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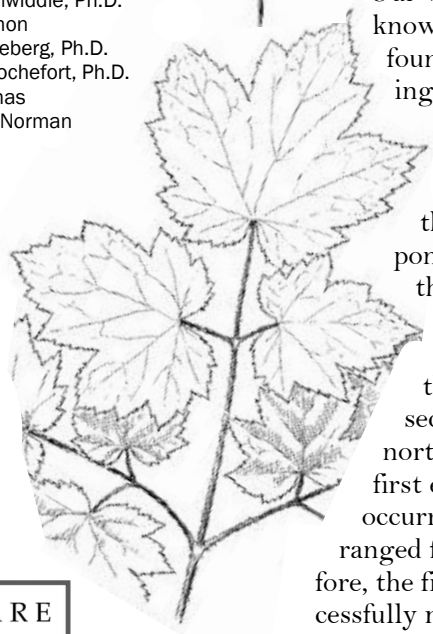

Cimicifuga elata var. *elata*

RARE PLANT CARE & CONSERVATION

UNIVERSITY OF WASHINGTON BOTANIC GARDENS
Plants for Life

School of Environmental and Forest Sciences
College of the Environment

What have we learned about focus species?

In 2008, Rare Care started designating a short list of rare native plants as focus species and gave them the highest priority for monitoring by volunteers (see Spring/Summer 2008 newsletter at http://courses.washington.edu/rarecare/Links.htm). Our goal was to monitor all or most of the occurrences of each focus species within a 3-year period to develop an understanding of their status in the state. (An occurrence is a unique record in the Washington Natural Heritage Program's database for a known location of a species.)

To date, 17 rare species have been designated as focus species. We have completed our assessment for six of them and expect to complete six more in the 2013 field season. We consider the assessment to be complete when we have revisited all occurrences on public lands included in the project with sufficiently precise information to allow volunteers to relocate the species. Therefore, for some species we are not able to revisit all occurrences because they are on private lands or public lands not accessible to our volunteers, or have very imprecise location information.

From the 12 complete or nearly completed focus species, we can evaluate whether the focus species designation is achieving our goal. Our volunteers have surveyed 124 of the 191 known occurrences sites for these 12 and found the species at 107 of them, representing a success rate of 86%. Volunteers provided population size estimates for all of the sites found except *Howellia aquatilis* occurrences, an aquatic annual that is easily uprooted by walking in the ponds. For several of the focus species, these estimates are the first on record for many of their occurrences. For instance, Rare Care's surveys of six of the 11 NHP records for *Carex stylosa*, a sedge found in wetlands and meadows of northwestern Washington, provided the first estimate of population sizes for these occurrences. The population estimates ranged from 36 stems to 38,000 stems. Therefore, the first goal of the program has been successfully met: our surveys are resulting in quantifiable data that provide a better understanding of the abundance of these species in the state.

For several other species, we can compare Rare Care's estimates to surveys conducted in previous decades. NHP staff completed a survey of *Petrophyton cinerascens* occurrences in 1988. This endemic subshrub grows in mats on cliffs along the Columbia River in Chelan and Douglas Counties. They recorded two large occurrences with over 1,000 mats, two with about 100 mats,

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Cunningham and Manns recognized for service

Thanks to numerous dedicated volunteers, Rare Care has generated more than 1,300 rare plant field data sheets since 2001. Most of these volunteers complete one rare plant monitoring assignment per year, each report being a substantial contribution in itself.

However, there are others who do a little more. In 2012, Brenda Cunningham and Tim Manns submitted 11 rare plant monitoring reports and one seed collection. In 2011, they completed 11 monitoring assignments and turned in reports for new sightings of *Draba breweri* var. *cana*, *Carex magellanica* var. *irrigua* and *Carex stylosa*. Their searches have taken them to many locations across the state. And they've been going at it for some time. Brenda became a volunteer in 2007. Thanks to her, Tim joined our volunteer ranks in 2009.

Together they have tackled species that are challenging to identify, challenging to reach, and even challenging to see. Big, big thanks, Brenda and Tim, for all of your outstanding contributions.

Left, erect pygmy-weed (Crassula connata) *is one of those hard-to-see plants monitored by Brenda Cunningham and Tim Manns (photo by Brenda Cunningham). Top left, monitoring takes Brenda Cunningham to hard-to-reach places (photo by Tim Manns). Center, obtuse sedge* (Carex obtusata) *grows in alpine habitat in the eastern Olympic Mountains (photo by Brenda Cunningham). Right, Chelan rockmat* (Petrophyton cinerascens) *grows on cliffs along the Columbia River (photo by Julie Bresnan).*

Technology: an investment in Rare Care's future

Wise use of technology goes a long way in helping 1.6 staff members communicate with 200 very engaged volunteers and manage the quantities of data that go in and out of our office on an almost daily basis.

While technological advancements increase efficiency, improve the volunteer experience, and reduce costs for volunteers and Rare Care, they are actually an investment in Rare Care's future, increasing our capacity for growth.

The latest in a series of improvements is Rare Care's new online assignment selection site. Volunteers may now search among current monitoring priorities for a favorite species or sort by phenology, county and ease of identification. See something interesting? A mouse click displays the details for the selection on a single screen. No more scrolling across vast spreadsheets posted as pdfs!

We'll be expanding this new system, as we continue to look for additional ways to increase capacity.

Focus species surveys employ consistent methodology

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and one with fewer than 25. Our 2008 and 2009 surveys recorded smaller counts (5 and 23 mats) at two of three small populations, a similar count at one occurrence with 100 mats, and thousands of mats at the two larger occurrences. While we cannot detect any change in the large populations, we did in two of the smaller ones. Small plant populations are vulnerable to extirpation but can have significant swings in population counts, so we will keep an eye on these populations.

We can also make a similar comparison for *Silene seelyi*, a narrow endemic of the Wenatchee Mountains. From surveys conducted in the early 1990s, the size of its 19 occurrences ranged from a few to several hundred individuals, with most below 100 individuals. Rare Care's estimates were comparable overall: larger counts were recorded for five sites but smaller counts were recorded for four sites. The other sites' comparisons were not possible because of missing data. Overall, the abundance of this species today is comparable to observations 20 years ago.

In some cases, Rare Care's estimates show that the species are more abundant than previous casual observations suggest. Estimates for *Carex obtusata*, a rhizomatous sedge in the alpine habitat of the eastern Olympic Mountains, range from 185,000 to over three millions stems! Rare Care's surveys of *Microseris borealis*, a state sensitive species found in montane meadows, documented larger sizes at all six of the ten occurrences surveyed to date. We cannot say that these species have increased in abundance, because previous surveys may have been casual observations. But we now have a better picture of their abundance today.

And this last point underscores the value of our focus species program. Because we have applied consistent methodology across a majority of the occurrences, we have established a common bench line for future comparison which hadn't previously existed. These data are valuable to NHP when they review their list of sensitive species and evaluate their rankings. It will also be of particular value as we evaluate species' responses to climate change in the coming decades. With the surveys for six focus species being wrapped up this year, we expect to add a suite of new focus species next year.

Rare Care is grateful for support from the Miller Charitable Foundation, National Fish and Wildlife Foundation, Seattle Garden Club, Tacoma Garden Club, Washington Native Plant Society, private organizations and individual donors.