

RARE PLANT PRESS

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BOTANICAL EXPLORATIONS

This spring, Rare Care launched a new initiative in partnership with the Washington Natural Heritage Program to conduct botanical surveys of several Department of Natural Resources (DNR) sites, including Natural Area Preserves (NAP) and Natural Resource Conservation Areas (NRCA). Our goal is to expand our understanding of the botanical diversity of these preserves and the flora of Washington State. With so much land conversion in our state resulting in the loss of native ecosystems, these preserves become increasingly important to the conservation of native plants.

Our first botanical survey of the season was in mid-April at the Two-Steppe NAP in Douglas County. Located on the slopes of a side canyon to Moses Coulee, this preserve protects a high-quality shrub-grassland ecosystem. Nine volunteers from Rare Care and the Wenatchee Chapter of the Washington Native Plant Society joined staff from Rare Care, DNR, and the Heritage Program for the first of two surveys. While still early for many species, the group was rewarded with observations of six blooming desert-parsley species, including *Lomatium canbyi*, *L. dissectum*, *L. farinosum*, *L. macrocarpum*, *L. simplex*, and *L. triternatum*. We were also early enough to catch scilla-like onion (*Allium scilloides*) in bloom, an uncommon endemic plant

found on lithosol soils from Douglas County south to Klickitat County. For this first Two-Steppe NAP survey, we added approximately 20 species to the plant list.

In mid-May, we ventured out for a second survey at Two-Steppe along with seven volunteers and Heritage Program Botanist Walter Fertig. During this trip another 25 species were identified that had not been seen in April, 17 of those new to the growing plant list. Collections were made of species with uncertain identities on both surveys and we continue to work on identifying those. At present the total number of new species from both surveys is at 37 and counting.

Later in the season and closer to home, three Rare Care volunteers, Rare Care staff, and Fertig hiked up to Granite Lakes at Middle Fork Snoqualmie NRCA in August. This recently established 10,000+ acres preserve helps conserve a forested landscape between Mt. Si NCRA and the Mt. Baker-Snoqualmie National Forest, creating a large habitat and wildlife corridor through the Cascade Mountains. In the past, botanical surveys in this area have been limited and the working plant list was small. After a full day of hiking and botanizing, we were able to add a whopping 110+ new species to the list.



Fragile onion, (*Allium scilloides*)
Photo: Wendy Gibble



Volunteers Susan Ballinger and Richard Fleenor
Photo: Stacy Kinsell

Frolicking with Ferns

This past August, Rare Care held its 13th annual rare plant monitoring weekend in the Colville National Forest. Based at Frater Lake, we camped below the stars and woke to the chattering of red squirrels busy with their daily chores. Strong coffee and the smiles of familiar faces set our mornings off to a pleasant start as we reconnected with people we hadn't seen since last summer. Some traveled the 360+ mile trek from Seattle and others weren't too far from their own front doors, but all of us were content to tuck away in the pine forest for the weekend.

This area was chosen for some of the same practical reasons we consider each year when planning: a high number of rare plant occurrences, a campground able to accommodate our group, and a variety of plant species to keep everyone's interest. However, we were also drawn to the

ancestral lands of the Kalispel Tribe for its varied habitats. Rare plant sites in this region can be found along lakeshores, nestled in wet meadows, or under the coniferous trees of dry forests. This diversity of habitats enticed us.

During the monitoring weekend, 21 known rare plant sites were visited. We relocated 16 of the 21 and found an additional five new sites. Of the 26 reports completed, 14 were for ferns including the crested shield-fern (*Dryopteris cristata*), adder's-tongue (*Ophioglossum pusillum*), and moonworts (*Botrychium* spp.). The bright, fleshy green trophophores and uncoiling sporophores of moonworts had many of us crawling at a tortoise-pace hoping to relocate populations that hadn't been seen in seven or more years. Like Aesop's famous tortoise, we were rewarded for our slow diligence with several

moonwort finds including one new site. Our frolicking with ferns didn't stop there. The crested shield-fern enamored many with its dimorphic fronds, and the succulent leaves of adder's-tongue caught the attention of others. Suffice it to say, we all left with a greater fondness for ferns.

While the common goal of plant conservation may have been what brought us there, it was the people that kept us going. Following our community dinner on Saturday, Rare Care volunteers Carol Mack and John Stuart shared their knowledge of the area and its natural history. Long-time Colville National Forest botanist Amy Cabral told stories of her botanizing adventures, and we met many of the Forest Service staff. It's this intersection of plants and people that makes the monitoring weekends a special experience each year. Thanks to all who participated!

Crested shield-fern, *Dryopteris cristata* Photo: Kelli Van Norman



**Meg Decker and Barry Wendling
Photo: Ellen Kuhlmann**





Photo: Stacy Kinsell

REFLECTIONS FROM THE ALPINE

Rare Care completed the first of three field seasons this summer for a three year grant with the National Park Service (see Above the Tree Line in our spring 2019 newsletter). Under this study, we are monitoring rare and endemic alpine plants that may be threatened by climate change and developing management strategies to sustain their populations and habitats.

This summer we hired two talented early career botanists as interns, Maya Kahn-Abrams and Callie Zender. They spent their summer conducting field work at the parks and have each written a blog of their experiences. You can read Maya and Callie's blog posts on the University of Washington Botanic Gardens website here: botanicgardens.uw.edu/about/blog/. We look forward to sharing more about this study in future Rare Plant Press issues.



Knoke's biscuit-root, *Lomatium knokei*

Photo: Stacy Kinsell

*This summer, with a grant from the Center for Plant Conservation, Rare Care collected Knoke's biscuit-root, *Lomatium knokei*. Over 800 seeds were collected from a population in the Okanogan-Wenatchee National Forest. This species was named after the late Don Knoke, a local farmer, botanist, and plant collector. As with all of our seed collections, half of these seeds were sent to the USDA's National Laboratory for Genetic Resources Preservation in Fort Collins, CO. It's important to not put all of our seeds into one proverbial basket!*

INTERN SPOTLIGHT



Photo: Wendy Gibble

CALLIE ZENDER

(photo left) is a recent University of Washington graduate with a degree in plant biology and minors in quantitative science and American Indian studies. She grew up in Deming, Washington near Mt. Baker-Snoqualmie National Forest. "I was enamored with the vast array of plants the forest and alpine regions had to offer, that is what sparked my interest to study plant biology."

MAYA KAHN-ABRAMS

(photo right) completed her dual BA/BS degree in microbiology and environmental biology from The Evergreen State College. Originally from Los Angeles, she has cultivated a deep passion for plants. "I'm passionate about conservation and land management and excited to conserve rare and endemic plants."

Flett's violet, *Viola flettii*

Photo: Wendy Gibble



July 1, 2018 - June 30, 2019

THANK YOU 4,225 total volunteer hours

Rare Care is grateful for the valuable contribution of our volunteers, who gave 4,225 hours in fiscal year 2019.



\$1,000 & ABOVE

Bonhoeffer Botanical Gardens
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Christopher Mealy &
Ara Jane Olufson
Bobby & Lily Takatsuka
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Hally Swift & Eric Strandburg,
in recognition of Betty Swift
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Marilee Henry, Ph.D.,
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