was to a zoned landscape via Forest Plans. Now, this gives timber number one priority, but there are lots of other values out there. If you take a particular timber sale on the National Forest, they admit that they are going to damage some of the other natural resources, but we'll try and mitigate them the best we can.

Some people think that ecosystem management will settle all these arguments about how to use the land and the resource . . . you know, the itimber boys and the environmentalists, and hunting clubs, and so on. They think the arguments will melt if you look at it from an ecosystem point of view. But there are many different ways of doing things. That will always be with us—the argument about what is the best way. But I think there are two foundations to ecosystem management: one, protect that ecological integrity. That is one thing you have to do no matter what kind of a use option. And two: keep it sustainable. Those are the two basic things

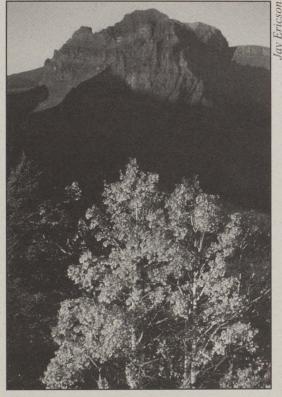
MH: How do you advance this practice on your own property, the Coyote Forest?

BM: What we've got here at the Coyote Forest is the pond ecosystem, the riparian ecosystem, and the forest ecosystem, which are all unique in

themselves. That's what you're looking for in all of this—how is this place unique from the next? How will this area react differently to certain applications than another place?

When I go to make a plan for this place, all of this is what I have to look at and map out—maps are very important. I am mapping out all of the connectivity that I can, the connectivity to the pond and beyond.

This is where the Upper Swan Landscape Analysis comes into play. We've already mapped the broad ecosystem, the broad connection. It allows us to stand here on this place, the Coyote Forest, and realize how important this place is to the rest of the Swan Valley landscape. This is something we've never had before in the valley. You manage your 80 acres in a way that compliments surrounding lands. I need to consider how Plum Creek and the Forest Service and other private landowners manage their land as well. And that is why I feel that the Upper Swan Landscape Analysis is so important for the Swan Valley. When it is complete, every landowner can see how what he or she does on his or her place affects everyone else.



MH: Traditionally, corporate ownership of lands in the West has resulted in a checkerboarded landscape that has increased habitat fragmentation. How does corporate ownership of land fit into your vision of managing 'whole' ecosystems rather than fragmented parts?

BM: Corporate responsibilities have come along differently than those of the Forest Service because federal laws set the basic direction for public land management. Plum Creek, which is our big corporate owner here in the Swan, has a direction that is

quite different. The same laws do not bind them. They have been in a commercial forest mode. They want to practice the kind of forestry that will maximize the growth of timber to go to their sawmills. Now, in my thinking, I always separate the public land from the corporate land just for that reason. That doesn't mean that one has to hurt the other; after all, they're neighbors. And we both surround communities that are dependent on us. So there is an ethical corporate responsibility there that goes beyond just their desire to keep their sawmills running.

The idea of focusing on resources, well, it tends to compartmentalize policy. In other words, you manage for white-tailed deer, commercial forests, or you manage for some watershed, or some winter range. All of this is done in compartments . . . when it comes to ecosystem management, the idea is to give first attention to the land, the place.

Here in the Swan we are in a new ball game. Because the land values have become so high here, trying to manage for timber is no longer very significant. Plum Creek can turn this value around and get tremendous prices per acre now. So, with that in mind, Plum Creek is selling out some of their property. They can generate more land base by selling here and buying elsewhere. And of course that is the privilege that they have. But then the ethics gray a little when you look at that a little deeper. What they are doing on that land is they're cutting all the merchantable timber off of the land they are going to sell.

The conflict goes something like this: We have lots of people in the valley here, and they love it so much and the quality of life that they can get that they just don't want to see the valley change. But we don't know how far Plum Creek will go with these sales. What I think is that they're probably planning on selling out pretty much everything in this valley. Now, if that all happens with the prices so high, the locals don't have a chance. It'll turn into big, estate-type places. It will have a daunting impact on access, wildlife, and the naturalness of the valley.

You can sum that up this way: While a lot of us here are putting easements on our places to prevent subdivisions because we want to do our part to keep the valley intact, the big company is selling out for residential purposes. And on top of that, they are cutting all the big timber!

It's a real dichotomy. If you look at some places, I'm sure there is nothing wrong with having some more residential areas. It's inevitable. But to go too far with that will leave us vulnerable. If the Plum Creek lands are sold to big estates, we'll lose the ability to work the lands and we'll lose our access. Those are all big things.

MH: In your book, you say that you are convinced we can sustain a brisk flow of wood products off of the Lochsa's forests while at the same time maintaining the landscape's ecological integrity. How can we maintain a working landscape and advance ecological stewardship?

BM: They are not in direct conflict at all, not if we take this Ecosystem Management approach. We need, as first priority, to maintain the land's ecological integrity. Instead of being timber cruisers we need to be ecosystem cruisers.

If we take care of the place first and keep its basic value, which is so important, natural resources can still come off, and at the same time we maintain the naturalness of rural communities. We've got to bring [resources] out. We need some of the stuff that's out there in the woods to have jobs and live, too.

But taking resources off won't be the primary purpose. Instead, resources will be the outputs from considered stewardship of the land. We won't be out there managing trees, game, and so on individually. You're not going to have 10

million board feet of timber very often. You're going to have more small stuff, a lot of it rehabilitation, and we've a lot of that to do. We'll be out there taking care of that whole place, making sure its ecological integrity stays intact, its spirit. Then we'll look at resources as the output of this kind of stewardship. That is a big challenge. But I know we can do it.

This place right here [Coyote Forest], I've taken the logs for all these houses here, I've taken wood out of here just to help nature a little bit, and it's a pretty nice-looking place. There is 20 times the [forest] mass on this place than when we came here 30 years ago, and we've taken a lot out. I think that's the difference. If we're going to use and sustain these resources, then we're going to have to take care of the whole place as first priority.

When I look at what I do and the way I look at the land—here is my chance to walk the talk of the Lochsa story. That is my personal challenge. And to help walk it far beyond my property. I think we're doing that with the Swan Valley landscape analysis. We're setting the stage so everyone can walk the talk of the Lochsa story if they choose.

MH: What role will fire play in ecosystem management?

BM: Fire was what got me into this ecosystem management idea. Anybody who works in these woods can see that fire is a natural thing. When I got into fire control, fire was public enemy number one. Man, I put 'em out in snowstorms! There is a lot of political rhetoric and even blame on some of us old timers who put out too many fires for too long. And I accept that blame. Our

mission was single-purpose back then. We didn't know what these forests were going to be used for.

Then I began to rethink things. And so, for the first time in Forest Service history, we set up an area in the Selway country which was the first fire study where we would control no fire. We wanted to allow them to burn and test out our knowledge of fuels.

Trying to get fire back into the ecosystem would reinforce your feeling that there is a lot of stuff needed here. Fire is both good and bad. You don't want your house to burn down, naturally. But you don't want the forest that is dependent on fire to dry up, either. So you have to think in terms of two things.

We're [the Forest Service] getting all kinds of money for fire now, and the people in the agencies are spending this money to

fireproof the forest. But whenever a single-purpose program goes driving through, it's got a high potential to do more basic damage than good. Money comes in boxes; it is still compartmentalized. If the managers know the whole picture, they can spend the money pretty darn wisely. But if you have another manager who doesn't think in the big picture context and still sees things in compartments, then they are more apt to make mistakes. And so whenever I see a big program in fire, or silviculture, it's a warning signal to me. I have lots of experience on the bad side of that. You gain a little, but you lose a lot. too.

What I recommend we do with all this fire money—and I think we're trying to do it this way—is let's clean the woods up good around your towns and homes. We don't want them to burn up.

We'll create an ecosystem boundary. Then when we back out into the broader forest this fire threat becomes less and less of a problem. We want to reduce the fire threat in the forest but not to the point where we damage some other value.

MH: In The Lochsa Story, you write: "We have become a divided people with respect to the use of the public commons. Yet we—the government and the people together—brought ourselves to this situation." How do we bridge the disconnects between the divided public and the government agencies so that we can arrive at a future where we all live better with the land?

BM: Well, I think there are some good signs now. I sense a movement now where people realize that no one is going to win by civil wars amongst us. Even the judicial gang is getting frustrated. I'm pretty encouraged that things are popping up that I had nothing to do with . . . or maybe I did, I wrote that, didn't I [smiles]?

I think we're maturing right alongside this ecosystem management idea. It's all linked together. We're maturing as a society and as well as a public agency. I'm pretty hopeful. In the meantime, what we can do in local communities is just gather up that spirit and promote it wherever we can. It's going to be pretty tough. There is always someone way out on the end that I don't believe we'll be

able to convince. What I decided several years ago is that I won't spend any time or energy on anything that will further polarize our community. That is my deal; that is my bottom line. So, I won't get into arguments with hard liners that will have it only their way. But as soon as I find something that we can get together on, I'll work with all the energy I've got. I see more people working together. I see a lot of it going on already. This is another step in collaboration that makes sense.

You couldn't get more participatory than we're doing right here in the Swan today. Look who is doing the landscape analysis for the Forest Service—we're doing it! We've come a long way. Look at the Swan Ecosystem Center. It is a partnership between the Forest Service and the citizens. That takes us so much closer to the



decision table when big decisions are made. The Swan Ecosystem Center is institutionalized enough now, so we use it as our way to work through things that we think are good for the valley.

MH: What is your hope and vision for the future of rural communities in the West?

BM: I think the communities in the West have a big future, but a lot of it is going to be dependent on saving our rural lifestyle. If we can hold onto the lifestyle we've had for the last 40 years, we will do nothing but prosper. The lifestyle and the closeness to nature are the big amenities that attract us. Just look at the price of land here. Where that value comes from is from a good, healthy, close-to-nature, semi-natural rural community. It wouldn't be here if we had roads all over these mountains and over into the Bob [Bob Marshall Wilderness]. But if we continue to degrade it, let it become a colony where the resources that are here are allowed to fall and the major part goes somewhere else, then we're just another place.

I think the future of rural prosperity in Montana and probably throughout the West is probably based on how well we care for these amenities. As long as we in the rural areas can hang onto our spirit of place, I don't see anything but a positive future.

continued from page 17

"Just one pellet of lead is enough to kill a condor," says Olson. Condors feed in groups, but it is the most dominant condors who eat first and most of the carrion. Therefore those are the ones who ingest most of the lead, killing the best birds and leaving the weaker ones to continue the genes. With so few condors in the world, the loss of a single bird is a blow to the entire species.

According to Osborn, every condor they have recaptured for annual check-ups so far has tested positive for lead in its bloodstream. Condors "tank up" on carrion, storing it in their crops for several days because they don't regurgitate non-digestible material as often as raptors. Ingested lead pellets or fragment are easily transferred to the bird's bloodstream. As Osborn and Parish recapture the condors, they field tests them for lead. If the reading is high the bird is taken to Page, AZ for an x-ray to see if it contains any lead fragments. If the condor does have a visible lead fragment, the condor is taken to the Phoenix Zoo to either have the fragment flushed or surgically removed. However, if any bird tests positive for lead poisoning it must undergo a Chelation treatment. This treatment is tedious for the crew and extremely painful for the bird. It is held in a flight pen for two weeks and given two shots a day. The shots strip calcium from the condor's system and leave it weak and stressed. Still, there are other worries. Condors with elevated lead levels in their bloodstream can also suffer incurable ailments such as brain damage, crippling, and sterility.

Putting a Barnes X bullet in the hands of every hunter would be a costly venture. But making people aware of the consequences of their actions can be done more quickly and more cheaply. Parish, Osborn, Olson and others are trying to make people aware of the condors. The entire P-Fund crew knows the condors of Arizona by number. Condor 116, one of their best males, was the first to die of lead poisoning here. "You know," says Olson, "these birds are referred to by numbers. But it doesn't take long before these numbers become their names and you can see them as individuals."

"Each bird has a distinct personality," adds Osborn.

It takes an extremely committed crew to drive all day over bumpy back roads only to find that the condor they sought moved two miles down river to another canyon, which is half a day away. They can sit or stand for countless hours peering through a shaky spotting scope into a potential nest site waiting for one glimpse of a condor leaving or coming. These people know that the California condor has a place in the world, and their goal is to ensure that the condors live to find it. Condors exist in the wild, according to Parish, because enough people wanted to see them there and those people responded by preserving them. As I watched three young condors explore true freedom for the first time, I could see clearly that the California condor belongs in wild places. Because dang, look

For more information on this project, please contact: The Peregrine Fund 5668 West Flying Hawk Lane Boise, Idaho 83709

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Ignorance Is My Co-pilot: On *Almost* Getting Away From It All

by Daniel Berger

As President George W. Bush makes his way through the world, he is followed by lies, deceit, controversy, shady deals, nepotism, and greed that flock around him like Alaskan black flies. Oddly enough, it seems only us so-labeled liberals, many Democrats, and uncooperative foreigners are able to see the swarm. The rest see him as a shining figure of justice, out to "rid the world of evil."

With his Iraqi war not 48 hours old, six other bug-seers and I cinched one last water jug, dry bag, and roll-a-table onto

our two inflatable rafts and floated away, deep into a wild canyon on a bloated desert river in the far American Southwest. We were far from Washington, D.C., where the bugs swarmed thickest, and far from the barren Iraqi desert, where the blood of Kurds, Shiites, Sunnis, and other faceless Arabs and smart bombs mixed with the sands of a bottomless history. We didn't believe in Bush's war because we were fearful of his true motives, and this was our peace movement.

E verywhere was spring. Five of us left a cold and wet Montana and drove for two days to where spring meant shorts and flip-flops. We rolled into Phoenix, met a couple more friends, bought plenty of food and beer, and headed east to the Salt River on the White Mountain Apache Indian Reservation. The first two days were short and, as far as running rapids went, fairly easy. By

the third, the river had been fed with enough muddy snowmelt to make for some formidable whitewater.

On the fourth day, we rested. We camped on a beach just under the canyon's high-water mark. In the morning, Jesse and I fried bacon and eggs and boiled coffee, and after breakfast I disappeared into the shade to browse a thick Park Service document on the ecology of the saguaro cactus. In the afternoon,

Alison, James, and I left for a hike. Away from the river's constant parlance, the silence hit us like a gust of hot air. We heard only the sound of our feet crashing softly into the gravelly bottom of a dry wash.

I led for a bit, stepping around the little cacti that nipped at my ankles. This was my first afternoon in shoes since we shoved off, and my feet felt suffocated, but the spikes and pins growing from the desert floor proved meddlesome. At one point, a teddy bear cholla cactus and a sprawling yucca trapped

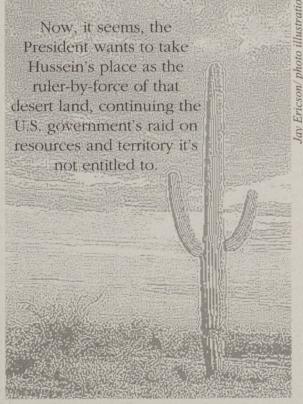
> me, and Alison made her way to the front of our little pack. James seemed content to hang back. None of us spoke. Instead, we hiked and listened to the sun, air, and slope around us.

From the river, a radiant green bathed...

here, it was hard to avoid supplied ping on blooming desert larkspurs ping and orange flax. We have thick stands of saguaro, which had completely captured my imagination. Carnegiea gigantean, according to Steenbergh and Lowe's Ecology of the Saguaro III: Growth and Demography, are succulent trees with woody skeletal trunks. Their seedlings rely on the shade and protection of nearby palo verde to grow in the dry, rocky soil. Saguaro can grow up to 40 feet tall and live several hundred years. When they die, their bodies fall like dead soldiers left to dry and rot on the battlefield. In my dry bag, I carried

another book, this one about the celebrated Apache warrior Geronimo, who led his people against the U.S. Army for 50 bloody years. When Geronimo surrendered to the unstoppable force of the Army not too far from here in 1886, these towering saguaros would have been half my size.

Survival for Geronimo was brutal. The U.S. government wanted his people's territory and the resources it contained.



No matter how many U.S. soldiers the Apache killed, more always replaced them. Geronimo was said to have scalped 49 white men, and he led the slaughter of countless others: Geronimo was a warrior. His nature and undying convictions made him a natural leader, and unlike the nemesis of today's U.S. government, Saddam Hussein, Geronimo's people gave him the authority to head their struggle. Hussein, on the other hand, took what didn't belong to him: control of the lives of the Iraqi people.

Now, it seems, the President wants to take Hussein's place as the ruler-by-force of that desert land, continuing the U.S. government's raid on resources and territory it's not entitled to. The Bush family is guilty of taking much that doesn't belong to them, and as I later discovered, that includes a very real part of this landscape.

eorge W. Bush's grandfather, former U.S. Senator and Army Jcaptain, Prescott Bush, stole Geronimo's buried skull as part of a college prank. The skull has since been used in weird

fraternity rituals. The college was Yale University, and the fraternity was the Skull and Bones Society, perhaps the most secretive society in the country (besides Cheney's energy commission a few years back.) Like the history of Bush Jr.'s dealings with the Texas Rangers, Arbusto Energy, and the Carlyle Group, this one gets stranger the deeper you look.

In 1918, nine years after Geronimo's death, Prescott Bush and six other Army captains were stationed at Ft. Sill in Oklahoma, where he was buried. As stated in a Skull and Bones internal history, entitled Continuation of the History of Our Order for the Century Celebration, 17 June 1933:

"An axe pried open the iron door of the tomb, and Pat[riarch] Bush entered and started to dig. We dug in turn, each on relief taking a turn on the road as guards.... Finally Pat[riarch] Ellery James turned up

a bridle, soon a saddle horn and rotten leathers followed, then wood and then, at the exact bottom of the small round hole, Pat[riarch] James dug deep and pried out the trophy itself.... We quickly closed the grave, shut the door and sped home to Pat[riarch] Mallon's room, where we cleaned the Bones."

The skull was taken back to the Tomb, the home of the Skull and Bones society in the middle of the Yale campus in New Haven, Connecticut, where it was encased in a glass box to be used during secret weekly rituals. When a group of Apache wanted to bring Geronimo's remains back to this part of Arizona in the early 1980s, the theft by Prescott Bush and his cronies surfaced. A tribal chairman managed to secure

a meeting with Jonathan Bush, W.'s uncle and Bush Sr.'s brother, in an attempt to recover the stolen remains, but the 1996 Manhattan meeting proved fruitless. The Apache haven't given up, and there is talk of a mass demonstration and even a peaceful invasion of force later this year to recover the skull from inside the Tomb.

So far as anyone outside the society knows, the skull remains there today, used by current and former members, which, by the way, include Vice President George Herbert Walker Bush and President George W. Bush, along with several high-raking CIA and Pentagon officials. But I didn't know any of this until weeks later, when a friend who, after hearing of my trip, introduced me to this bizarre story.

Back on that hike, deep in the canyon, I remained oblivious. The afternoon rolled by as the three of us followed the ridgeline to a rocky outcrop. We stopped at a high point to take some pictures and drink. Finally, James and Alison broke the silence trying to identify a few of the flowers. I went to

further inspect a saguaro. Its accordion trunk rose straight from the thorny, rocky soil up past my shoulders and well beyond my reach. This towering plant had to rely on less than ten inches of rain yearly, yet it was healthy and vibrant. Tucked back in this remote desert canyon, the saguaro has been left to live untroubled, and for that I envied it. For the week, I would emulate it. A few in our flotilla wanted to know if the world had changed drastically in the four days we were gone. But I didn't.

Far below us to the west, the

rest of our group enjoyed a lazy afternoon. To the east, the river slipped around an unnamed sandy beach like the one on which we camped. Beyond that it banked hard left, gaining froth and momentum, and dropped steeply into a narrow gorge. My throat tightened and stuck a bit as I considered the challenge that lay ahead.

Our time on the river was mysteriously devoid of little flying pests; if they were there, we couldn't see them. I didn't yet know of the Bush family's theft of Geronimo's skull, I had no idea what terror was being wrought by whom in the bigger world, and my ignorance left me untroubled — at peace. Oh, how I was spoiled!

On the walk down I grazed my left pinky and middle fingers on a barrel cactus just hard enough to puncture skin, and the sting was surprisingly intense. I held my hand with my other hand and cursed the little bugger that did this to me. Back in the wash, I found a seep in which to dip my fingers, and the cool water felt good.



Survival for Geronimo was brutal. The U.S. government wanted his people's territory and the resources it contained.

Salt: A World History

By Mark Kurlansky, Penguin Books, 2002

Tpicked up Salt: A World History in between a January trip to Timbuktu and a March excursion to the Great Salt Lake and adjacent salt flats. Timbuktu was founded as a center of trans-Saharan trade with salt as its principal commodity, and although I had not read Mark Kurlansky's much acclaimed Cod: A Biography of the Fish That Changed the World, or The Basque His-

reviewed by Jennifer Sutton tory of the World, I was excited to learn about how salt factored into the development of civilization. The premise of Salt is enticing, examining a single chemical compound, Sodium chloride, over time through economic, scientific, political, religious, and culinary lenses. However, the sheer volume of research that went into Salt, and the hunger in-

duced by reading about bacon, soy sauce and cheese, does not eclipse the disjointedness of this historical account.

Within chapters with clever titles, such as "Salt's Salad Days", "Preserving Independence", and "The Odium of Sodium",

Kurlansky conveys a point that history books have ignored: salt has played as much a role in the location of civilization as water. The reader learns that since prehistoric times, the two have gone hand-in-hand, as much of the salt used by humans has been derived from water. For me, the intricate descriptions of the different ways people have obtained salt was a fascinating aspect of the book. Across the world, humans have responded with what their geography has thrown at them. In drier climates, ocean water evaporates on shores, or sebkhas were formed from dried-up lake beds and people merely scrape salt from the surface. Brine from the ocean or natural springs was piped in bamboo and tree trunks, and then evaporated by the sun in clay pots. Since the Iron Age, brine has been boiled in

large, shallow pans until crystals precipitate out. The phrase "back to the salt mines" evokes the hardships faced by miners, who, often as slaves, have retrieved the substance from underground deposits throughout the ages.

Kurlansky's use of illustrations enhances the descriptions of salt production and human society. An engraving from the Middle Ages shows chained prisoners powering a large wheel like rodents to pump brine in Salsomaggiore, Italy. On the other end of the social order, a drawing of the Grand Hall made entirely of salt within the Wielicczka salt mine shows how the Polish Crown used the mine to impress guests. Kurlansky jumps back and forth between time periods and references to different peoples, so the maps he includes are helpful in visualizing trade routes described in the somewhat unorganized text.

Perhaps in writing *Cod*, Kurlansky sparked on the idea for this latest book because of the importance of salt to the fishing industry. Whether it is carp in Egypt, herring in Scandinavia, murex in Phoenicia, or anchovies in Catalan, Kurlansky demonstrates how access to saltworks was crucial for trading. *Salt* focuses mostly on European, Mediterranean, and Asian trading of preserved salted fish. Exploitation of this resource both made and broke city-states and empires during the last 2000 years. The stories of conquest and competition are accompanied by recipes and cooking advice from the likes of poets and presidents for delicacies from sauerkraut to caviar. The recipes elicited both laughter and revulsion from me, and I silently thanked whoever invented modern refrigeration.

In trying to ensure that the reader not miss salt's impor-

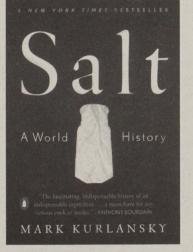
In trying to ensure that the reader not miss salt's importance in history, Kurlansky often seems to over-credit the substance. Two of the more outlandish examples involve ancient China and colonial New World. In discussing the accomplishments of Li Bing, a Sichuan governor, hydraulic engineer, and salt genius living around 250 B.C., Kurlansky writes, "The uni-

fied state [of China] was the culmination of centuries of intellectual debate about the nature of government and the rights of rulers. At the center of that debate was salt." As Kurlansky tells it, centuries later not much had changed. "The history of the Americas is one of constant warfare over salt. Whoever controlled salt was in power. This was true before Europeans arrived, and it continued to be the reality until after the American Civil War." The reader is left hoping Kurlansky meant to be humorous with such overemphasis, but suspicions of salt-serving cheesiness linger.

A justly emphasized subject was the prevalence of salt taxes, a running theme used by Kurlansky to demonstrate the commercial and social implications of the salt trade. Like many resources, salt has been taxed through-

out history as nation states attempted to gain monopolies. In France and colonial America, salt taxes helped to fuel revolution. China taxed the transportation of commercial salt. "To cross Hubei Province, one had to pay forty-two different taxes." The account of how the development of a British salt tax and policy in India brought about the ascension of Gandhi is truly illuminating.

All of the information in *Salt* is interesting, and one may marvel at the research behind it. It is a thorough account of the substance's place in history. But the author's propensity for jumping around and for corny salt puns made this book a difficult read for me. If the purpose of *Salt* was to convey to the reader the importance of NaCl in developing the world as we know it, then Kurlansky certainly succeeds. Despite its organizational flaws, *Salt* is a good read. At the very least, it will make you hungry.



continued from page 31

dashed to tiny fragments in the ocean. Perhaps a gnarled old fisherman, casting his handnet out from the rocks at dawn, caught a few pieces and shared them with the people—but they made little sense after their night in the waters. Hints of the future were lost, leaving only the tales of the past.

Perhaps, just perhaps. It seemed no less plausible than a handful of stray plants and animals being responsible for the diversity that surrounded me. After wandering over miles of land utterly transformed by invasive species, it was still difficult for me to accept that I would never see what the islands had once been, and that at best, our work would only slow the tides of change.

But my thoughts of Pele and her young lover reminded me that humans ride the crest of the wave of time, our consciousness moving far faster than the pace of the natural world. From that lofty, speedy position, we miss a lot—namely, that change itself is the constant. We probably will not undo what we've done to Hawai'i in the past two hundred years-not in my lifetime, anyway—but adaptation happens with each new generation. In the space of a million years, California's common tarweed transformed itself into the ahinahina or silversword, a stunning rosette of fleshy leaves, tinted pink and green beneath a silky, shining fur that protects the plant from highaltitude UV rays. Left alone, without the introduction of new genetic material from its homeland in Africa, who knows what the faya tree now invading Hawai'i's grasslands might become? How might the wasps which lay their eggs in the leaves of native ohia trees change their habits to take advantage of this new species?

We desire what is rare, making the effort to become familiar with such things in ways we never do with common wild creatures. These rarest of the rare are invaluable to us, making us focus our blundering human attentions outside of ourselves long enough to recognize that we are moved, inspired to do anything we possibly can to prevent their demise. Somehow, we manage to identify with those outside our own species, genus, even outside our phylum. Perhaps their uniqueness and fragility reminds us that we, too, are fragile adaptations to an ecological niche. Perhaps they remind us that we, too, are expendable.

Though I was in Hawai'i because I wanted to help save an incredibly rare place, I had discovered that preservation of species isn't the most precious thing to be sought in the wild hinterlands. What we seek and find through the process of restoration ecology projects is the restoration of ourselves. It's salvation, if you will, an admittance of our wrongs, an acceptance of humility. It's the next necessary step in our cultural evolution. Without this humility, our species is sure to find its place as a thin band of the fossil record, while exotic faya trees and cockroaches transform themselves into something beautiful. They certainly don't need us around to tell them what to do or to pat them on the back for a job well done.

Systems-oriented sciences like ecology and chaos theory have established that the earth functions as a nearly incomprehensible exchange of interdependencies—the proverbial butterfly flapping its wings triggering a chain of reactions that

results in a thunderstorm halfway across the globe. And they have shown that this web is resilient, self-healing, capable of adaptations at a scale that suggests something resembling sentience. Most people know the theory as the Gaia hypothesis, but it also can be reduced to the axiom that life exists to keep on living and it will adapt to whatever comes its way. It's human hubris that speaks when our nightmares conjure up grey, barren plains scoured by nuclear winters. Nature cannot be controlled, no matter how we try, and global war, while spelling utter self-annihiliation, would represent a polite cough on the part of dear Gaia. It's been 65 million years since the dinosaurs were extirpated by some astronomical collision that created nuclear winter-like meteorological chaos. The first Hawaiian island (now reduced to a coral-encrusted rise in the ocean floor) didn't even begin to graze the surface of the Pacific Ocean until 30 million years later—and look at the life on these islands today. I'm not saying we should quit clinging to koalas, ahinahina, and other endangered species. I just find comfort in believing there's only so much screwing up we can really accomplish.

Verena's voice called me up the slope in hushed tones. I fixed on her ponytail and wove between snags and loose scree to where she stood next to a small bush, holding one of the branches. Her eyes were round with delight, and she smiled. "Look!" She let the weight of her hand bend the branch, and three naked and blind chick heads simultaneously popped out of a well-camouflaged nest. Beaks agape the sky, more mouth than body, they peeped with a ferocity that belied their tininess. We grinned at each other, and Verena released the branch. The chicks immediately sank back into their sanctuary.

It often feels to me as though we humans are all too similar to those chicks, blind and voracious, singleminded in our desire to grow, transparently fragile. Taking the long view, we are among the most endangered species on the planet, with our big brains and gifts of imagination and creativity. Life won't go extinct, but imagination, art, and culture easily could, a victim of its own strength. Nobody gets a deed to the house out of Gaia—lease agreements only, and we already know from the stories of sedimentary rock that those leases get terminated far more often than not. The hand that rests upon our branch does not have to be a gentle one.

I like to believe that we are a unique opportunity in the history of life—a self-reflexive form that is able to reflect upon the implications of the little thing we call a cell. The capacity to wonder— both to be curious and to delight in the sensation of amazement—could enrich the grand adventure of living in ways that benefit the entire endeavor of life. We have vast potential—the potential to be Gaia's imagination, to make culture function as a collective storehouse for reveling in the wild manifestations of beauty that we share with all creatures. Maybe it's through myth, the power of storytelling, and all the blessings of human culture that we will navigate our way to harmony, to home. The next time Pele beckons seductively, we ought to pay better attention to what she whispers in our ears.

Trailer Song

The cupboard so small no room for Wall's economy size raspberry jam, except on the counter against my Beach toaster, nice, though, everything sort of arm-in-arm in here, the Porta-potty deodorant next to Field Guide to North American Birds leaning into the Bhagavad Gita held up only by the weight of the rotund sculpture, my little nude. Made her myself. Not for sale. One works hard to get a life so small where just breathing sways the pans, knives hanging over the sink, the hand towel half hiding Meher Baba above the little 3-burner stove. Any move in here has to be thought out, deliberate, not to kick over the dog bowl, untangle my one leg the table has room for. No contraries either. One slipper gone off somewhere, the other paired with my Hi-Tec boot. You want grief, sorry, at my age it's a waste of space though a hard wind, when it comes, tries to frighten me pulling at the roof vent with its metal pliers, the jacked-up tire that keeps the jam from sliding, the books level. It's a minimalist life. What's outside is almost in, the beautiful flicker, self-contained, can go anywhere, startled me when it landed on the roof this morning, its nails scratching the metal. If I fall, well, I'm bound to catch the bed or God's call, if He should, on the first ring.

by Tom Crawford

Camas

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