# One Step at a Time

Newsletter of the Mountaineers Naturalist Group March 2017

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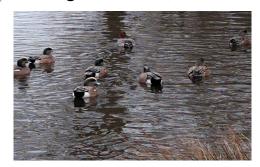
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## Photos from our February naturalist hikes

As you all know (unless you are off somewhere else like Mexico or Tucson) we've had a cool, wet and somewhat blustery February, in line with what is often associated with a La Nina year (which it is). As such, we were rained, snowed, sleeted and hailed out of our hike of the month, which was supposed to be to Boulder Creek. There is another naturalist hike to Boulder River, led by Gary Brill, coming up, however. We did have a couple of informal in-



town birding trips during the month, and here are a few photos from these.









Black brant geese and American (plus one Eurasian) widgeon at Golden Gardens, canvasback, wood duck and sleeping shoveler, Magnuson Park and Union Bay Natural Area.

#### In the Garden – What's happening in our Native plant garden?

\*\*\*\*\*\*\*\*\*\*

The native plant garden is beginning to show signs of life, though the cold and rains has slowed and postponed flowering. The good news is that shrubs, trees and ferns have



prospered through the winter and are posed for a healthy growth spurt. Blooming at this time are ribes sanguineum (red flowering current) and a little manzanita, plus the hardy bittercress (a mustard and not a native). Many plants are in bud (as the oregon grape shown).

# March and early April Field Trips for Mountaineers' Naturalists

You will notice that the number of offerings has ramped up spectacularly starting in March. Obviously we are betting on the come, in hopes that the rains we've been having will keep mosses and lichens happy while allowing spring flowers a chance to get here as well. There are a couple of near to Seattle hikes led by Gary Brill, which will emphasize his relatively newfound enthusiasm for mosses. The Bowman Bay hike (already full, but sign up anyways because we can divide the group if need be) will give us a chance to explore Deception Pass, early spring flowers, and wonderful views of marine birds. The hikes led by Linda Moore are all in Oregon, and require travel for us. They are well worth it. Linda chooses her hikes well and prepares logistics well. You will be in for a treat if you opt for these longer trips. Gordie and Stewart will also lead a couple of hikes in the Columbia Gorge area (Waclella Falls and Catherine Creek). This weekend trip is listed as two hikes but you must sign up for both. We will plan to stay over Saturday night and will suggest a possible venue for us all to stay. This is a wonderful wildflower area in early spring. Dick Hayek is leading some trips that are cross listed as naturalist trips. We are hoping that some of you can sign up for these hikes, in part to help Dick identify plants and birds they see in lovely hiking areas. The mima falls hike is in the mima mounds area, which, at that time of the year should be loaded with camas. There is also an early April trip to Boulder River, led by Gary, replacing the Boulder river trip cancelled in February, and probably a better time to go there. The waterfalls are spectacular, not to mention the mosses. Brian Carpenter has listed a tour of IslandWood, an environmental education center that promises to be educational as well as enjoyable. There is also another Nisqually trip, this out of the Olympia center \_\_ always worth the trip. You choose, but choose early because many of the naturalist hikes do fill early.

#### **Day Hike - Discovery Park**

**Exploring Nature Trip** 

This is an easy day hike on the loop trail of Discovery Park with the

Difficulty: Easy Sat, Mar 4, 2017 No Prerequisites Availability:

1 participant 1 leader Registration closes Mar 2

Seattle Branch Leader: <u>Gary Brill</u>

#### **Day Hike - Tiger Mountain Trail**

Exploring Nature Trip
A Naturalists hike to look at mosses and lichens, primarily.
Difficulty: Easy/Moderate
Sat, Mar 18, 2017
No Prerequisites
Availability:

**5** participants **1** leader Registration closes Mar 16 Seattle Branch

Leader: Gary Brill

#### **Day Hike - Bowman Bay**

**Exploring Nature Trip** 

This early spring hike combines wildflowers, birding and marine life in a melange of habitats.

Difficulty: Easy Sat, Mar 25, 2017

No Prerequisites, Leader's Permission Required

Availability:

4 participants on waitlist 0 leaders

Registration closes Mar 23

Seattle Branch

Leader: Gordie Swartzman

#### Day Hike - Smith Rock State Park

Exploring Nature, Photography & Day Hiking Trip

Difficulty: Moderate

Sat, Mar 25, 2017 - Sun, Mar 26, 2017

No Prerequisites Availability:

4 participants 0 leaders

Registration closes Mar 20

Seattle Branch

Leader: Linda Moore

#### **Day Hike - Nisqually National Wildlife Refuge**

Exploring Nature & Day Hiking Trip

Naturalist Hike. This is the first of a series of hikes with the Olympia Mountaineers

Difficulty: Easy Sat, Mar 25, 2017 No Prerequisites Availability:

10 participants 3 leaders

Registration opens Mar 4

Olympia Branch

Leader: Laurie Choate

#### **Day Hike - Squak Mountain/West Access**

Exploring Nature & Day Hiking Trip

WINTER CONDITIONER OPEN TO ALL MEMBERS. Follow the historic Bullitt Fireplace Trail through the beautiful

Difficulty: Easy
Sat, Apr 1, 2017
No Prerequisites
Availability:
11 participants

Registration opens Mar 20

Foothills Branch Leader: <u>Dick Hayek</u> Qualified Youth Leader

#### **Day Hike - Dry Falls & Wahclella Falls**

**Exploring Nature Trip** 

There will be two hikes on this day; the first to Wahclella falls and the

Difficulty: Easy Sat, Apr 1, 2017

No Prerequisites, Leader's Permission Required

Availability: **10** participants

Registration opens Mar 1

Seattle Branch

Leader: Gordie Swartzman

#### Day Hike - Catherine Creek: The Labyrinth & Natural Arch

**Exploring Nature Trip** 

We will enjoy wildflower identification while hiking along this wonderfully full flower habitat.

Difficulty: Moderate Sun, Apr 2, 2017

No Prerequisites, Leader's Permission Required

Availability: **10** participants

Registration opens Mar 1

Seattle Branch

Leader: Gordie Swartzman

#### **Day Hike - Boulder River**

**Exploring Nature Trip** 

This will be a Naturalists outing primarily to study mosses and lichens.

Difficulty: Easy/Moderate

Sat, Apr 8, 2017 No Prerequisites Availability:

4 participants 1 leader

Registration closes Apr 6

Seattle Branch Leader: <u>Gary Brill</u> \_

#### **Day Hike - Mima Falls**

Exploring Nature & Day Hiking Trip

Combine the scenic beauty of hiking through a forest canopy leading to a waterfall with

Difficulty: Easy Sat, Apr 8, 2017 No Prerequisites Availability:

11 participants

Registration opens Mar 20

Tacoma Branch
Leader: <u>Dick Hayek</u>
Qualified Youth Leader\_

#### Day Hike - IslandWood

**Exploring Nature Trip** 

Learn ways to engage with nature while exploring the IslandWood campus on Bainbridge Island.

Difficulty: Easy+ Sun, Apr 9, 2017 No Prerequisites Availability: 11 participants

Registration opens Mar 1

Seattle Branch

Leader: Brian Carpenter
Oualified Youth Leader

#### Day Hike - Margaret's Way

Exploring Nature & Day Hiking Trip

WINTER CONDITIONING HIKE OPEN TO ALL MEMBERS. Hike the newest trail on Squak

Mountain, Margaret's Difficulty: Moderate Sat, Apr 15, 2017 No Prerequisites Availability:

11 participants

Registration opens Mar 27

Foothills Branch Leader: <u>Dick Hayek</u> *Qualified Youth Leader* 

Exploring Nature, Photography & Day Hiking Trip

Lower Table Rock trail - leisurely naturalist/photo hike for spring wildflowers, birds, geology.

Difficulty: Easy/Moderate

Sat, Apr 15, 2017 No Prerequisites Availability:

4 participants 1 leader

Registration closes Apr 10

Seattle Branch

Leader: Linda Moore

#### Day Hike - Grants Pass Area Siskiyous (Oregon)

Exploring Nature, Photography & Day Hiking Trip

Eight Dollar Mtn and Waters Creek trails for spring wildflowers and photography

Difficulty: Easy/Moderate

Sun, Apr 16, 2017 No Prerequisites Availability:

**4** participants **1** leader Registration closes Apr 10

Seattle Branch

Leader: Linda Moore

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2016-2017 Naturalists Lecture Series

## Thurs., March 9, 2017, 7 p.m. Cascade Room, Seattle Program Center

Citizen science at Mount Rainier: You can help

MeadoWatch is a citizen science program monitoring the link between climate and wildflower reproduction at Mount Rainier National Park.

Since 2013, MeadoWatch volunteers have been collecting data on wildflower phenology (the timing of budding, flowering, fruiting and seed release) in high mountain meadows at Mount Rainier. Janneke Hille Ris Lambers, University of Washington biology professor and executive director of MeadoWatch, will explain how these data allow UW scientists to understand how climate change will influence the timing of peak wildflower season at Mount Rainier, information that can also aid the park's resource management.

#### 'Link to course, for email etc.:

https://www.mountaineers.org/about/branches-committees/seattle-branch/committees/seattle-naturalists-committees/course-templates/naturalist-lecture-series/naturalist-lecture-series-2017-2

Link to Meadowatch site. <a href="http://www.meadowatch.org/">http://www.meadowatch.org/</a>



Note: Janneke Hille Ris Lambers is CQ



"Best Wildflower Hikes in Western Washington"
Peter Stekel



Photo by Mary Ingels

Peter Stekel, an award winning author, will provide a perambulation through some of Western Washington's premier wildflower habitat - surprising and not - and known, little known, or somewhat forgotten gems of landscape. There will be plenty of photos, hints on not only where to go for wildflower displays but when to go to see the best. He will also walk you through the history of botanical exploration in our region, what and what not to bring on hikes, and attempt to navigate you through the roiling and confusing waters of trail permits. Stekel has a B.A. Botany, University of California, Davis and has done graduate work in evolutionary plant ecology, Humboldt State University 1976-7 He received a teaching credential in secondary school science, Humboldt State University, 1982. He has worked as an outdoor/science school teacher; biological surveys; program manager; freelance writer and journalist; novelist. He is an award-winning author with over 700 magazine and newspaper feature stories published since 1991. He is author of one other hiking guide, **Best Hikes Near Seattle** (Falcon guide)

Thursday, March 2, 2017

Cascade Room, The Mountaineers, 7700 Sand Point Way NE, Seattle, WA 98115

Doors open at 6:00 PM for the Native Plant Identification Workshop; Program begins at 7:30 PM.

# Refreshments, Public Invited, Admission is Free Upcoming Programs:

April 25, 2017: Bellevue Botanical Garden; Richard Ramsden; "Seeking Washington Wildflowers"

May 4, 2017: Center for Urban Horticulture, NHS Hall; Linda Vorobik; ; "A Yankee Botanist's Search for New Zealand Bush"

June 1, 2017: The Mountaineers Program Center, Cascade Room; David Giblin; "Revising 'Flora of the Pacific Northwest'-What did we Learn and What's Next?"

June 13, 2017: Bellevue Botanical Garden Nancy Kartes "Coming of Age: Bellevue Botanical Garden at 25" plus tour of the Urban Meadow Project

#### **Seattle Audubon Society Field Trips**

Saturday, March 11, 2017 - Limit 12

**Green Lake** 

Leaders: Louis Kreemer (206-849-2602 day of trip only) and Martin Muller 8:00 AM, Bathhouse Theater, West Beach (between water and bathhouse)

Green Lake is an excellent place to observe birds up close after they've spent the winter getting acclimatized to people circumnavigating the lake. This time of year most winter ducks are still around and some migrant water birds start passing through. The local eagles (up the hill) should be on eggs, leaving one of them free to scour the lake for edibles, encourage visiting eagles of the same sex to "move on through" and those of the opposite sex to "stay awhile." We should observe courtship in some of the waterfowl, as well as coots and pied-billed grebes practicing their freshly developed flight muscles prior to departure for breeding grounds (although perhaps some pied-bills will stick around like they used to, to try breeding amongst the water lilies). We should encounter some warblers, as well as lingering goldfinches and kinglets. And who knows what else. Besides bird identification and bird behavior, Green Lake history and ecology are also be on the menu. Dress for standing still. Layers are advised. 'Tis better to shed than to shiver! If you have a scope please bring it. Over by noon or whenever we've worn out the hardiest of you!

Saturday, March 18, 2017 – Limit 10 in 3 cars Semiahmoo, Blaine Marina, Birch Bay Leaders: Neil and Carleen Zimmerman (206-200-6700 day of trip only) n3zims@comcast.net 7:00 AM, North Jackson Park (NE 145th Street) Park-&-Ride

Winter is a good time to look for loons, diving ducks and alcids. Loons sometimes number in the hundreds. Long-tailed Ducks are also normally seen. We'll start at Semiahmoo and make our way to Drayton Harbor, the Blaine Marina and Birch Bay. Weather and time permitting, we will stop at Lake Terrell on our way home. Drivers will need a Discover Pass for Birch Bay S.P. Dress for cold/wet weather, bring fluids, lunch, treats for leaders and snacks. Scopes will be very helpful but not required. Return by late afternoon or early evening.

Carpool Costs: \$60 shared equally by riders.

Wednesday, March 22, 2017 - Limit 11 in 3 cars

**Kittitas County Sage Birds** 

Leader: Brian H. Bell (206-619-0379 day of trip only)

6:30 AM, uncovered Tibbetts Lot (1675 Newport Way NW), across from Issaquah P&R

March is a good time for sage birds in Kittitas County. We will meet at the Tibbetts P&R (I-90 exit 15, turn south to 3rd stop signal, turn left a block and then right into the P&R). We will work our way east from Ellensburg down to Vantage looking for Sage Sparrow, Sage Thrasher, Brewer's Sparrow, and whatever else we can find. Bring lunch, scopes, and dress warmly. Drivers will need a Discover Pass. Carpool cost \$65 per car shared by riders.

Saturday, March 25, 2017 Circumnavigation of Bainbridge Island Leader: George Gerdts

9:45 AM, Winslow City Dock. Boat leaves at 10:00 AM. See below for sign up and travel directions

Aboard the 80-foot "Admiral Pete" with George Gerdts, long-time SAS Member, as leader/naturalist. Expect great looks at three species of cormorants; sea ducks; rocky-shore sandpipers; a Bald Eagle or two; great scenery; and a unique, close-up view of the Bainbridge Island shoreline. The trip leaves the Winslow City Dock at 10:00 am, and will return by 2:00 p.m. If coming from Seattle, plan to take the 8:55 ferry to Bainbridge Island as a walk-on. George will meet the group at the Bainbridge Ferry Terminal at 9:30 for the short walk to the "Admiral Pete". If you plan to drive on, parking is available near the City Dock. Call George at 206-842-8138 for further details. To reserve a space call the Bainbridge Island Parks and Recreation Department at 206-842-2306 ext. 118. (Ask about Class # 131850-01.) Credit card payment is accepted. Leave your e-mail address when signing up, and directions and a map of Bainbridge Island, including where to park if driving, will be sent to you via e-mail. Price is \$85, but for SAS members \$15 of the cost of the trip will be donated to SAS. Be sure to tell the BI Parks, when you sign up, that you are a member of SAS, so that the donation can be made. If a participant does not live on Bainbridge Island, a \$5.00 "off-Island" fee is added to the cost of the trip.

Sunday, March 26, 2017 - Limit 8
Discovery Park
Leaders: Kathy and Arn Slettebak (206-327-4297 day of trip only)
7:30 AM, Discovery Park South Parking Lot entrance on W Emerson St

We'll take a leisurely 3 to 4 -mile walk, with some elevation gain and loss, on the Loop Trail and Wolf Tree Nature Trail. We will explore forest, field and wetland habitats looking for resident and migrant birds. Dress for weather; bring binoculars, water & snacks. Over by 11 a.m.

#### **Odds and Ends**

#### **Poetry**

After the Winter

By Claude McKay

Some day, when trees have shed their leaves
And against the morning's white
The shivering birds beneath the eaves
Have sheltered for the night,
We'll turn our faces southward, love,

Toward the summer isle

Where bamboos spire the shafted grove And wide-mouthed orchids smile.

And we will seek the quiet hill
Where towers the cotton tree,
And leaps the laughing crystal rill,
And works the droning bee.
And we will build a cottage there
Beside an open glade,
With black-ribbed blue-bells blowing near,
And ferns that never fade.

#### **Emily Dickinson**

#### A Light Exists In Spring

A light exists in spring Not present on the year At any other period. When March is scarcely here

A color stands abroad On solitary hills That science cannot overtake, But human naturefeels.

It waits upon the lawn; It shows the furthest tree Upon the furthest slope we know; It almost speaks to me.

Then, as horizons step, Or noons report away, Without the formula of sound, It passes, and we stay:

A quality of loss Affecting our content, As trade had suddenly encroached Upon a sacrament.

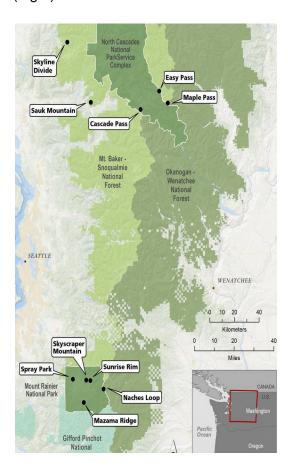
#### **Cascade Butterfly Project – by Lee Wales**

Citizen Science: Cascade Butterfly Project

"Beautiful an graceful, varied and enchanting, small but approachable, butterflies lead you to the sunny side of life. And everyone deserves a little sunshine."

#### Jeffrey Glassberg

The Cascade Butterfly Project is a long term citizen science project started in 2011 sponsored by the National Park service and both Mount Rainier and North Cascades National Parks. The project's objectives are to monitor the ecological effects of climate change by tracking butterflies and flowers at ten permanent survey sites in two Washington National Parks and National Forests each summer. (Fig.1).



Future pacific northwest summers will be warmer and drier with snow melting earlier. Temperatures are expected to increase 3-6 degrees Fahrenheit by the end of the 21st century. Mountain ecosystems will be vulnerable to these rapid changes. Monitoring the changes in butterfly abundance, species diversity, plant phenology(timing of flower budding thru seed dispersal) and distribution will provide a data base for optimal management of national parks and forests.

Butterflies and plants were chosen since they are dependent on each other, are monitored across the world, and easy to learn. This data will be available for scientists to add to better analyses wider effects of the climate change.

Who is involved? Regina Rocheforoft PhD. of North Cascades National Parks the lead scientist. She is assisted by environmental science summer interns and citizen science volunteers each summer.

At the beginning of each summer there is both an informational webinar and meeting to explain the program in detail and also a field training session. These sessions introduce the volunteers

to the common butterflies seen, and survey methods. All survey sites are on major trails, with well marked start and end points. Each survey route is 1 kilometer(.6 mile) in length. The survey route is walked each way using the Pollard survey technique. All butterflies both netted and seen within the Pollard zone are counted. Usually the flower portion of the survey is done on the return walk. Volunteers are provided data sheets, printed identification keys and nets to use for the surveys. Usually the survey is done with 2 volunteers (one person recording data and the other doing the observing) but one person can do the survey. Afterwards the data sheets information can either mailed in or entered online into the data base.

I have been volunteering at Mount Rainier NP for several years and I can attest to the advantages. It's a good excuse to be in the mountains and allows one to both do citizen science and separately do a hike on ones own. All of the hikes are offer magnificent vistas and solitude. Good weather conditions are one of the prerequisites to doing a survey. For a naturalist the experience is an opportunity to deepen one's knowledge of both butterflies and plants. As a volunteer you can do as little or as much as you like.....your efforts are alway appreciated. Last spring David Droppers taught a Mountaineer's butterfly identification course and likely will do it again this year.

For more information contact: Regina M Rochefort PhD, North Cascades National Park Complex. email: regina\_rochefort@nps.gov Phone: 360-854-7202 Regina Rochefort is having an informational meeting for the Cascade Butterfly Project Saturday April 8th 1-3 PM at the Burke Museum for potential volunteers.

Online Resources: Butterflies of America: http://butterfliesofamerica.com/US-Can-Cat.htm Butterflies and Moths: http://www.butterfliesandmoths.org/ Washington Butterfly Association: http://wabutterflyassoc.org/











# Citizen Science Cascades Butterfly Project National Park Service U.S. Department of the Interior Natural Resource Stewardship & Science North Cascades National Park Service Complex Mount Rainier National Park

## **Monitoring Subalpine Butterflies as Climate Changes**

### 2016 Summary of Accomplishments

#### Background

Future Pacific Northwest summers will be warmer and drier, snow will melt earlier, and forest fires may be more frequent. High-elevation ecosystems are especially vulnerable to warming climates because plants and animals are adapted to long winters and short summers with mild temperatures. We are monitoring butterfly abundances and plant phenology to understand how pollinators in our parks will be influenced by warming climates.

#### Program Objectives

Citizen scientists monitor butterfly abundance and plant phenology at ten permanent survey sites in two national parks and two national forests each summer, starting in 2011.

#### 2016 Survey Results

- First survey of the year was June 8 at Sauk Mountain 61 butterflies, 6 species: Anise Swallowtail, Clodius Parnassian, Western Meadow Fritillary, Sarah Orangetip, Silvery Blue, Milbert's Tortoiseshell
- Last surveys of the year were September 16 on Mazama Ridge (38 butterflies, 4 species) and Cascade Pass (19 butterflies, 4 species). The same 4 species were observed at both sites: Anna's Blue, Mormon Fritillary, Hydaspe Fritillary, and Mariposa Copper
- 7 new species were documented: Echo blue, Persius Duskywing, & Greenish Blue (Mazama Ridge), Common Alpine (Easy Pass), Cabbage White & Acmon Blue (Sunrise Rim), and Coronis Fritillary (Naches Loop)

Figure 1. Coronis Fritillary, Naches Loop. Photo by Melanie Weiss.

Figure 2. Map of survey sites.

Table 1. Summary of surveys completed by year.

p		
# Surveys	# Species	# Butterflies
29	23	819
29	21	480
34	21	1,585
65	30	2,519
100	36	4,431
82	37	3,573
	# Surveys 29 29 34 65 100	# Surveys # Species  29 23 29 21 34 21 65 30 100 36

#### • Butterfly Abundance & Flight Times

Figure 3. Sauk Mountain butterfly abundances, 2011-2016.

At almost all sites, peak abundances were lower and occurred later than in 2015 (e.g. Sauk Mountain, Figure 3, Table 2) Anna's Blue was recorded at all 10 sites, Boisduval's Blue and Mormon Fritillary at all sites except Maple Pass Table 2. Peak butterfly abundance by route and date for 2015 and 2016.

Site	2016 Date	#	2015 Date	#
Cascade Pass	Aug 29	116	Aug 11	111
Easy Pass	Aug 4	118	Jul 14	169
Maple Pass	Aug 3	35	Jul 14	24
Sauk Mountain	Aug 19	183	Jul 15	358
Skyline	Aug 15	67	Jul 7	125
Mazama	Aug 25	87	Jul 6	242
Naches	Aug 16	59	Jul 8	96
Skyscraper	Aug 16	58	Jul 15	99
Sunrise	Aug 16	90	Jun 30	113
Spray Park	Aug 22	44	Jul 15	72

#### • Plant Phenology Surveys

This year we worked on refining a list of plants for each survey route. Currently we have between 14 (Spray Park) and 29

species (Easy Pass) listed for surveys at each site. Phenophase data will be analyzed during the winter of 2016-2017.

Figure 4. Mid (left) and late (right) phenophases of Bracted Lousewort.

#### • Volunteer Involvement

This year we had 36 great volunteers! Thank you Everyone! A few facts on our Citizen Scientists:

#### Most Surveys this Season

- 7 surveys Melanie Weiss & Doug Murphy
- 6 surveys Mary Prichard & Paul Metzner, close second

#### Longest Volunteers

- 6 seasons Melanie Weiss
- 5 seasons Ayako Okuyama-Donofree, Mike Donofree, Elena Bianco, Irene Perry, and Cathy Clark

#### Most Sites Surveyed

- 3 sites Lee Wales
- 2 sites Ayako Okuyama-Donofree & Mike Donofree, Irene & Mark Perry, Sue Casillas, Paul Metzner

Figure 5. Volunteer hours 2011-2016.

#### • 2016 Field Crew

Figure 6. 2016 NPS field crew: Kathy Acosta, Tanner Humphries, Eddie Silahua, Michelle Wong, Regina Rochefort, Ana Casillas Brownson, Angelina Nguyen.

#### More Information

Regina M. Rochefort, Ph.D.
North Cascades National Park Service Complex
Email: <a href="mailto:regina\_rochefort@nps.gov">regina\_rochefort@nps.gov</a>
Phone: 360-854-7202

December 19, 2016

EXPERIENCE YOUR AMERICA™

If you are interested in participating Regina Rochefort is having an informational meeting for the Cascade Butterfly Project Saturday April 8th 1-3 PM at the Burke Museum for potential volunteers.

#### Rob Sandelin environmental educator dies



"I worked for three summers as a Naturalist in Denali National Park. I led hikes for visitors and spent most my days off hiking in the park. I had several encounters with grizzlies, a few were tense but most were benign. Hiking in grizz country is different. The all mighty human becomes humbled before the power of nature, and the potential for looking death straight in the eye. Something primitive inside you wakes up and you become hyper-alert. You see everything, the bend of a bush, the crackle of leaves, the density of berries. Your brain filters possible bear information and it affects your decision making, you think not like a predator but like prey, you avoid the thicket and choose to walk in the open. You constantly make noise to avoid surprising king bear. A sudden noise and you clutch your can of bear spray and then sigh in relief that it's just a squirrel. The primary difference in hiking in bear territory is that you become part of nature in a way that is unique, and a little bit of you is changed forever by the experience. I think we need badly need this connection, and the humility that comes with it, in order to be fully human again. In bear territory you fully understand you are a part of nature, not the lord of it."

- Rob Sandelin, Naturalist, Writer, Teacher, Snohomish, Washington

Biography: ROB SANDELIN was a naturalist and environmental educator who since childhood spent much of his life observing and studying nature in the mountains of the Northwest. He served as a park naturalist at Yosemite National Park, Olympic National Park, and Denali National Park. Currently taught field skills to student naturalists at the Environmental Education School Education Center in Monroe, Washington. He was the author of *This Week in the Woods*, a series of natural history essays; *the Cohousing Resource Guide*; and the Intentional Communities Resource Pages website. He lived with family and friends in the Sharingwood Cohousing Community in Snohomish County. He was also author of *A Field Guide to the Lowland Northwest*, an online multi-species webbook, and *A Field Guide to the Cascades and Olympics*, published by Mountaineers Books. In his spare time, he composed and recorded original music.

As most of you know, Rob was major author on the resource book used for the Introduction To the Natural World Class. Apparently (this from Barb Retzlaff), Rob gave many lectures for early version of this class, so in that sense he is a graduate of our program. His consciousness lives with us.

#### **Photos**

The mystery location on the picture with the penguins last month waaaas – tada **Faulkland Islands** 

Photos by Ray Redd



Cladonia or reindeer lichen at Mima Prairie



cattail moss in snowstorm



kinnickinick



salal



cladonia forest