

# RARE PLANT PRESS

From Washington Rare Plant Care & Conservation

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## NOTES FROM THE FIELD

Despite unique challenges posed by the COVID19 pandemic, Rare Care staff and volunteers successfully completed another busy field season this year. The start of field work was delayed by the closure of most public lands, which gave us time to develop a Health and Safety plan for volunteers ensuring we kept everyone safe and healthy. Our volunteers have been superb as they adapted to the new protocols and made the most of their time!

Some of the first public lands to allow volunteers were the Bureau of Land Management and Little Pend Oreille NWR. This put eastside monitors Carol Mack, John Stuart, and Bill Fouts back to work monitoring four populations: Washington polemonium (*Polemonium pectinatum*), northern blue-eyed grass (*Sisyrinchium septentrionale*), and two sites of Spalding's catchfly (*Silene spaldingii*). Not all populations were relocated, but in mid-June Mack and Stuart were rewarded with a field of dainty lavender blooms of Washington polemonium.

After naming snow cinquefoil (*Potentilla nivea*) a focus species in 2019, volunteers continued revisiting historic locations this year. Brenda Cunningham, Tim Manns, Samuel Lee, Chelsea Gudgeon, and Kathleen Learned explored the Okanogan highlands, visiting four sites between them and relocating three populations. Their efforts are helping us better understand the current population trends of this species.

High in the alpine scree and rocky outcrops of Mt Baker-Snoqualmie NF two seed collections were made by Sam Wershow: twin sisters sandwort (*Sabulina sororia*) and glaucous gentian (*Gentiana glauca*). Cunningham and Manns also found themselves well above the clouds in the Okanogan-Wenatchee NF to collect seeds of pygmy saxifrage (*Saxifraga hypnoides*). All three of these species are new to the Miller Seed Vault!

These are just a few snapshots of the work our dedicated volunteers achieved this summer; demonstrating their resiliency, dedication, and commitment to plant conservation. We are pleased with the progress made and grateful for the support from our volunteers and donors.

Photo: Brenda Cunningham



Clockwise, L to R:  
Tim Manns in the field, snow cinquefoil (*Potentilla nivea*), pygmy saxifrage (*Saxifraga hypnoides*),  
and Carol Mack monitoring polemonium.



Photo: Samuel Lee



Photo: B.Cunningham



Photo: John Stuart



# RESTORATION

## *After Wildfire*

Wildfires have always been a feature of the western landscape, despite intense efforts of the past century to suppress them. When multiple fires impact the same rare plant populations in the span of seven years, they become a growing concern to plant conservationists. The Milepost 10, Colockum Tarps, Spartan, and Colockum fires have burned part or all of the entire extent of Whited's milk-vetch's (*Astragalus sinuatus*) habitat near Wenatchee.

A population Whited's milk-vetch's on Bureau of Land Management (BLM) land was impacted by three of these recent fires. The site was historically grazed, but after it was designated as an Area of Critical Environmental Concern (ACEC) in 1985, the site was fenced off to protect the Whited's milk-vetch population. Since then, studies have been conducted at the site to learn more about this species and the site has been managed to protect it. In 2013, a year prior to the Colockum Tarps fire, Rare Care and BLM established 11 permanent plots in the ACEC to monitor the milk-vetch population.

The milk-vetch occurs in areas with deeper soils that also support big sagebrush, and a band of sagebrush occurred across the top of the slope at the site. In some places the sagebrush was dense, which often occurs



Colockum Creek in 2019

Photo: Wendy Gible

at sites where the cover of perennial grasses and forbs are reduced by grazing. The Colockum Tarps fire destroyed most of the big sagebrush, and what remained afterwards was subsequently wiped out by the 2017 Spartan fire. As a result, cheatgrass (*Bromus tectorum*) and tumble mustard (*Sisymbrium altissimum*), along with several other annual non-native grasses, have greatly increased. Both cheatgrass and tumble mustard germinate early, utilizing water that is a scarce resource in arid environments.

Whited's milk-vetch likely evolved to tolerate fire in the ecosystem, and the monitoring data in the past six years do not show evidence of a decline after recent fires. However, seedling establishment appears to be episodic, which is typical in arid environments. It is unknown how well new plants will establish in the altered habitat and whether the removal of big sagebrush and competition with non-native species will reduce the overall vigor of plants. Very little is known about what role big sagebrush plays in facilitating Whited's milk-vetch. A recent study in Oregon showed that big sagebrush improved the reproductive success of certain perennials under drought conditions. Furthermore, research conducted by Julie Combs, as a graduate student of Sarah Reichard, showed that seedling recruitment and establishment is substantially reduced where cheatgrass is present. Therefore,

land managers are concerned about the long-term viability of this population and the entire species across its range.

Rare Care is developing a site management plan that will help guide restoration and management of the ACEC. An important question in developing this plan is how to restore the vegetation community to make it more resilient to wildfire. Another key question for restoration will be deciding what the target vegetation community should be in light of the increased fire frequency, the predicted warmer temperatures, and increased drought stress expected in the coming decades. Reducing the cover of cheatgrass will be key and grass specific herbicides can be effective, but we need to understand what affect they have on Whited's milk-vetch before they are used in areas it occupies. Increasing perennial grasses and forbs has also been shown to reduce cheatgrass cover and we will develop a plan to increase native vegetation at the site.

Restoration activities have already commenced, and future planting activities are scheduled for the upcoming years. These activities will provide an opportunity for our Rare Care community to contribute to the restoration and conservation of this rare plant and to engage with the local community to foster an appreciation for the wonderful diversity of plants found in the Wenatchee area.



Photo: Julie Combs



## OUTSTANDING PARTNER AWARD

Rare Care is honored to be awarded the Outstanding Partner Award by the Washington Native Plant Society (WNPS) at their annual meeting this summer. The award is a testament to the tremendous contributions Rare Care volunteers make to plant conservation by monitoring rare plant populations and collecting seeds for the Miller Seed Vault. We greatly appreciate the recognition of our work and the partnership we have with WNPS (<https://www.wnps.org/history/outstanding-partner>).



## RONE'S BISCUIT-ROOT

Like the cartwheel of a spirited umbel, we are rolling on with our seed collections for the genus *Lomatium*. This summer Rare Care collected Rone's biscuit-root (*Lomatium roneorum*). This species was described by botanist Mark Darrach in 2018 and is a new species held in the Miller Seed Vault. The features separating it from a nearby neighbor, *L. cuspidatum*, are its crowded, glaucous leaflets and the presence of involucre bracts. Rone's biscuit-root is a narrow endemic to the Wenatchee Mountains found mostly on steep, unstable slopes of rocky to sandy substrates. This fragile habitat makes for difficult terrain to traverse and collect seeds from.



## Interns Monitor Alpine Plants

Two bright interns, Marina Kochuten and Megan Rodenbeck, joined Rare Care this summer to continue work in the alpine of our National Parks. They furthered research by installing permanent monitoring plots and mapping populations of endemic and rare plants at Olympic and North Cascades National Parks. Check out their blogs on the University of Washington Botanic Gardens website: <https://botanicgardens.uw.edu/about/blog/>



**MARINA KOCHUTEN** (photo left) is a recent graduate from the University of Washington with a degree in Environmental Science and Resource Management. She grew up in La Conner, Washington and is eager to learn field techniques outside of coursework and to spread knowledge about native plants. "It is my professional dream to be able to work outside in our wildlands while playing a role in conservation."

**MEGAN RODENBECK** (photo right) completed her degree in Environmental Science, Technology and Policy at California State University in Monterey Bay in 2019. She has a strong interest in bryophytes and hopes to pursue a master's degree in botany focusing on pollination ecology. "I have a special interest in endemic plants and I would greatly enjoy the opportunity to expand my knowledge of native rare plants in Washington."

July 1, 2019 - June 30, 2020

# THANK YOU 2,425 total volunteer hours

*Rare Care is grateful for the valuable contribution of our volunteers, who gave 2,425 hours in fiscal year 2020.*

Photo: Wendy Gibble



**Tisch's saxifrage,  
(*Micranthes tischii*)**

## \$1,000 & ABOVE

Bonhoeffer Botanical Gardens  
Dorothy P. Gibble  
Terri Knoke and Mark Mease  
Christopher Mealy and  
Ara Jane Olufson  
Bobby and Lily Takatsuka  
Washington Native Plant Society –  
Salal Chapter  
Susan Wheatley

## \$500 to \$999

Anonymous  
V. Lee Ellis  
Wendy Lee

## \$250 to \$499

Suzanne Anderson, Ph.D. and  
Marvin Anderson  
Eleanor Boba and Alan Humphrey  
Steven Clark  
Janet Coles  
John and Lee Neff  
Paul Slichter  
Lyle and Jessica Stone

## \$100 to \$249

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Susan Ballinger  
Ron and Susan Bockelman  
Walt and Dona Bubelis  
Tom and Sally Cahill  
Pamela Camp  
Mickie Chamness  
Brenda Cunningham and Tim Manns  
Darcy Dauble  
Mary DeVany  
Earl and Tena Doan  
Dean Dougherty  
Peter Dunwiddie, Ph.D. and  
Elizabeth Bell  
Walter Fertig, Ph.D. and Laura Fertig  
Lucy Flanagan  
Joan Frazee  
Wendy Gibble  
Cleveland Hall and Lafe Lawyer  
Catherine Hovanic and Bill Brookreson  
Shaun Hubbard and Harold Kawaguchi  
Virginia King  
Kathleen Learned  
Larry Loftis  
Frederick McDonald  
Michael McGoodwin, M.D.,  
in memory of Rebecca C. McGoodwin  
Steven and Katie Messick  
Renee Miller, Ph.D.  
Puget Sound Mycological Society  
Queen of Spades Garden Club  
Ann Risvold and Lawrence Donovan  
Susan Saul  
Carver and Mary Ann Simmons,  
in memory of Terri Knoke  
Elizabeth Stanek and John Ratts  
Curtis Sundquist  
Ken Swedberg  
Hally Swift and Eric Strandburg,  
in honor of Betty Swift  
Ted Thomas, in honor of Joseph Arnett  
George Thornton and Lee Miller  
Jeff Thorson, Ph.D. and  
Marilee Henry, Ph.D.  
Jeff Walker  
Cheryl Wagner and Richard Johnson  
Stephen West, Ph.D. and  
Pamela Yorks, Ph.D.,  
in memory of Sarah Reichard  
Withey Price Landscape & Design

## \$50 to \$99

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Ruth Baetz and Sandra Jo Palm  
Thomas and Donna Blanton  
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Timothy Fullam, Ph.D.  
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in honor of Jennie Green  
Debra Ann Inglis and Kenneth Baber  
Ron Klump  
James and Colleen Lourie,  
in honor of George Thornton  
Betsy Lyons  
Brian Thompson  
Sue Trevathan  
Andrew Walker  
Veronica Wisniewski and  
Edoh Amiran  
Jennifer Youngman

## UP TO \$49

Julie Bresnan  
Clara Burnett  
Liz Exell  
Mark Fessler and Barbara Kolar  
Dorothy and Edward Hudson  
Bob and Judy Kent  
Sashi Raghupathy and  
Hugues Hoppe, Ph.D.  
Kava Vale  
Susan Varnum

## CORPORATE MATCHES

The Boeing Company

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