

Rumblings



Lyn Topinka, USGS

Issue 2 - January / February 2014

2014 Resounds With Opportunities to Make a Difference

Welcome to the second edition of the Mount St. Helens Institute newsletter. I hope you like this one as much as our inaugural edition in November. This publication is loaded with alternatives to the sedentary life, worrying about disasters in the news, and wondering if and how you could get more involved in improving community. Please allow me to ask you three questions that relate to our non-profit organization mission.

- Do you want to know more about extreme natural events - earthquakes, volcanic eruptions, monster storms, frequent floods and the resilience, rebirth and balance of nature?
- Do you think that understanding what happens at the dramatic edges of nature can help produce a saner, friendlier relationship between people and our planet?
- Have you looked for ways to change our culture and right the balance of humans and the rest of nature a little?

If your answer is yes to any of these questions, the Mount St. Helens Institute can help. We can provide that deeper knowledge, broader understanding and ways for you to stand up and be counted in this world, no matter your age, education or resources.

MSHI has 15 exciting science, education and exploration programs designed, piloted and ready to schedule this

new year. Look inside this second edition of *Rumblings* for descriptions of these programs. Imagine the results and multiply them. Pick one and participate or sponsor it. Your help will make it happen.

Volcano Outdoor School – Volcano Explorers – STEM – Field Seminars – Volcano Views and Brews – Volcano Naturalist – Science & Learning Center – Field Camp – Fisheries – Science Research – Guided Climbs – Crater Climbs with Scientists – Winter Adventures – Mountain Stewards – Volcano Volunteers

**We are ready to present these programs.
Your help will activate them.**

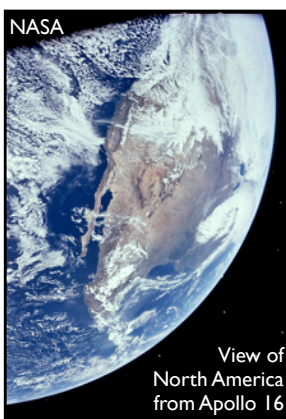
You have the opportunity to advance understanding and stewardship of the earth in 2014 through one or more of the following actions:

- Become a MSHI Member. Whether an active or passive member, this is a great way to pitch in, and you continue to receive this informative newsletter.
- Make a MSHI contribution. Our classes, field trips and success increase with every gift.
- Participate in a MSHI program. Learn more yourself, assist a scientist, enjoy a hike or volunteer and spread the wealth of knowledge.
- Sponsor a MSHI class or Guided Climb. Make an awesome event more available and affordable to all.

Look to Southwest Washington on a clear day and gaze on America's most accessible and studied active volcano. Think of what you can do with a charismatic volcano in your own Pacific Northwest front yard.

I wish you bold New Years Resolutions!

- Richard Meyer, Executive Director





Mission

Mount St. Helens Institute is a non-profit 501(c)(3) organization that advances understanding and stewardship of the earth through science, education and exploration of volcanic landscapes.

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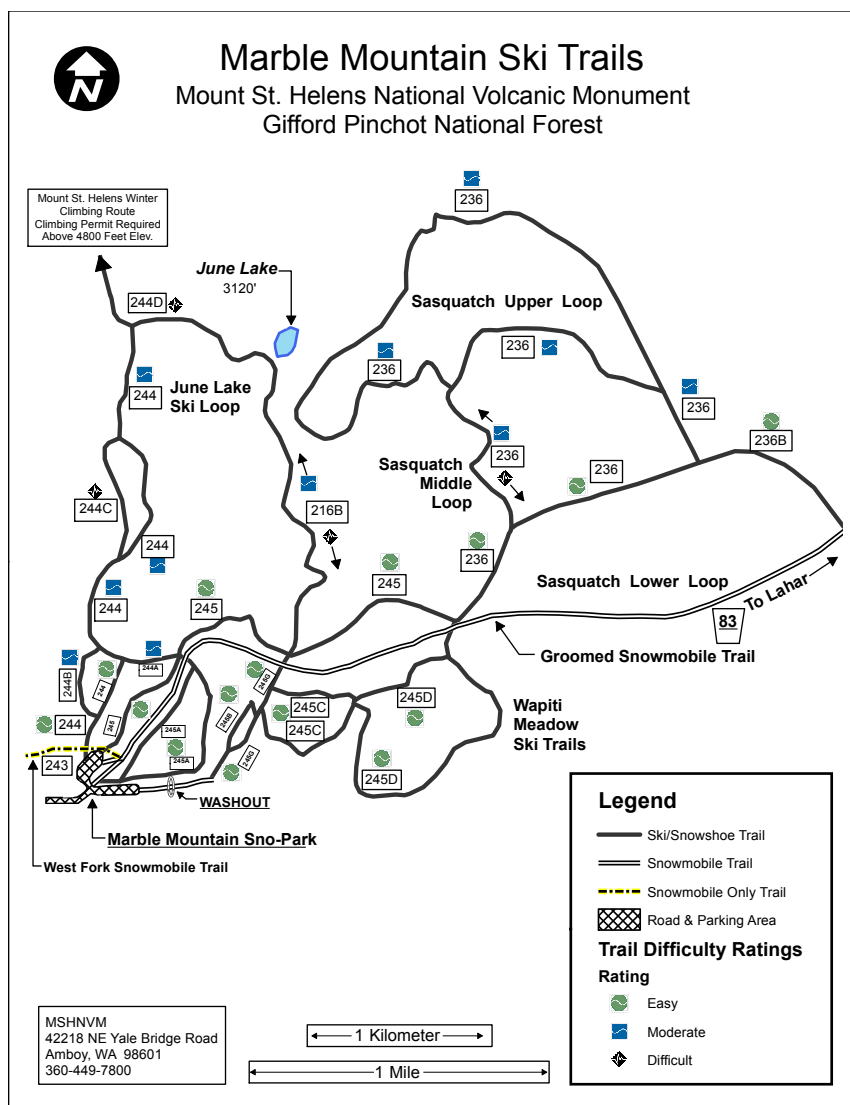
We depend on your contributions.

Educational Partners in Mission

In this issue of *Rumblings*, we would like to highlight our partners who play an integral role in the success of our education programs:

Educational School District 112 -- Centralia School District -- Battle Ground School District -- Clark College -- Lower Columbia College -- Vancouver School District -- Washington STEM -- Castle Rock School District -- Toutle School District -- Komachin Middle School -- Washington State University -- Wahluke School District -- Trackers Earth -- Pacific Education Institute -- Mt. Adams Institute -- Oregon State University

Other important partnerships will be highlighted in future editions of Rumblings.



A map of Mount St. Helens winter trails based out of Marble Mountain Sno-Park, where you are able to explore the snowy volcanic landscape! Washington State Sno-Park pass required at all parking areas.

June Lake Snowshoe

**January 18
February 22**

This is one of our most popular guided snowshoe adventures. This round-trip snowshoe takes you up to the remote and peaceful June Lake along the bleaching white rolling snow hills of beauty and wonder.

Meeting Time: 10 am

Distance: 6 miles

Difficulty: Moderate



Frank Barsotti



Frank Barsotti

Old Man Pass Snowshoe January 25

This is a peaceful and undiscovered gem just outside of Stevenson, WA. You will snowshoe at an elevation of about 3,000' on a volcanic plateau between Mount St. Helens and Mt. Adams. Journey through this peaceful mature forest along untracked snow.

Meeting Time: 10 am

Distance: 6 miles

Difficulty: Moderate

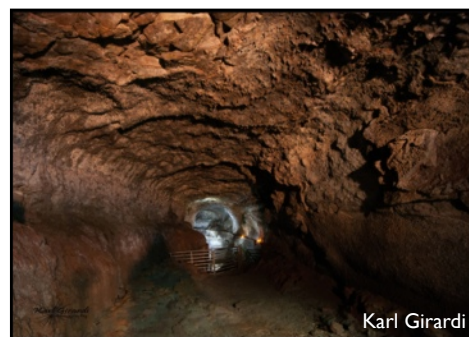
Ape Cave Snowshoe and Cave Exploration February 15

This wonderful adventure will take you directly to Ape Cave where we will descend into the cave for a dark walk to the lava tube's terminus. We will continue above ground, weaving in and out of a forest with a rich volcanic history. This adventure is easy and relatively flat. It is perfect for both beginners and more experienced snowshoers alike.

Meeting Time: 10 am

Distance: 3.3 miles

Difficulty: Easy



Karl Girardi

Mt. Adams Ice Cave and Natural Bridges Cross-country Ski February 1

Starting at the Atkisson Sno-park we will visit some of Trout Lake's notable attractions. We will visit ice caves where blocks of ice were once taken by carriage to upscale Portland pubs to be put in customer's drinks and Natural Bridges formed by collapsed lava tubes.

Meeting Time: 9 am

Distance: 8 miles

Difficulty: Moderate



2014 Mount St. Helens Climbing Permits On Sale

**February 3
9am PST**

*See Lahar Membership Level
for exclusive access*

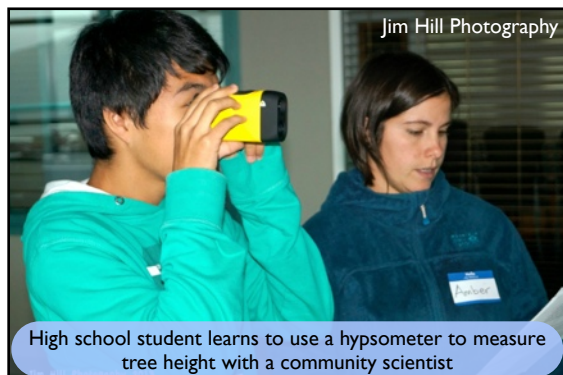
**For more
information and to
sign-up, visit our
website
mshinstitute.org**

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A Mountain of Stories

Mount St. Helens is a place of stories. When the 1980 eruption comes up in conversation, everyone wants to share the story of where they were and what they saw. Students not born before 1980 who visit Mount St. Helens today are creating their own unique experiences with the mountain. The story they tell is shaped by their understanding of the geological history, ecological succession, leadership, inquiry and simply breathing the fresh mountain air.



High school student learns to use a hypsometer to measure tree height with a community scientist

For us at the Mount St. Helens Institute, the landscape itself continues to tell the story – of the past and present. Students who visit will hopefully carry a tradition of inquiry into the future.

With a GPS receiver and a list of coordinates in hand, small groups of students wander seemingly aimless through a forest that fell and a forest re-emerging. They look for hidden caches with questions and clues to understand the landscape around them. What made the holes in this standing dead tree? What creature made this a bonsai tree, dwarfed and shrub-like? The Toutle River in the valley below is eroding; what caused all the sediment and where is it going? Through vignettes, they piece together a story of landscape change.

Canoeing on Coldwater Lake, students dip their paddle into the water with a confident splash, watch

trout rise and fall from the lake surface, spot osprey overhead and imagine the quiet creek that existed before 1980. With the wind on their face, they bring stories of experience back home.

Walking out into a stream pool or hummock pond in waders initiates the same response in most students – a big smile. Perhaps it is being out in the water and looking down at the pebbled or murky bottom or perhaps it is the feel of being a real scientist as they pull in a trap and peer at the squirming aquatic life. Youth might not remember the names of the different aquatic insects, but the next time they see a pair of chest waders, they will remember the feeling of the waders hugging their legs as they walked out into the water.

In 2014, the Mount St. Helens Institute will once again offer students an opportunity to create their own learning and their own story in this amazing landscape. Volcano Outdoor School overnight programs are open for registration by youth groups and classes by calling



Volcano Outdoor School Boy Scout

360-274-2114. Open enrollment for overnight programs and summer camps will be available in March. Find out more on our website and pass this newsletter onto a teacher, parent or student.

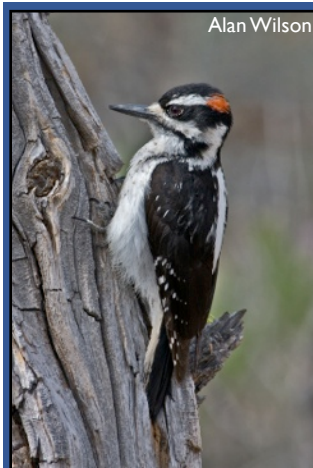
- Abigail Groskopf, Science Education Manager



Volcano Outdoor School students determine if this tree was cut before or after the 1980 eruption

Mount St. Helens Fun Fact!

Hairy woodpecker males incubate the eggs during the night and females incubate them during the day



Species Spotlight!

The hairy woodpecker (*Picoides villosus*) feeds along tree trunks primarily on insects that live in the bark.

They also feed on fruits, seeds and sap. Hairy woodpeckers make nests in cavities of dead trees or dead branches of trees. No birds survived in the blast area of the 1980 eruption but hairy woodpeckers soon returned to colonize the newly formed standing dead forests which provided plenty of foraging and nesting opportunities in snags. Bird watchers may also find them in town and occasionally at backyard birdfeeders.

The Future of Science at MSHI

I arrived at Mount St. Helens in the summer of 2007 as a graduate student... and I was in awe.

I spent that first summer on the Pumice Plain, from Windy Ridge to Johnston Ridge, between Spirit Lake and the crater. I became intimately familiar with that place - elk bugles echoing off of Windy Ridge, geese flying low in the morning light on their way to Spirit Lake. My days were filled by hiking across that landscape and soaking in the many layers of stories the volcano had to tell. My evenings were spent around a campfire talking about science with top-notch researchers from all over the U.S. John Bishop at W.S.U. Vancouver, Charlie Crisafulli of the U.S. Forest Service Pacific Northwest Research

In the ensuing years, I've had the pleasure of meeting many more scientists, all of whom work to understand the complex and dynamic landscape around this volcano so near to us.

These scientists live and breathe Mount St. Helens Institute's mission. Their work reminds us of how unique Mount St. Helens is in the world of science and they are generous to share their findings through MSHI activities. They speak at our monthly Volcano Views and Brews pub lectures. They are science guides on our Field Seminar Guided Hikes. They mentor students as part of our high school Eco-Research program. They serve as instructors for our Volcano Naturalist volunteer training.

The Mount St. Helens Institute supports these scientists and through our science programs that we hope will expand in 2014. Our Field Camp has grown and improved every year and we look forward to hosting more field-based seminars and studies.

We have facilitated the preservation of hundreds of thousands of biological specimens collected by the Pacific Northwest Research Station at Mount St. Helens since 1980. These incredibly unique and highly sought after specimens now reside at the Smithsonian,

California Academy of Science, University of Washington's Burke Museum, and the Museum of Southwestern Biology at the University of New Mexico. We hope to continue support of this important endeavor.

Our work with threatened bull trout expands to include snorkel surveys and additional habitat monitoring this next year. A growing and more diverse group of scientists will participate in our high



Ray Yurkewycz

Field Assistant taking notes

Station, and Bill Fagan from the University of Maryland were studying willow, elk and insect herbivores. Jon Titus of SUNY-Fredonia, Dave Wood of Chico State and Roger del Moral of University of Washington were sampling their long-term plant ecology sites. Mike Clynne of U.S.G.S. was working on a geologic map of the volcano. And these were just the folks at the Windy Ridge-area research camping area.

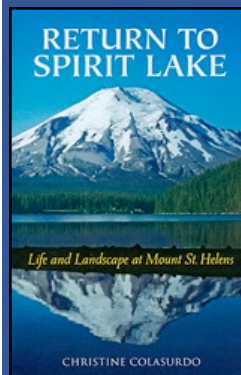
Ray's Book Pick

Return to Spirit Lake

By Christine Colasurdo

Mount St. Helens is an intricate landscape. There are layers upon layers of human, biological and geological stories that intertwine, with each multifaceted layer changing as it moves through history. Christine Colasurdo's book, "Return to Spirit Lake", deftly explores these many layers with elegant prose, and ties

them all together through the narrative of her own experiences. From her pre-eruption idyllic youth spent at her family's cabin near Spirit Lake, to her post-eruption struggles with making sense of



the landscape's drastic change, Mount St. Helens retains a unique yet changed beauty through Christine's eyes. This book is a must read for anyone with an interest in Mount St. Helens.

school Eco-Research program. We will have new speakers and expanded locations for Volcano Views and Brews and some brand new and exciting Field Seminars on the schedule in 2014.

Just as Mount St Helens' value is enriched by the work of scientists, the mountain and our community are enriched by you. Your support makes our science programs possible. We look forward to sharing expanded programing with you in 2014.

Thank you for your support.

-Ray Yurkewycz, Science Manager

Mount St. Helens Fun Fact!

Mount St. Helens elk are a hybrid between 2 subspecies - Roosevelt and Rocky Mountain elk

Volcano Naturalists Thrive on the Unique Story of Mount St. Helens

The Volcano Naturalist Program is an adult, community-based natural resource education and volunteer program serving Mount St. Helens and the greater Southwest Washington and Portland Metro areas. In its first year of existence, 25 enthusiastic participants completed 54 hours of in-depth training comprised of classroom instruction and hands-on fieldwork, culminating with graduation on (appropriately) May 18th, 2013.

A joint education partnership between the Mount St. Helens Institute and the Mount St. Helens National Volcanic Monument staff, the Volcano Naturalist Program includes a requirement for participants to commit to a minimum of 60 volunteer hours through a variety of opportunities.

From the 2013 Naturalists

"It covered a wide range of subject matter. I learned a lot and realized I need to learn so much more. The never-ending subject matter of changes in the ecology of the mountain is golden. The lessons in the history of past and present are extremely valuable. Passionate presenters and staff help fuel the interest to learn more and show up for class. I feel lucky to be a part of such an engaging group of folks. Thank you for the offering the program. Looking forward to the adventures on Loowit ahead."

What is a Volcano Naturalist?

Volcano Naturalists undergo training specific to Mount St. Helens and seek to engage visitors in the understanding and stewardship of nature through science-based education and

volunteer community service. This includes understanding the geology, ecology, specific inhabitants (birds, plants, mammals, etc.), and the impacts of humans on the landscape. During the program, participants study the fundamentals of Mount St. Helens geology and biology. They develop field identification and other naturalist skills at 10 evening classes and four weekend days in the field at various locations around the monument. The inclusion of high-quality interpretation skills help graduates tell the intriguing story of Mount St. Helens.

"I have taken many classes and workshops on the outdoors and nature. This was, hands down, the best I have ever attended. The quality of the speakers was incredible. This class and the opportunities to volunteer have changed my life. I have fallen in love with a mountain. My fellow students were wonderful...It would be impossible to say enough good stuff. You guys did an amazing job. I am still sort of blown away by the whole experience."

What Do Volcano Naturalists Do?

Individuals who participate in the program bring diverse skills and experiences that, combined with their new-found knowledge and interpretation skills, create an association for visitors to the volcanic landscape. After training, Volcano Naturalists may participate in different types of volunteer activities. These might include assisting in an education program at a Monument facility or a school, assisting a scientist collecting data, supporting researchers monitoring streams, providing interpretive services at a visitor center, and much more. In 2013 Volcano Naturalists contributed 4,005 hours engaging and educating the public at visitor centers, outreach events, on the trails of Mount St. Helens and in the surrounding Gifford Pinchot National Forest.

"Very well put together training program. Nice mix of presenters, enough 'field' experiences to make some of the information more real."

Program Details

The Volcano Naturalist program is a 12-week course that includes four days in the field. Classes meet from February through May each Wednesday from 6 – 9pm. Field days are held in several locations throughout the Monument. Travel time to locations varies and could be up to two hours; carpooling is strongly encouraged. Cost of the course is \$200, which covers course materials and instruction by top regional experts in their field. Washington teachers may earn up to 54 clock hours by participating in the Volcano Naturalist program.

For more information, and to apply to the program, visit mshinstitute.org or contact Amy Tanska, Volunteer and Membership Manager: atanska@mshinstitute.org or (360) 449-7826.



2013 Volcano Naturalist Program Graduates



Dave Anderson

Along Loowit Trail over the Worm Flows



Dave Anderson

Goat Rocks Fan - Emplaced about 1840



Dave Anderson

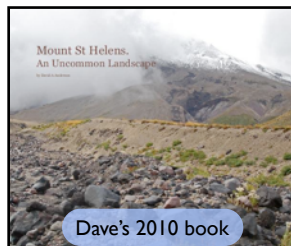
Checkerspot butterfly and cocoon

Dave Anderson: Photographer, Author and MSHI Volunteer

One of the first birds I remember seeing when I was ten years old was a Greater Yellowlegs. I saw it on a birding trip with my Aunt and my sisters. On one of my first Christmas Bird Counts I spotted a Violet Green Swallow fly by, and my Aunt looked at me with a look of "yeah, right, kid!" Until she saw it! When I was two years old I felt a major earthquake, and reportedly told my teddy bear everything would be OK! Later in high school I would take care of an antique seismograph that had been installed in my hometown of Ferndale decades earlier by University of California Berkeley Seismograph Station and later given to the town. My parents didn't let a TV enter the house when my sisters and I were growing up, so naturally my

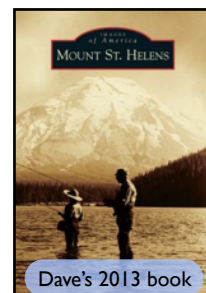
interests in natural history developed.

I joined the Sierra Club and Audubon Society and loved hiking, and took care of the trails in our small city wilderness area, Russ Park. Our high school couldn't offer photography because of the expense involved, but I was interested in photography early on.

Mount St Helens.
An Uncommon Landscape
by Dave Anderson

Dave's 2010 book

My fascination with photography and natural history subjects - birds, earthquakes, fossils and volcanoes - continued after moving to Portland. How could someone not be captivated by what happened in 1980? I was fascinated by Mount St. Helens 1980 events, and realized the eruption was more than a blast and landslide on the north side of the mountain. Looking at how Mount St Helens is continuing to impact the landscape is an ever-changing lesson. A fairly recent pumice layer north of the mountain is about three feet deep, while the 1980 pumice layer was measured only in inches. Wow! What did that eruption do to the landscape and people living down wind?



Dave's 2013 book

Later, after my knees started to complain on long hikes, I took up mountain biking so I could continue to see some of the wild places I loved hiking in. And, I realized that some of the things I had once heard were not necessarily true about mountain bikes and trails. So, my passion to explore the natural world continues as does my passion for photography (what'd we do before digital?!) and volunteer trail maintenance.



Dave Anderson

Muddy River Lahar Field - Mt. Adams in the distance

Dirty Words on Mount St. Helens

By **Simmons B. Buntin**, *Editor-in-Chief, Terrain.org: A Journal of the Built + Natural Environments*

On Mount St. Helens *recovery* is a four-letter word. Considering its context, that seems a bit harsh. After all, this is a place where pyroclastic flows of 1,500 degrees Fahrenheit are, geologically speaking, a regular occurrence; where disturbance ecologists measure mycorrhiza efficacy by the micrometer over a vast plain of pumice and ash; where the avalanche lily, despite its tough-guy name, hasn't bounced back.

But scientists can be mean folk, and I'm not referring to those who spend months at a time out in the field plotting vole droppings among lupine or who count spire after innumerable spire in the mountain's scorch area. No, I'm talking mostly about the other scientists who gathered in the summer of 2010 at the volcano on the 30th anniversary of its most recent significant eruption. Do you remember where you were on May 18, 1980, when the southern Washington mountain blew with a force 500 times that of the Hiroshima atomic bomb, sending an ash cloud nearly 15 miles above the Earth? I don't think the scientists are bitter about that, though some other folks cannot bear to face the blast zone even three decades later—those who once lived among the mountain's dense forests, who recall with no misplaced amount of nostalgia the ranks of 600-year-old Douglas-fir along the picture-postcard shore of Spirit Lake.

I believe they're pissed, after decades of careful research, because a tall drink of water such as myself could just saunter into the 2010 Science Pulse and blatantly draw comparisons between Mount St. Helens and communities struck by natural disasters: how they both lose their identity in an



Simmons B. Buntin

Flowering lupine on the Pumice Plain at Mount St. Helens, showing the eastern edge of the volcano's crater from the north, summer 2010

instant; how after that instant they seem to pause in a weird and timeless way before residents can summon the wherewithal to return; how, in the end, they both recover.

There's that word again: *recovery*. Just the sound of it brings a white tightness to their knuckles, a hard, one might say volcanic look to their eyes.

So what's the deal? For starters, I've got my story wrong, even after all these years. "When Mount St. Helens erupted," write Charles Goodrich, Kathleen Dean Moore, and Frederick J. Swanson in the introduction to *In the Blast Zone: Catastrophe and Renewal on Mount St. Helens*, "the story most people heard seemed to be almost entirely about violence, danger, and devastation." Until my visit, I'd likewise only considered the violent aspects of the eruption. Actually, living down in the Sonoran desert and otherwise far from the Pacific Northwest, I'd hardly considered Mount St. Helens at all. Yet the Lady's eruption is a part of our American landscape lore, even in my long-dormant volcanic landscape of the Southwest. Here I'm surrounded by the remnants of ancient activity. Just north of Tucson, for example, Picacho Peak rises an abrupt 1,500 feet from the desert floor, a geologic fault of tilted rock interlaced with rich veins of lava 22 million years old.



Simmons B. Buntin

The "scorch zone" at Mount St. Helens: still-standing and fallen firs and hemlock with new tree growth thirty years after the volcano's last major eruption

Mount St. Helens Fun Fact - The Mount St. Helens area has been occupied by humans for at least 9,000 years

Fred Swanson, the fatherly guide for myself and a dozen other writers at the Pulse, knows something about the geology of volcanoes—he’s a research geologist with the U.S. Forest Service’s Pacific Northwest Research Station and is an authority on the ecology of Mount St. Helens. “Like a birder,” he says, “I have a life list of encounters with erupting volcanoes—walking across an advancing *aa* lava flow at Arenal in Costa Rica, feeling the heat of fountaining lava on the flanks of Kilauea, sensing the deep seismic rumblings of Fernandina, Galapagos. But nothing beats my continuing affair with Mount St. Helens.”

Mount St. Helens was my first active volcano, though not so volatile on this visit as it was even two or three years ago, when a new lava dome grew inside the broken, glacier-filled crater. Still, I could tell right away that she’s a lady worth pining over, especially on our sunny visit, when slopes of purple lupine and rivulets of Indian paintbrush ribboned her north side. Indeed, that first warm day on the Pumice Plain reminded me of the rare but glorious wildflower swaths of the desert in spring. Dazzling geometries of black and gray rock, crazy explosions of low-growing wildflowers in pink and lavender and red, dramatic vistas of mountain and sky at every turn.

Fred told us of his visits to the seared slopes of Mount St. Helens just days after the eruption: “My preconceptions of how volcanic landscapes behave in the aftermath of an eruption were blown away like the top of St. Helens, and I’ve been reconstructing my understanding ever since.” Almost right away the mountain’s *re...* is it *re* anything? He wouldn’t say *recovered*, surely? Renewed? Resurged? Resilient? Regrown?

Life emerged rapidly, we might say. It returned, in a way, but mostly it already existed in tiny semblances here and there—protected from the blast by snowbanks, brought forth in new soil pushed up from surviving pocket gophers, dropped in on a spider’s floating web. The landscape’s repopulation wasn’t, as scientists originally expected, primarily from the edges of the blast zone inwards—though there was some of that, exemplified by the nesting horned larks and chicks we saw with the ornithologist Elise Larsen on our last full day on the

mountain (the birds are not otherwise native to the region; the open, rocky expanse provides new opportunities). Rather, species recolonized the most impacted area—the Pumice Plain—through tiny oases of lupine communities that have, over 30 years, grown together not completely but still substantially. Meanwhile, a few silver firs, huckleberry, and willows have started to take hold.

Like Fred, renowned forest ecologist Jerry Franklin has also studied Mount St. Helens since the eruption; his research on the forest systems of the mountain began in 1959, in fact. Twenty-five years into his studies on the post-eruption landscape, he began questioning his use of the term *recovery*, “since implicit in the word is the notion of a return to some pre-existing condition,” he says. Coming from a background in forestry, he assumed like most others that it was both logical and natural

for the mountain to return to its previously lush self. “[Yet] Mount St. Helens is not about ‘recovery’ to some future forested state,” he says. “It is about its natural evolution, its rich array of organisms and processes, and its contributions to our ecological understanding.”

Fred agrees: “The notion of ‘recovery’ may be relevant to specific components of an ecosystem in specific parts of the Mount St.

Helens landscape. . . . But some parts of the landscape are new places on the face of the Earth—the crater, new lakes, and the debris avalanche deposit, which raised the land surface up to 600 feet in places. ‘Restoration’ and ‘recovery’ are not taking place there—these are wholly new ecological systems.”

Fred and Jerry were not the scientists with the fiery eyes, however. They’d dealt with artist types such as myself and knew that eventually I’d get it. And it wasn’t the job of the other scientists to convert me, either. It was really my task to connect with them and seek to understand, in a more generalist way, the application of their work to the mountain, to landscape renewal in general, and—in my particular case—to human communities.

So Mount St. Helens isn’t about recovery; can it still be about cultural significance? Is there a metaphor of resiliency for our built communities—post-natural disaster or otherwise—to be applied here?



Simmons B. Buntin

The giant drifting fir and spruce of Spirit Lake

On the first morning of our week-long residency, we visited a forest of silver fir where the mature trees survived the 1980 eruption. As we hiked beneath the deep canopy, I noticed the whitish stones, shaped like small river rock, that formed the trail and, I realized, covered the forest floor. I knelt to scoop a handful as a nearby researcher explained that the material is called tephra, which is large ash and pumice that falls from the sky as the volcano erupts. The soils of the Cascades are, I learned, comprised mostly of volcanic fallout including tephra, which during an eruption can range from less than a centimeter to a meter in depth. A two-centimeter depth doesn't impact growing plants. At four centimeters, forest undergrowth such as herbs and huckleberry are harmed. More than 15 centimeters, and pretty much all small undergrowth is destroyed. Like ecosystems that rely on fire to return nutrients to the soils, however, volcanic ecosystems such as this silver fir forest, two thin valleys north of Mount St. Helens, rely on mineral-rich tephra soils.

On this first morning I also learned that Mount St. Helens is the tantrum-prone toddler of the Cascades chain of volcanoes, erupting on average every 150 years. Indeed, it's one of North America's youngest mountains: the base is perhaps 300,000 years old—what we see today, amazingly, is only 2,500 years old. And the symmetrical pre-eruption summit? Its shape was formed perhaps 20 or 30 years before the American Revolution.

Well before that, Native Americans called the mountain *Loowit*, and called its forests and lakes home. Archaeologists have surmised, however, that the area was abandoned for 1,900 years some 3,600 years ago. Why? There was a massive eruption, what's called the "Y Blast," that left tephra piled seven meters high where we then stood. An entire civilization displaced—an outcome as symbolic to the science of place, it seems to me, as to the culture of place.

Throughout the week, however, the conversations of the scientists largely excluded the role of humans. Whether measuring plant species in the silver fir forest or documenting nesting sites on the Pumice Plain, the only place for humans seemed to be in conducting the science itself: experts looking in—but not actually acknowledging

mankind's role in this rich landscape. Part of that is the nature of objective science, of course, but with such a methodical look at the natural systems, are human influences unduly factored out? Could it be that ecology is the study of natural systems absent of humans?

"Recovery!" I shouted. Or that's what I would have yelled if I didn't already know that the 2005 Pulse and other studies have considered the effects of past eruptions on traditional peoples across the region. Even the basest scientists would not disregard the symbiosis of humans and the natural world, would they? Without a doubt the natural world alters landscapes beyond comprehension, beyond time itself, but are we not learning that about mankind, as well? What landscapes have we not also altered significantly, if not irreparably?

And that's where I seek more than just the metaphor of resurgence that Mount St. Helens and all disturbance ecosystems can be for mankind's created places. What does this post-eruption landscape teach our built communities? What lessons can be learned from the striking resurgence of the landscape that, following the 1980 eruption, many believed would be barren for a century or more? What can the process of investigation in this post-disaster region mean for our villages, towns, and cities?

Over the next several months I plan to play the role of researcher myself, and though I may not find that answer, I will be able to follow these important questions, my own eyes burning, those beautiful, dirty words of science and community falling like tephra all around.



A tree buried upside down during the 1980 eruption on the slopes of Spirit Lake with Mt. Rainier in the background

Simmons B. Buntin

This is Terrain.org's editorial article from
Issue 31 > To Know a Place, Winter 2013

This special edition presents writings from, about, and inspired by Mount St. Helens, that beautiful, temperamental lady the indigenous people called *Loowit*, that last erupted in 1980. Thirty years later, scientists gathered to share data, research techniques, and stories of the region's renewal at the Science Pulse. The Spring Creek Project for Ideas, Nature, and the Written Word, along with the U.S. Forest Service, brought a dozen writers and artists to interact with the scientists, and the volcano.



Tom Wolverton

Tom serves as President of the Board of Directors for the Mount St. Helens Institute. He has taught science for 13 years at award-winning middle and high schools and community colleges. After graduating from La Center High School, Tom took a Bausch & Lomb Math and Science scholarship to the University of Rochester, where he earned a Bachelor of Science in biology. He attained a Master of Science in Biomedical Sciences from the University of Connecticut Health Center and authored numerous articles about genomics and aging.

Back in the Pacific Northwest at Prairie High School, he was awarded the district's "Teachers Make a Difference" award and was a finalist for the "Albert Einstein Distinguished Educator Fellowship" in Washington D.C. As a National Outdoor Leadership School trained Outdoor Educator, Tom has taken students up to Mount St. Helens and helped the Mount St. Helens Institute establish a perennial Eco Research trip for area high schools. He loves preparing today's youth for the challenges of tomorrow and brings his excitement to his leadership of the MSHI Board.



Michelle Howell

Michelle joined the Mount St. Helens Institute as a board member when Dave Bennett, husband of Jeanne Bennett, former Executive Director, said they were looking for an accountant that liked science to be Treasurer. She did in fact have a degree in Physical Science and Math Education. She taught 7th Grade for a year, retired from teaching, then went back to school to become a CPA. She works tirelessly as Controller at Compass Oncology and still has made time to serve as Board Treasurer for five years and help the Executive Committee on an as-needed basis.

Michelle moved to southwest Washington a couple of years before Mount St. Helens erupted and has a keen interest in the mountain. She says it is a pleasure serving on the MSHI board of directors, "It has been great watching the Institute engage so many people and increase their interest and appreciation for our treasure." Those who know Michelle would replace her word "watching" with "empowering", as she has worn most hats needed to run a not-for-profit organization. Not only does she help with finances and administration, but also volunteer and fundraising events. Her enthusiasm and outdoor chili are both famously outstanding.

Poetry Corner

Volcanic/Panic

Taken from -- Terrain.org - Issue 31: To Know a Place

By Cheryl J. Fish

Many of them that sleep in the dust of the earth shall awake, some to everlasting life, and some to shame and everlasting contempt.

– Daniel 12:2

1.
Poets and scientists struggle
to explain, to grasp
volcanology—a pyroclastic flow
is rapid
turbulent
hot gas undulating
escaping fragments
ash
rock
lahar mudflow
liquid fires flying
domes collapsing upon themselves
We cannot stay away

2.
"Private property"
cannot appease public needs
the towers fell in fragments
scattered
beneath the rubble
spirits smoldering

3.
Large tephra chunks of
Lapilli (Italian, for the ash
of Vesuvius)
Species return, some new to the
Cascade plain where forest had thrived
We live with embers
What about a simple memorial?
A national monument for all who pray or cry
Volcanic insides expose hot air
Who speaks?
Light hits the pit where rubble lingers
I hear something.

Mount St. Helens Institute
PO Box 1208
Vancouver, WA 98666

Mount St. Helens Institute *Rumblings*



Karl Girardi - Take A Peak Photography

To continue receiving *Rumblings* you must become a MSHI Member!

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Have you enjoyed the first two issues of *Rumblings*? If so, you can sign up at any Membership Level to continue receiving our exciting bi-monthly *Rumblings* newsletter throughout 2014. By becoming a Mount St. Helens Institute member you will get the inside scoop about our science and education programs, guided adventures, field notes straight from scientists on the volcano, interesting volunteer opportunities, poetry, extra benefits and a place in history as an informed agent of change.

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* Excludes "Into the Crater" hike

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