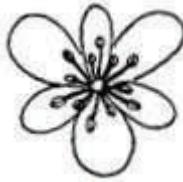


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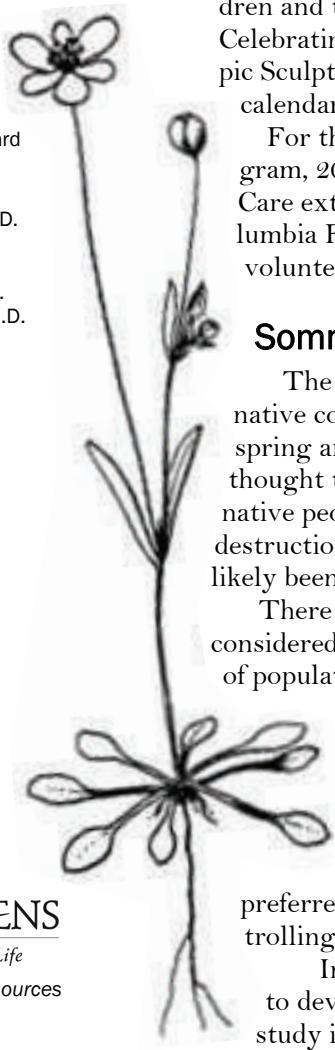
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Meconella oregana

Year in review: 2008 a record-breaking year for seed collections

Last year proved to be one of Rare Care's busiest years by any yardstick: public outreach events, new volunteers trained, sites monitored, seeds added to the Miller Seed Vault and collections made for Seeds of Success.

Rare Care kicked off 2008 with a free UW Alumni Association lecture on plant conservation by Rare Care Director Sarah Reichard. UWTv features the lecture regularly. (View it on their website.) Rare Care staff also gave a number of presentations to local organizations around the state and reached out to children and their families at the annual Celebrating Wildflowers event at Olympic Sculpture Park. (You're invited! See calendar, page 2.)

For the rare plant monitoring program, 2008 was an exciting year. Rare Care extended its network in the Columbia River Gorge, training 22 new volunteers in White Salmon. Rare

Care also offered trainings in Seattle and Wenatchee, resulting in a total of 50 new volunteers for the year.

The robust volunteer monitoring corps visited and reported on 129 rare plant sites. Volunteers also assisted agency partners with intensive monitoring of golden paintbrush (*Castilleja levisecta*) and Wormskiold's northern wormwood (*Artemisia borealis* var. *wormskioldii*), counting every individual in a single population of each species. This takes dedication!

The seed bank grew substantially, receiving a record 28 new collections. It now holds seeds of 62 species of rare native plants. Twenty-one collections were completed for the Seeds of Success project, 8 of which were sent to the Millennium Seed Bank in England.

View detailed program information in our annual reports posted online at <http://depts.washington.edu/rarecare>.

Sommargren researches black lily distribution patterns

The black lily (*Fritillaria camschatcensis*) was an important food source for the native coastal people of Washington and British Columbia. Its bulbs were dug in spring and summer and eaten as a mash or steamed and dressed with fish oil. It is thought that the lily was purposely cultivated and planted in coastal estuaries by native peoples. It is found as far south as northwestern Oregon. However, with the destruction of its habitat over the past century, a number of historic populations have likely been lost to development.

There are now only 10 known occurrences of black lily in Washington State. It is considered a sensitive species in Washington due to limited distribution and number of populations. Because of its cultural significance, there is interest in reintroducing this species to areas where it may have occurred.

The first step of a successful reintroduction effort is to understand a species ecological needs and factors limiting its distribution. University of Washington graduate student Alaine Sommargren focused her research on these topics and completed a master's thesis in 2008. Ms. Sommargren's research included two studies: one that described the black lily's preferred habitat in the Pacific Northwest, and another that looked at factors controlling the lily's distribution in a Puget Sound tidal marsh.

In the first study, Ms. Sommargren visited 8 sites where the black lily occurs to develop a habitat characterization based on shared similarities of the sites. Her study included 4 sites in Washington, 2 in Oregon, and 2 in British Columbia. Three sites were located in tidal marshes and 5 were in montane meadows and sphagnum fens. A range of parameters were evaluated at each site,

(continued on page 2)

Agency Partners Profile: Pam Camp wears 3 hats

Pam Camp says that despite 30 years working as a professional botanist in Washington, there are still many plants she hasn't seen and many she knows very little about. This is one of the main reasons Ms. Camp joined Rare Care as a volunteer rare plant monitor in 2007. But she isn't new to the program. Ms. Camp has assisted Rare Care as district botanist for the Bureau of Land Management (BLM) since the program's inception.

Like many botanists, Ms. Camp started her career by working in temporary positions, one of which was with BLM in Spokane. She landed a full-time BLM position in 1980. Early on, she developed an interest in rare plant biology, evolutionary history and management. With ample opportunities to study native plants of eastern Washington's shrub steppe ecosystem, she became enamored with the *Astragalus* genus, a large group of milk-vetches that includes over 2,000 species throughout the northern hemisphere. Ms. Camp completed her master's research on the evolutionary relationship of the rare endemic Columbia milk-vetch, *Astragalus columbianus*.

These days, Ms. Camp has fewer opportunities to be in the field and hopes to explore new areas and species as a Rare Care volunteer. She is interested in botanizing in alpine areas, partly because it's one of the few habitats she doesn't visit in her job. When not botanizing, Ms. Camp enjoys other outdoor activities, and is currently developing her singing voice.

In 2008, Ms. Camp joined Rare Care's Science Advisory Board, bringing a wealth of knowledge about rare plant conservation and eastern Washington ecosystems. When asked what she considers sensitive plant conservation's biggest need, she suggested that better legislation and policy are required, and other resources, such as funding and staffing, will follow.

Calendar

Saturday, May 16

Seed collecting training, Seattle

Friday, May 29

Howellia aquatilis monitoring training, Spokane County

Saturday, June 6, 12-4 p.m.

Celebrating Wildflowers, Olympic Sculpture Park, Western Ave and Broad Street, Seattle

July 24-26

Rare Plant Monitoring Weekend, Wenatchee Mountains



Pam Camp headed up a group of Rare Care volunteers searching for *Silene seelyi* during the 2008 Wenatchee Mountain monitoring weekend. Photo by Jennifer Youngman.

Black lily tolerates a range of conditions and stresses

(continued from page 1)

including topography, light intensity, type of substrate, vegetation cover classes, organic content of soil, soil pH, nitrogen availability and soil salinity.

Ms. Sommargren found that the black lily grows in a variety of plant assemblages, both with and without an overstory, and in a range of soil conditions from neutral, saline soils to acidic soils low in salts. High variability in biotic and abiotic conditions of these sites suggests that the black lily can tolerate a wide range of environmental conditions and stresses. The primary commonality of all sites was the presence of water. Black lilies grew in mounded areas adjacent to stream channels where water was readily available, but the areas were rarely inundated.

The second study looked at the distribution of black lilies within a tidal marsh to describe characteristics of its preferred microsites. Ms. Sommargren found that microsites with black lilies were typically at slightly higher elevations and contained wood as a growth substrate. The soils typically had lower salinity and ammonium (a type of nitrogen readily available to plants) than those of microsites lacking black lilies. Microsites with black lilies were also more likely to be located in shadier areas and had appreciably higher amounts of moss.

Ms. Sommargren makes several suggestions for restoration plantings in



The rare black lily grows in tidal marshes and freshwater montane wetlands. Photo by Alaine Sommargren.

Puget Sound tidal marshes. She recommends placing bulbs or seeds in areas with decaying logs or areas of mounded soils at sites approximately 11 feet above mean low water. When available, woody vegetation should shade the site.

Thank you, volunteers!

Rare Care recognized three volunteers for "above-and-beyond" participation in 2008: Julie Jose of eastern Washington, Krista Thie of central Washington and Rachel Hulscher of western Washington.

Each contributed in at least two ways, including monitoring, collecting seeds, processing seeds in the seed vault, helping with office projects, recruiting and organizing volunteers, and hosting Rare Care trainings in their areas.