

# RARE PLANT PRESS

## From Washington Rare Plant Care & Conservation

Fall/Winter 2021 Vol. 16, No. 2

## NOTES FROM THE FIELD

2021 was a jam-packed and prolific year of rare plant conservation for both Rare Care volunteers and staff. Safety remained a top concern, with care given to evolving COVID-19 protocols, and the wildfire season affecting access to many east side locations. Despite the extra challenges, we successfully completed research fieldwork and rare plant monitoring assignments, and added new collections to the seed vault.

Rare Care and our partners finished up a nine-year effort to census the Wenatchee Mountains checkermallow (*Sidalcea oregana* var. *calva*) population at Camas Lands. This has been a really fun project and many volunteers have been involved for almost a decade! Initially it was estimated that there were 11,000 checkermallows at this site. After nine years of flagging, counting, and mapping, we now know there are over 35,000 plants! Monitoring will continue in a more limited basis in the future. (Read more: [bit.ly/WM\\_checkeramallows](https://bit.ly/WM_checkeramallows))

This July, Wendy Gible and Anna Carragee collected the first of three seed collections for the Center for Plant Conservation's ex-situ seed longevity study. The freshly collected pasqueflower (*Anemone patens* var. *multifida*) seeds will be compared with a

sample of seeds collected from the same population in 2006 and held in the Miller Seed Vault. Thank you to volunteer Josh Wozniak for determining if these seeds were ripe for collection, and thank you to our seed vault volunteers for the quick seed cleaning.

Rare plant monitoring can be an adventure and some sites require quite the effort to access them. Veronica Wisniewski, Edoh Amrian, and Patricia Otto rafted 8.5 miles of the Ronde Grande River in July to monitor several populations of sagebrush mariposa-lily (*Calochortus macrocarpus* var. *maculosus*). Robin Fitch kayaked down the Columbia River four times in search of the lowland toothcup (*Rotala ramosior*). Peter Boley and Leo Egashiro bushwhacked to find prickly tree clubmoss (*Dendrolycodium dendroideum*) deep in the forest off of Highway 2. This is just a small sampling of the great efforts our rare plant monitoring volunteers go to reach these rare and vulnerable populations.

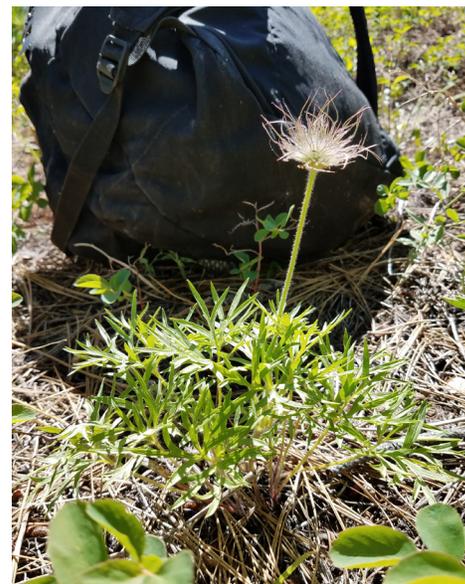
Collectively our contributions make a big difference for the future of rare native plants in Washington.



White bluffs bladderpod on the Columbia River.  
Photo: Maya Kahn-Abrams



Edoh Amrian on the Grande Ronde River.  
Photo: Veronica Wisniewski



Pasqueflower (*Anemone patens* var. *multifida*)  
Photo: Gail Roberts

# HABITAT SCOUTING

*From the sky*



*Drone flying over potential showy stick seed habitat.*

*Photo: Sarah Shank*

It's late in the hotel room and every outlet is precious- lamps and clocks are abandoned for a plethora of plugs and cords. Everything is plugged in and charging: smartphone, tablet, laptop, power station, and batteries for the drone and sensor, check! Memory cards have plenty of space, data are backed up, and extra batteries and cables are in the bag, check! The weather looks good, not too windy, no rain, solar noon is around 1pm, and no restricted airspace in our flight areas, check!

While this may not sound like a field crew preparing for plant conservation, this is not an atypical evening for today's field biologist. Modern devices, sensors, and techniques are quickly being adopted in applied science. In fact, rapid advances in technology, computing power, statistical modeling, and genetic analysis are ushering in a new era for conservation biology and ecology. I was lucky enough to spend time as a UW graduate student at the vanguard of plant conservation science. As part of a larger collaborative effort, Rare Care teamed up with the Remote Sensing and Geospatial Analysis Laboratory at UW to explore the use of unoccupied aerial systems (UAS), or drones, to further conservation

efforts for the rare endemic plant, showy stickseed (*Hackelia venusta*). The goal of the project was to predict and identify suitable habitat for future recovery efforts.

My research focused on developing a model to predict suitable habitat where new showy stickseed populations might be established. Over the course of summer 2020, my lab partner and I acquired imagery of 365 acres of high-resolution multispectral imagery from UAS flights. Using these data, we identified approximately 33 acres of potential habitat from the resulting model analysis. This analysis narrows the search area for targeted field surveys, which will hopefully identify new locations for future showy stickseed outplanting sites.

I'm certain that UAS will become an essential tool in the toolkit for future field biologists; however, nothing replaces boots on the ground, nor the knowledge and relationship between people and the planet. New technology, sensors, and abstruse algorithms are simply tools to better understand the environment, and conservation will always need passionate advocates and stewards like the Rare Care program.

*Article by Drew Foster, M.S.*

## RARE PLANTS AND CLIMATE CHANGE

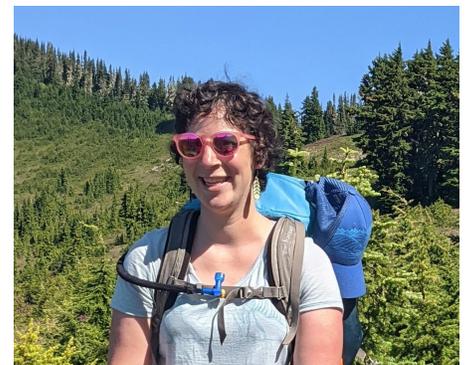
Over the past five months, Rare Care employee and incoming UW masters student Maya Kahn-Abrams, has worked on several of Rare Care's projects restoring native rare plants all over Washington state. She reflects on the climate stress faced by White Bluffs bladderpod (*Physaria douglasii* ssp. *tuplashensis*), Umtanum buckwheat (*Eriogonum codium*), and Spalding's catchfly (*Silene spaldingii*) on our blog: [bitly/RP\\_Climate](https://bit.ly/RP_Climate)



*Umtanum buckwheat (Eriogonum codium)*  
*Photo: Wendy Gibble*

## WELCOME ANNA CARRAGEE

Anna Carragee joined Rare Care as our new Volunteer and Outreach Coordinator at the beginning of June. Anna is a graduate of the Master of Environmental Horticulture program at University of Washington and a committed volunteer management professional. She is excited to join such a devoted team of plant enthusiasts and ready to do her part to protect the rare plants of Washington. Visit our blog at: [bit.ly/MeetAnnaC](https://bit.ly/MeetAnnaC)



*Photo: Aaron George*

# CUSICK'S CAMAS

Local botanists have long recognized several patches of an odd camas growing above the Klickitat River. They didn't quite match the Suksdorf's camas (*Camassia leichtlinii* ssp. *suksdorfii*) or common camas (both *C. quamash* ssp. *breviflora* and ssp. *quamash*) which are the local camas in the area.

Fortunately, Susan Kephart, a specialist in camas taxonomy, was invited to look at the unusual camas by local plant enthusiast, Barbara Robinson. Susan quickly solved the mystery by noting that these were Cusick's camas (*Camassia cusickii*) found far outside their range. Susan's efforts to investigate camas species in western Klickitat County can be found in Volume 43, No. 1, the Spring 2019 Journal of the Washington Native Plant Society.

Cusick's camas was originally considered endemic to the Snake River region of northeastern Oregon and west-central Idaho where it inhabits vernal moist montane slopes. It can be identified by the cluster of 10 or more leaves, long dense spikes of light blue flowers, and the mix of

radially symmetrical and irregular flowers. The other local camas species have fewer than 10 leaves, less dense inflorescences, and differences to their respective flowers.

Cusick's camas is a sensitive species in Washington. Little is known of its distribution. It is limited to an area about 5 to 10 miles long above the western edge of the Klickitat River. During the spring of 2021, a group of local Rare Care volunteers were invited to visit a property owned by Barbara Robinson near the town of Klickitat, WA. During the course of this late April hike Barbara directed us to a Cusick's camas patch grouped along a seep on a steep cut bank of basalt above the river. We noted the plant characteristics, took photos, and I then wrote a brief monitoring report that was sent into Rare Care. This piqued the interest of Rare Care since it was the first monitoring report filed with them for this species.

This was a recreational hike, and we did not conduct a formal monitoring search. Such efforts will have to wait until 2022.

Some of the populations will be easy to monitor as they are along trails and roadsides. But most are high up on steep, rocky slopes. One of Barbara's hiking acquaintances has assured us that there are a number of populations awaiting adventurous plant monitors high above the river. Perhaps you will be one of those lucky enough to monitor this beautiful plant?



*Cusick's camas* (*Camassia cusickii*)  
Article and Photo by Paul Slichter

# REFLECTIONS FROM THE ALPINE

Allie Howell and Jaileen Merced Hoyos were the last two interns to round out a 3 year effort to assess the vulnerability of select alpine plant species at National Parks in Washington. They had a busy summer backpacking to and monitoring sites in Olympic, North Cascades, and Mt. Rainier National Parks. Find out more in their blogs on the University of Washington Botanic Gardens website:

<https://botanicgardens.uw.edu/about/blog/>

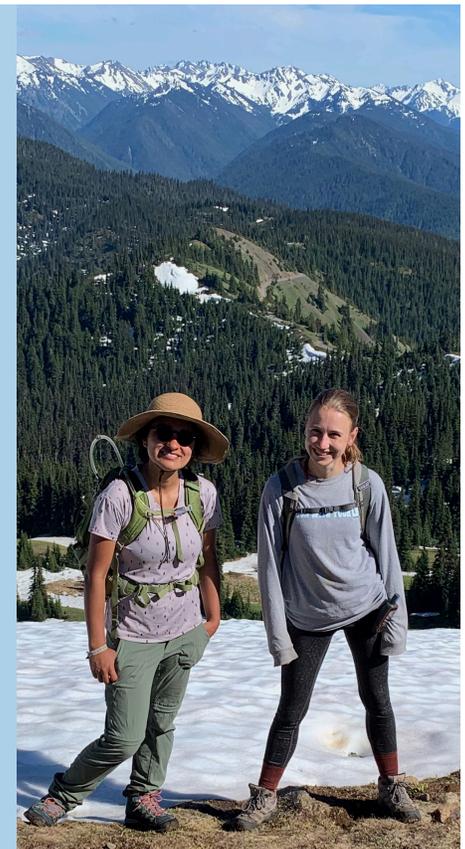
## JAILEEN MERCED HOYOS (photo left)

“There aren't many people that get to see the very last bit of a species. Even though that's not the case for *Saxifraga hyperborea* (it's found in other parts of the state), it did awaken in me a sense of gratefulness for this job. We got to see species that haven't been seen in years.”

## ALLIE HOWELL (photo right)

“I have also gained an appreciation for what challenging growing conditions alpine plants face, and therefore how fragile their ecosystems are. Rather than be the last to see some of these populations, I hope that our work will make valuable contributions to the continued survival of these plants and protection of these amazing places.”

Photo: Wendy Gibble



July 1, 2020 - June 30, 2021

# THANK YOU 3,032 total volunteer hours

Rare Care is grateful for the valuable contributions of our volunteers, who gave 3,032 hours in fiscal year 2021.



Quinalt fawn lily (*Erythronium quinaultense*) Photo: Jacob Maki

## \$1,000 & ABOVE

Deupree Family Foundation  
Christopher Mealy and Ara Jane Olufson  
Bobby and Lily Takatsuka  
David Thomsen, Ph.D.  
Susan Wheatley

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V. Lee Ellis  
Dorothy P. Gibble  
George Thornton and Lee Miller

## \$250 TO \$499

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Thomas and Donna Blanton  
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Janet Coles  
Community Foundation of North Central WA  
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Lyle and Jessica Stone  
Jeff Thorson, Ph.D. and Marilee Henry, Ph.D.

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Crescent Calimpong  
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Richard Johnson, M.D. and May Reed, M.D.  
Virginia King  
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Ed McArthur  
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Michael McGoodwin, M.D., in memory of Rebecca C. McGoodwin  
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Renee Miller, Ph.D.  
Dan and Pat Montague, in honor of Joe Arnett  
Puget Sound Mycological Society  
Lois Prestrud  
Ann Risvold and Lawrence Donovan  
Susan Saul  
David Selk and Teresa O'Connor  
Elizabeth Stanek and John Ratts  
Linda Storm  
Robert and Ethel Story, in memory of Gail Karges  
Curtis Sundquist  
Hally Swift and Eric Strandburg  
Meg Tavio, in memory of Patty Pecchenino  
Ted Thomas  
Mr. and Mrs. Robert Virden, in loving memory of Rachel Elizabeth Virden Hulscher  
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Stephen West, Ph.D. in memory of Pamela Yorks  
Lyle Wilen, in memory of Betty Swift  
David Wilderman  
Withey Price Landscape & Design

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Liz Exell  
Barry Kast  
Ron Klump  
Lars Larson  
Betsy Lyons  
Deborah Naslund  
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Cynthia Smith-Kuebel  
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William and Molly Tomita  
Brian Thompson  
Sue Trevathan  
Susan Varnum  
Andrew Walker  
Peggy Wilton

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Jan Charkow, in memory of the mother, Liz Schott  
Tanya Demarsh-Dodson  
Mark Fessler and Barbara Kolar  
Dorothy and Edward Hudson  
Bob and Judy Kent  
Helen Lau  
James and Colleen Lourie, in honor of George Thornton  
Justine Nagel  
Cailean McWhorter

## CORPORATE MATCHES

The Boeing Company

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