

2023 Rare Plant Monitoring and Seed Collecting Annual Report

Washington Rare Plant Care & Conservation

SUMMARY

2023 was the 23rd year of University of Washington Botanic Garden's Rare Plant Care and Conservation Program's (Rare Care) community science project to monitor rare plant populations in Washington. The goal of the project is to provide information on the status and distribution of the rare native plants of Washington State. Working in partnership with the Washington Natural Heritage Program, Rare Care trains citizen scientists to monitor and report on rare plant populations across the state.

In 2023, 78 volunteers participated in the project, contributing 121 reports on populations located across the state. Volunteers successfully re-located plants at 77 of the sites and were uncertain whether they found their plant at five sites. Three sites could not be reached because of closed roads or other obstacles. Six of the sites represented potentially new populations that had not previously been mapped. Rare Care's annual monitoring weekend took us to Umatilla National

Forest in mid-June. US Forest Service botanists asked us to focus on relocating rare plant populations within the 2021 Lick Creek fire to check on the impact of the fire on these species. Over the three days, we completed and submitted to the Forest Service 26 monitoring reports.

Rare Care offered a virtual volunteer training for the rare plant monitoring project on February 25, 2023 in which 30 volunteers participated, including 22 of whom were new. We also offered an in-person skills training on April 1, 2023 and 12 volunteers participated in the training.

Finally, Rare Care added ten collections of seeds to the Miller Seed Vault collection in 2023. Rare Care staff and volunteers contributed six collections and four were received from staff at public agencies and organizations working on plant conservation.



Julia Bent, Robin Fitch and Janka Hobbs combing a hillside looking for Scouler's catchfly (*Silene scouleri* ssp. *scouleri*). Photo: Wendy Gobble

SEASON SYNOPSIS

Rare Care's rare plant monitoring community science project provides valuable information on the status of Washington's rare native plant populations. Since its inception in 2001, volunteers have visited and submitted over 2,500 reports on rare plant populations across the state. In 2023, 78 volunteers participated in monitoring activities, submitting reports for 121 populations representing 71 species. At 77 of the sites, volunteers successfully relocated their target species and documented the size of the population, the condition of the habitat, and any management concerns such as land use activities or non-native species affecting the population.

Early season monitoring started in late March, and by the end of April volunteers had already completed six site visits, finding the target species at all but one of the sites. Volunteers found a very large population of over 100,000 small flower trilliums (*Trillium albidum* ssp. *parviflorum*) at one of two locations in Thurston County but did not relocate the species at the other site. Other early blooming species observed in April include Rollins desert parsley (*Lomatium rollinsii*) in Asotin County and Klickitat desert-parsley (*Lomatium klickitatense*) in Klickitat County. Klickitat desert-parsley was described in 2018 and while its distribution is limited to a small region of the Columbia River Gorge, its populations are often quite large, numbering in the 10,000s.

By late spring volunteers were active throughout the state. In May and early June, volunteers successfully relocated four populations of Washington Jacob's ladder (*Polemonium pectinatum*), a distinctive forb with widely-separated, linear leaflets on pinnately compound leaves. This species is endemic to the channel scablands of eastern Washington. Further east, a population of hybrid mouse-tail (*Myosurus x alopecuroides*) was found in a vernal pool in Lincoln County. This tiny annual only appears in years with adequate winter and spring rainfall



Top: *Polemonium pectinatum*. Photo: Barbara Varnum-Finney
Bottom: Jason Clinch, Wendy Gible and Joanna Long completing reports during the monitoring weekend. Photo: Anna Carragee

For more details see the Monitoring Weekend Summary Report: <https://bit.ly/2023Wknd>



Volunteer John Stuart. Photo: Anna Carragee

SEASON SYNOPSIS CONTINUED

to cause water to collect in shallow depressions within the shrub-steppe ecosystem, so we were excited to receive this report. Volunteers also had success finding Geyer's milk-vetch (*Astragalus geyeri*), another annual species that is associated with sand deposits along the Columbia River in Grant County.

Rare Care's annual monitoring weekend took us to Umatilla National Forest in mid-June. US Forest Service botanists asked us to focus on relocating rare plant populations within the 2021 Lick Creek fire to check on the impact of the fire on these species. The area provides beautiful vistas, steep slopes, and an abundance of rare plants. Volunteers observed several populations of yeti phlox (*Phlox solivagus*), and it was heartening to see robust and thriving populations of this recently described species after the fire. We found large populations of Snake River fleabane (*Erigeron disparipilus*), Blue Mountains beardtongue (*Penstemon pennellianus*) and mountain butter cup (*Ranunculus populago*). While we also observed Arthur's milk-vetch (*Astragalus arthurii*), our timing was too late to get good population estimates for this species. We counted all Spalding's catchfly (*Silene spaldingii*) plants we observed, but the stems were hard to spot in the lush grasslands. Over the three days, we completed and submitted to the Forest Service 26 monitoring reports.

In late June, volunteers attempted to locate a population of frigid shooting-star (*Dodecatheon austrofrigidum*) in Grays Harbor County. This narrow endemic occurs in the coastal mountains of Washington and northwestern Oregon on wet cliffs and stream banks. Unfortunately, volunteers discovered the Grays Harbor population was likely destroyed by a recent landslide. That population was the only known Washington population on public land. There are only two other known populations in the state, both on private land.

July and August are always busy months, and we had volunteers visiting populations from Olympic Mountains to Spokane County. In the Olympics, populations of two endemic species, cut-leaf kittentails (*Veronica dissecta* ssp. *lanuginosa*) and Olympic rockcress (*Arabis olympica*) were successfully located in alpine habitat of Olympic National Forest. Populations of cut-leaf kittentails typically number in the 10,000s or more, but to see this species in bloom you need to be on the ridgetops by late May when snow may still be too deep in the valleys for access. On the other hand, populations of Olympic rockcress are generally small and mature fruit are needed for identification – presenting a different challenge for surveyors.

Volunteers monitored 18 populations of rare plants in the Cascade Mountains during the summer months. A population of swamp gentian (*Gentiana douglasiana*) was successfully relocated in Kittitas County on the Okanogan-Wenatchee National Forest, the only known site for this species in the Cascade Mountains. Nearby, another volunteer found a population of one-cone clubmoss (*Lycopodium lagopus*) and further north in Chelan County, volunteers counted over 500 plants in a population of strawberry saxifrage (*Saxifragopsis fragarioides*) on a cliff with popular climbing routes.



Top: Sarah Zavel, Barbara Varnum-Finney, Jeff Thorson, and David Selk practice their field skills. Photo: Anna Carragee
Bottom: *Erigeron disparipilus*. Photo: Janka Hobbs

Finally, volunteers based in eastern Washington visited several populations during the summer months. Volunteers found a large population of prairie cord grass (*Spartina pectinata*) in Whitman County, an easily overlooked summer-flowering grass that grows in riparian areas. In Pend Oreille County, more than 500 least bladdery milkvetch (*Astragalus microcystis*) plants were spotted by volunteers using a canoe to access the site. And, volunteers searched three different locations for Jessica's aster (*Symphyotrichum jessicae*) in Lincoln and Whitman Counties, but were unable to confirm its presence. These sites will be followed up with additional visits in the coming years.

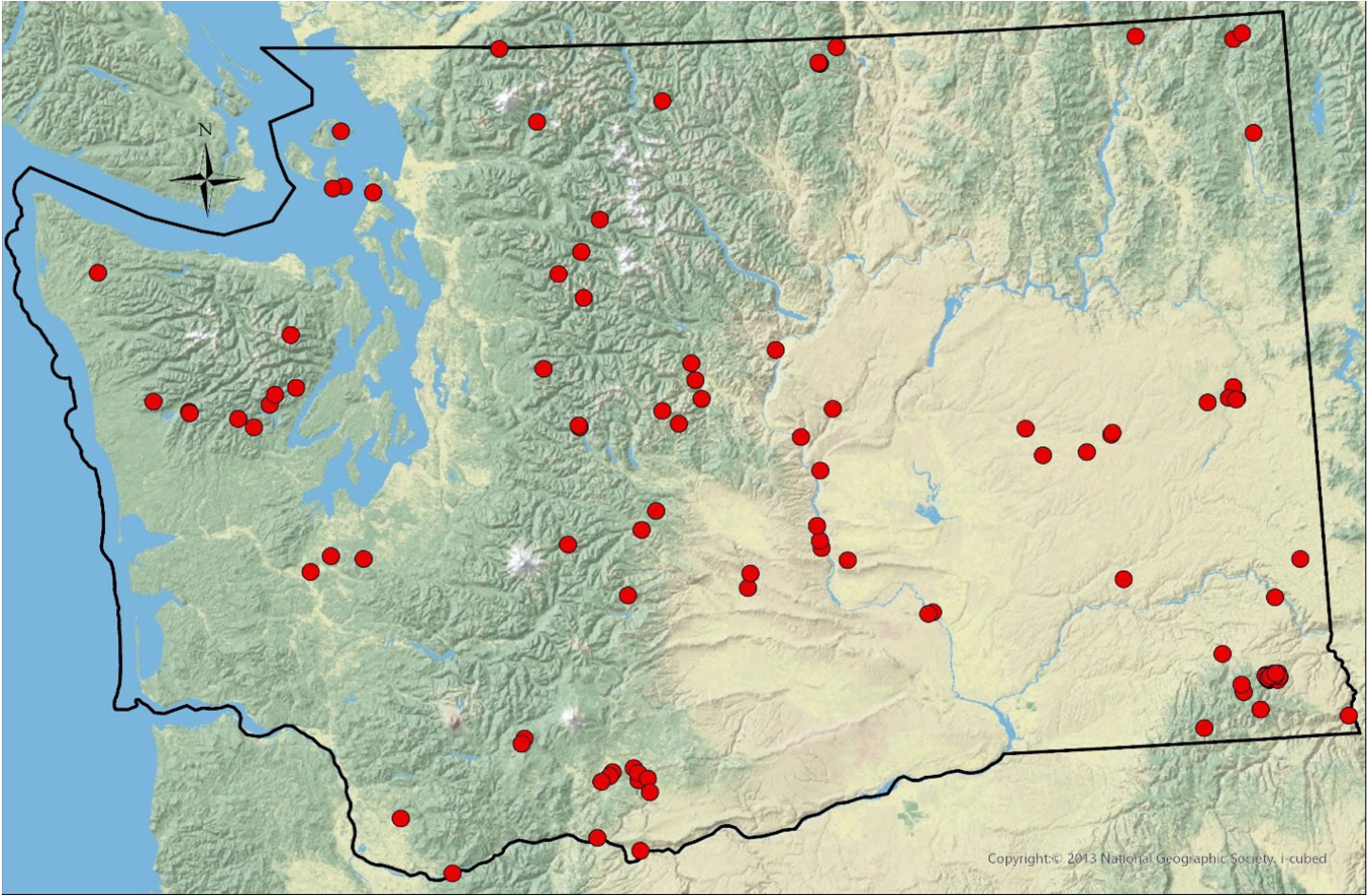
We are always excited to receive reports of previously undocumented populations, and this year volunteers found six. Two populations of Oregon goldenaster (*Heterotheca oregona*) were discovered in Olympic National Forest while a volunteer was in route to visit a known population. In Klickitat County, western ladies'-tresses (*Spiranthes porrifolia*) and mountain bluecurls (*Trichostema oblongum*) were found and mapped around two ponds on state land and a population of Baker's linanthus (*Leptosiphon bolanderi*) was reported from a site on private lands. Finally, volunteers spotted a new population of sagebrush mariposa (*Calochortus macrocarpus* var. *maculosus*) on a south-facing slope in Columbia County.

For a complete list of 2023 field results, see pages 7-13

WHERE WE WORKED

Rare plant monitoring occurred on federal, state and local public lands in 31 of Washington's 39 counties as shown on the map below. Approximately 81% of the sites were on federal lands, primarily National Forests and lands managed by the Bureau of Land Management. Monitoring also occurred on National Wildlife Refuges and lands managed by the US Army

Corps of Engineers. Another 18% of the sites were on state lands, including Wildlife Areas, State Parks, Department of Natural Resources natural areas and trust lands, and lands managed by the Department of Transportation. One site was on Grant County PUD property and another was on private land.



2023 completed assignments. These are only the sites that already had geographic location in the Washington Natural Heritage Database.

SEED BANKING

Rare Care added ten collections of seeds to the Miller Seed Vault in 2023. Rare Care staff and volunteers contributed six collections and four were received from staff at public agencies and organizations working on plant conservation. Rare Care volunteers Darcy Dauble and Sue Wickham joined Rare Care's Interim Volunteer Coordinator Jennie Green to collect seeds from two populations of Blue Mountains beardtongue (*Penstemon pennellianus*) in the Umatilla National Forest. These are the first collections of this regional endemic species for the Miller Seed Vault.

Four other collections made in 2023 by Rare Care staff and volunteers also represented new species for the Miller Seed Vault. Two volunteers, Jeff Thorson and Jayne Engle, each made a collection of fringed kittentails (*Veronica schizantha*), a

species only found in Washington and adjacent northwestern Oregon counties. Populations in Washington are found in Grays Harbor County and Lewis County. One collection was made at a site in Grays Harbor County where a population of over 1,000 plants were found at 3,000 to 4,000 feet elevation in the Olympic Mountains. The second population was located at similar elevations in the Cascade Mountains in Lewis County and also held over 1,000 plants. Jennie Green made small collections of two alpine species that were a priority for addition to the Miller Seed Vault: alpine bog swertia (*Swertia perennis*) and pretty lousewort (*Pedicularis pulchella*). These collections were small due to the small population sizes and limited availability of seeds.

Four seed collections were provided by outside organizations

SEED BANKING CONTINUED

for addition to the Miller Seed Vault. We added two collections of Wormskiold's northern wormwood (*Artemisia campestris* var. *wormskioldii*), one made from a population found in Klickitat County and a second from first generation nursery plants propagated from seeds collected at a population located in

Grant County. We also added a collection of White Bluffs bladderpod (*Physaria douglasii* ssp. *tuplashensis*) from Hanford Reach National Monument and Whited's fuzzy-tongue penstemon (*Penstemon eriantherus* var. *whitedii*) from a site in the vicinity of the City of Wenatchee.

2023 SEED COLLECTIONS ADDED TO MILLER SEED VAULT

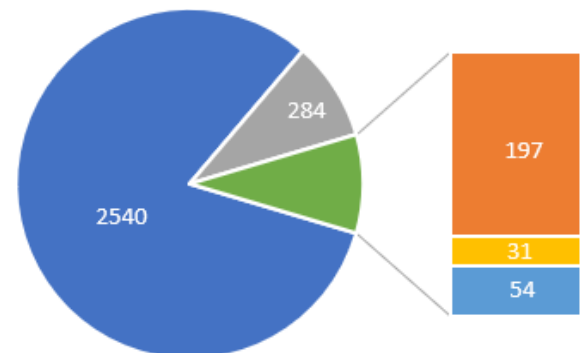
Species	EO #	No. of Accessions	Management Area
<i>Artemisia campestris</i> var. <i>wormskioldii</i>	4	5	Gifford Pinchot National Forest
<i>Artemisia campestris</i> var. <i>wormskioldii</i>	N/A	16	Nursery grown 2nd generation plants
<i>Penstemon eriantherus</i> var. <i>whitedii</i>	15		City of Wenatchee, Private
<i>Penstemon pennellianus</i>	14	18	Pomeroy RD, Umatilla National Forest
<i>Penstemon pennellianus</i>	18	40	Pomeroy RD, Umatilla National Forest
<i>Pedicularis pulchella</i>	1	6	Wenatchee River RD, Wenatchee National Forest
<i>Rudbeckia alpicola</i>	N/A	50	Private Land
<i>Physaria douglasii</i> ssp. <i>tuplashensis</i>	1	54	Hanford Reach National Monument, US Fish and Wildlife Service
<i>Swertia perennis</i>	3	3	Darrington Ranger District, Mt Baker-Snoqualmie National Forest
<i>Veronica schizantha</i>	1	56	Pacific Ranger District, Olympic National Forest
<i>Veronica schizantha</i>	6	7	Cowlitz Ranger District, Gifford Pinchot National Forest

VOLUNTEERS

Volunteers contributed 3,106 hours this year to the plant conservation activities with Rare Care. The bulk of these hours went towards the rare plant monitoring project, with 71 volunteers participating in 2023. Special honors go to Robin Fitch, Callie Zender, John Stuart and Paul Slichter, who all submitted four or more monitoring reports. Eighteen volunteers traveled to Asotin County to participate in our annual monitoring weekend.

We offered one virtual volunteer training for the rare plant monitoring project on February 25, 2023. A total of 30 volunteers participated in the training, including 22 new volunteers and eight returning volunteers. We also offered an in-person skills training on April 1, 2023 and 12 volunteers participated in that training.

Fifteen volunteers participated in seed collecting, seed cleaning and/or germination testing. Seven volunteers participated in seed collecting. Jeff Thorson and Jayne Engle each completed a collection of fringed kittentails for the Miller Seed Vault. Darcy Dauble and Sue Wickham assisted Jennie Green with seed collections of Blue Mountains beardstongue. Peg Balachowski, Shelly Carpenter, Jayne Engle, Jacob Maki, Nina Shim, and Shannon Thoele assisted with seed processing in the Miller



Volunteer Hours for 2023

■ Rare Plant Monitoring ■ Seed Collecting ■ Seed Cleaning
■ Germination Testing ■ Other

Seed Vault, collectively contributing 256 hours over the year. Joshua Glant assisted Rare Care staff with germination testing of seeds held in the Miller Seed Vault.

Finally 15 volunteers contributed over 130 combined hours on other field activities related to Rare Care projects, including monitoring and outplanting of plugs of Wenatchee Mountains checkermallow in Chelan county and reintroduction of Umtanum desert buckwheat in Grant county.

THANK YOU VOLUNTEERS



Wenatchee Mountains
checkermallow (75+ hours)

State Endangered
Sidalcea oregana var. *calva*
Photo: Anna Carragee

Julia Bent
Jane Engle
Robin Fitch
Jill LaRue
Carol Mack
Laura Potash
Susan Saul
Young Shim
Paul Slichter
John Stuart
Jeff Thorson

**We welcome your help to make our records as accurate as possible. If you think we're missing any hours please send in any relevant time sheets.



Blue Mountain
penstemon (26-74 hours)

State Threatened
Penstemon pennellianus
Photo: Anna Carragee

Peg Balachowski	Jacob Maki
Bethany Beyer	Timothy Manns
Ron Bockelman	Deborah Naslund
Dan Brake	Shelley Pasco
Steve Caicco	Cynthia Smith-
Steven Clark	Kuebel
Jason Clinch	Elaine Stewart
Brenda	Hally Swift
Cunningham	Tiffany Theden
Darcy Dauble	Shannon Thoele
Lorna Emerich	Ronald Toonen
Joshua Glant	Susan Varnum
Romey Haberle	Andrew Wargo
Marilee Henry	Josh Wozniak
Janka Hobbs	Leesa Wright
Remington	Sarah Zabel
Jackson	
Elyssa Kerr	
Joanna Long	



Geyer's milk-vetch (0-25
hours)

State Sensitive
Astragalus geyeri var. *geyeri*
Photo: John Stuart

Michael Auger	Krista Thie
John Bolivar	Emma Tiemeyer
Shelly Carpenter	Kelli Van Norman
Carter Case	Barbara Varnum-
Mickie Chamness	Finney
Tanya DeMarsh	Regina Wandler
Dodson	Susan Wheatley
Colin Dietrich	Sandra Whiting
Janet Egger	Susan Wickham
Tom Ettinger	Ariana Winkler
Chelsea Gudgeon	
Cleveland Hall	
Ellen Hallingstad	
Kelly Hollowood	
Julie Anne	
Hopkins	
Matthew	
Houghton	
Bob Jackson	
Bob Kent	
Samuel Lee	
Zoe Loutos	
Alicia McMurchie	
Katie Mitchell	
Robert Nerenberg	
Joanne Schuett-	
Hames	
Kayla Seaforth	
David Selk	
Teresa Sollitto	

**RARE CARE IS GRATEFUL FOR THE TIME AND
SKILLS VOLUNTEERS CONTRIBUTED IN 2023!**

2023 RARE PLANT MONITORING RESULTS

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Agoseris elata</i>	24	S	7/5/2023	Yes	30	Battle Ground Lake State Park	ST SPR
<i>Agoseris elata</i>	15	S	7/29/2023	Yes	70 stems	Darrington RD, Mt Baker-Snoqualmie NF	USAFS
<i>Aliciella leptomeria</i>	6	S	5/27/2023	No		South Columbia Basin WA - Wahluke Slope Unit, Hanford Reach NM	USAFWS
<i>Allium campanulatum</i>	3	S	7/27/2023	Yes	301-500	Naches RD, Okanogan-Wenatchee NF	USAFS
<i>Aphyllon californicum</i> ssp. <i>grayanum</i>	5	E	7/29/2023	No		Conboy Lake NWR	USAFWS
<i>Arabis olympica</i>	9	E	7/23/2023	Yes	5	Hood Canal RD, Olympic NF	USAFS
<i>Astragalus arthurii</i>	12	S	6/16/2023	Yes	12	Pomeroy RD, Umatilla NF	USAFS
<i>Astragalus arthurii</i>	22	S	6/16/2023	Yes	35	Pomeroy RD, Umatilla NF	USAFS
<i>Astragalus arthurii</i>	22	S	6/16/2023	Yes	101 to 300	Pomeroy RD, Umatilla NF	USAFS
<i>Astragalus arthurii</i>	22	S	6/16/2023	Yes	9	Pomeroy RD, Umatilla NF	USAFS
<i>Astragalus geyeri</i> var. <i>geyeri</i>	1	S	6/9/2023	Yes	417	Columbia Basin WA, Columbia NWR	ST DFW, USFWS
<i>Astragalus microcystis</i>	30	S	7/10/2023	Yes	500+ clumps	BLM - Spokane District (Wenatchee Field Office), Sullivan Lake RD, Colville NF	USABLM, USAFS
<i>Astragalus misellus</i> var. <i>pauper</i>	37	T	6/9/2023	No		BLM - Spokane District (Border Field Office)	USABLM
<i>Bolandra oregana</i>	7	T	6/1/2023	Yes	87 clumps	Columbia River Gorge National Scenic Area	USAFS
<i>Botrychium ascendens</i>	19	T	8/4/2023	No		Tonasket RD, Colville NF	USAFS
<i>Botrychium ascendens</i>	20	T	8/4/2023	No		Tonasket RD, Colville NF	USAFS
<i>Botrychium ascendens</i>	Fo2	T	8/4/2023	Yes	1	Tonasket RD, Colville NF	USAFS
<i>Botrychium ascendens</i>	17	T	9/23/2023	No		Methow Valley RD, Okanogan-Wenatchee NF	USAFS
<i>Botrychium paradoxum</i>	10	T	8/4/2023	No		Tonasket RD, Colville NF	USAFS
<i>Calochortus macrocarpus</i> var. <i>maculosus</i>	New ⁴	T	6/15/2023	Yes	25	William T Wooten WA	ST DFW
<i>Calochortus macrocarpus</i> var. <i>maculosus</i>	2	T	6/17/2023	Yes	96	Pomeroy RD, Umatilla NF	USAFS
<i>Calochortus macrocarpus</i> var. <i>maculosus</i>	27	T	6/22/2023	Site not reached		BLM - Spokane District (Border Field Office)	USABLM
<i>Calochortus nitidus</i>	4	E	6/16/2023	No		Pomeroy RD, Umatilla NF	USAFS

2023 RARE PLANT MONITORING RESULTS (CONTINUED)

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Campanula lasiocarpa</i>	6	S	7/13/2023	No		Darrington RD, Mt Baker-Snoqualmie NF	USAFS
<i>Campanula lasiocarpa</i>	1	S	8/3/2023	No		Darrington RD, Mt Baker-Snoqualmie NF	USAFS
<i>Carex pauciflora</i>	8	S	8/27/2023	Yes	100,000+ stems	Snoqualmie Bog NAP	ST DNR
<i>Claytonia multiscapa</i> ssp. <i>pacifica</i>	3	S	6/29/2023	No		Hood Canal RD, Olympic NF	USAFS
<i>Damasonium californicum</i>	3	S	7/8/2023	No		Mt Adams RD, Gifford Pinchot NF; Columbia River Gorge National Scenic Area	USAFS
<i>Delphinium viridescens</i>	29	T	7/30/2023	Yes	100+	Wenatchee River RD, Okanogan-Wenatchee NF	USAFS
<i>Dodecatheon austrofrigidum</i>	1	E	6/26/2023	No		Pacific RD, Olympic NF	USAFS
<i>Eatonella nivea</i>	11	S	5/19/2023	No		Grant County PUD	LOCCTY
<i>Epilobium mirabile</i>	1	S	9/9/2023	No		Mt Baker RD, Mt Baker-Snoqualmie NF	USAFS
<i>Erigeron aliceae</i>	2	S	6/27/2023	Yes	101-300 clumps	Pacific RD, Olympic NF	USAFS
<i>Erigeron disparipilus</i>	10	S	6/16/2023	Yes		Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron disparipilus</i>	9	S	6/16/2023	Yes	501 to 1000	Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron disparipilus</i>	9	S	6/16/2023	Yes	101 to 300	Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron disparipilus</i>	9	S	6/17/2023	Yes	501 to 1000	Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron disparipilus</i>	9	S	6/17/2023	Yes		Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron disparipilus</i>	9	S	6/17/2023	Yes	20	Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron disparipilus</i>	9	S	6/17/2023	Yes	501 to 1000	Pomeroy RD, Umatilla NF	USAFS
<i>Erigeron salishii</i>	7	T	7/7/2023	No		Wenatchee River RD, Okanogan-Wenatchee NF	USAFS
<i>Erythronium quinaultense</i>	4	T	5/27/2023	Yes	10,000-100,000	Pacific RD, Olympic NF	USAFS
<i>Erythronium revolutum</i>	67	S	5/6/2023	Yes	202	DNR Trust Lands - Olympic Region Coast District	ST DNR
<i>Gentiana douglasiana</i>	1	S	7/21/2023	Yes	1000+	Cle Elum RD, Okanogan-Wenatchee NF	USAFS
<i>Geum rossii</i> var. <i>depressum</i>	7	E	8/13/2023	Yes	301 to 500 stems	Wenatchee River RD, Okanogan-Wenatchee NF	USAFS
<i>Githopsis specularioides</i>	28	S	5/11/2023	Yes		Hamma Hamma Balds NAP	ST DNR
<i>Hackelia cinerea</i>	None ⁵		4/28/2023	Yes	101 to 300	Ginkgo Petrified Forest State Park	ST SPR

2023 RARE PLANT MONITORING RESULTS (CONTINUED)

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Hackelia diffusa</i> var. <i>diffusa</i>	7		6/9/2023	Yes	146	BLM - Spokane District (Border Field Office)	USABLM
<i>Heterotheca oregona</i>	New ⁴		6/25/2023	Yes	2565 clumps	Hood Canal RD, Olympic NF	USAFS
<i>Heterotheca oregona</i>	9	S	7/11/2023	Site not reached		Hood Canal RD, Olympic NF	USAFS
<i>Heterotheca oregona</i>	New ⁴		7/11/2023	Yes	9 clumps	Hood Canal RD, Olympic NF	USAFS
<i>Leptosiphon bolanderi</i>	New ⁴		5/14/2023	Yes	501-1000		PVT
<i>Leptosiphon minimus</i>	1	T	5/22/2023	Yes	1000+	Deception Pass State Park	ST SPR
<i>Leptosiphon minimus</i>	4	T	6/7/2023	No		Iceberg Point ACEC	USABLM
<i>Lipocarpus aristulata</i>	1	S	8/23/2023	No		Hanford Reach NM	USAFWS
<i>Lomatium klickitatense</i>	10	T	4/28/2023	Yes	10,001-100,000 clumps	BLM - Spokane District (Border Field Office)	USABLM
<i>Lomatium rollinsii</i>	16	T	4/25/2023	Yes	1000-10,000	Pomeroy RD, Umatilla NF	USAFS
<i>Lomatium rollinsii</i>	4	T	5/11/2023	Uncertain		BLM - Vale District	USABLM
<i>Lycopodium lagopus</i>	6	S	6/10/2023	No		Mt Baker RD, Mt Baker-Snoqualmie NF	USAFS
<i>Lycopodium lagopus</i>	5	S	7/19/2023	Yes	101-300 stems	Snoqualmie RD, Mt Baker-Snoqualmie NF	USAFS
<i>Myosurus alopecuroides</i>	3	T	5/20/2023	Yes	52	Marcellus Shrub Steppe Preserve	ST DNR
<i>Nicotiana attenuata</i>	21	S	7/3/2023	No		Rock Island Canyon ACEC	USABLM
<i>Orthocarpus bracteosus</i>	1	T	9/15/2023	No		Conboy Lake NWR	USAFWS
<i>Packera macounii</i>	2	E	7/1/2023	Yes	500+	Moran State Park	ST SPR
<i>Pedicularis rainierensis</i>	49	S	8/15/2023	Yes	501-1000	Snoqualmie RD, Mt Baker-Snoqualmie NF	USAFS
<i>Pediocactus nigrispinus</i>	32	S	4/29/2023	Yes	301-500	BLM - Spokane District (Wenatchee Field Office)	USABLM
<i>Pediocactus nigrispinus</i>	33	S	5/19/2023	Yes	501-1000	Yakima and Columbia River Islands ACEC	USABLM
<i>Pediocactus nigrispinus</i>	53	S	6/23/2023	Yes	1,001-10,000	BLM - Spokane District (Wenatchee Field Office), Columbia Basin WA	USABLM, ST DFW
<i>Pediocactus nigrispinus</i>	20	S	6/24/2023	Yes	220	Ginkgo Petrified Forest State Park	ST SPR
<i>Penstemon barrettiae</i>	13	T	6/9/2023	Yes	1167 clumps	BLM - Spokane District (Border Field Office)	USABLM
<i>Penstemon pennellianus</i>	21	T	6/18/2023	Yes	301 to 500	Pomeroy RD, Umatilla NF	USAFS

2023 RARE PLANT MONITORING RESULTS (CONTINUED)

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Penstemon pennellianus</i>	22	T	6/18/2023	Yes	1,001 to 10,000	Pomeroy RD, Umatilla NF	USAFS
<i>Petrophytum cinerascens</i>	4	E	7/16/2023	Uncertain		Earthquake Point ACEC	USABLM
<i>Phlox solivaga</i>	4	E	6/16/2023	Yes	100,000+ clumps	Pomeroy RD, Umatilla NF	USAFS
<i>Phlox solivaga</i>	9	E	6/16/2023	Yes	101 to 300	Pomeroy RD, Umatilla NF	USAFS
<i>Phlox solivaga</i>	10	E	6/17/2023	Yes	1,001 to 10,000 clumps	Pomeroy RD, Umatilla NF	USAFS
<i>Phlox solivaga</i>	10	E	6/17/2023	Yes	1,001 to 10,000	Pomeroy RD, Umatilla NF	USAFS
<i>Phlox solivaga</i>	10	E	6/17/2023	Yes	1,001 to 10,000 clumps	Pomeroy RD, Umatilla NF	USAFS
<i>Polemonium pectinatum</i>	45	T	5/22/2023	Yes	501-1000 clumps	BLM - Spokane District (Border Field Office)	USABLM
<i>Polemonium pectinatum</i>	53	T	5/23/2023	Yes	5 clumps	BLM - Spokane District (Border Field Office)	USABLM
<i>Polemonium pectinatum</i>	23	T	5/28/2023	Yes	501 to 1000	DNR Trust Lands - SE Region	ST DNR
<i>Polemonium pectinatum</i>	51	T	6/3/2023	Yes	101 to 300 clumps	BLM - Spokane District (Wenatchee Field Office)	USABLM
<i>Potentilla nivea</i>	4	S	7/7/2023	Yes	85	Chopaka Mountain NAP	ST DNR
<i>Pyrrocoma hirta</i> var. <i>sonchifolia</i>	1	T	8/8/2023	No		Lt Murray WA	ST DFW
<i>Ranunculus populago</i>	2	S	6/7/2023	Yes	501-1000	Pomeroy RD, Umatilla NF	USAFS
<i>Ranunculus populago</i>	5	S	6/18/2023	Yes	100,000+	Pomeroy RD, Umatilla NF	USAFS
<i>Ribes oxycanthoides</i> ssp. <i>irriguum</i>	21	S	5/20/2023	No		Pomeroy RD, Umatilla NF	USAFS
<i>Rubus nigerrimus</i>	26	T	6/10/2023	Site not reached		BLM - Vale District	USABLM
<i>Rubus nigerrimus</i>	25	T	6/22/2023	Uncertain		Mill Creek Project	USACOE
<i>Salix candida</i>	3	S	7/18/2023	Yes	90 stems	Three Rivers RD, Colville NF	USAFS
<i>Saxifragopsis fragarioides</i>	3	T	5/28/2023	Yes	82	Wenatchee River RD, Okanogan-Wenatchee NF	USAFS
<i>Saxifragopsis fragarioides</i>	4	T	7/9/2023	Yes	500+	Wenatchee River RD, Okanogan-Wenatchee NF	USAFS
<i>Sericocarpus rigidus</i>	94	S	8/9/2023	Yes	1123 stems	Iceberg Point ACEC	USABLM

2023 RARE PLANT MONITORING RESULTS (CONTINUED)

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Silene scouleri</i> ssp. <i>scouleri</i>	None ⁵	S	6/17/2023	No		Pomeroy RD, Umatilla NF	USAFS
<i>Silene spaldingii</i>	49	T	6/16/2023	Yes	30	Pomeroy RD, Umatilla NF	USAFS
<i>Silene spaldingii</i>	49	T	6/16/2023	Yes	4	Pomeroy RD, Umatilla NF	USAFS
<i>Silene spaldingii</i>	49	T	6/16/2023	Yes		Pomeroy RD, Umatilla NF	USAFS
<i>Silene spaldingii</i>	49	T	6/16/2023	No		Pomeroy RD, Umatilla NF	USAFS
<i>Silene spaldingii</i>	49	T	6/17/2023	Yes	1	Pomeroy RD, Umatilla NF	USAFS
<i>Silene spaldingii</i>	None ⁵	T	7/17/2023	No		Turnbull NWR	USAFWS
<i>Silene spaldingii</i>	None ⁵	T	7/17/2023	No		Turnbull NWR	USAFWS
<i>Silene spaldingii</i>	None ⁵	T	7/17/2023	No		Turnbull NWR	USAFWS
<i>Sisyrinchium montanum</i> var. <i>montanum</i>	2	S	5/24/2023	No		Sullivan Lake RD, Colville NF; Priest Lake RD, Kaniksu NF	USAFS
<i>Sisyrinchium sarmentosum</i>	10	T	7/14/2023	No		Mt Adams RD, Gifford Pinchot NF	USAFS
<i>Sisyrinchium sarmentosum</i>	20	T	7/14/2023	Uncertain		Mt Adams RD, Gifford Pinchot NF	USAFS
<i>Spartina pectinata</i>	1	S	7/22/2023	Yes	1,001-10,000 clumps	Palouse Falls State Park	ST SPR
<i>Spiranthes porrifolia</i>	1	S	6/27/2023	Yes	487	Catherine Creek & Rowland Lake Cliffs, Columbia River Gorge National Scenic Area	USAFS
<i>Spiranthes porrifolia</i>	New ⁴		7/2/2023	Yes	173	Klickitat WA	ST DFW
<i>Spiranthes porrifolia</i>	17	S	7/15/2023	No		Naches RD, Okanogan-Wenatchee NF	USAFS
<i>Swertia perennis</i>	2	S	9/10/2023	No		Skykomish RD, Mt Baker-Snoqualmie NF	USAFS
<i>Symphyotrichum jessicae</i>	None ⁵	E	7/21/2023	No		Turnbull NWR	USAFWS
<i>Symphyotrichum jessicae</i>	12	E	8/4/2023	No		WSDOT - Eastern Region	ST WDT
<i>Symphyotrichum jessicae</i>	26	E	8/23/2023	Uncertain		Turnbull NWR	USAFWS
<i>Trichostema oblongum</i>	New ⁴		7/2/2023	Yes	10,000-100,00	Klickitat WA	ST DFW
<i>Trichostema oblongum</i>	3	R1	7/28/2023	Yes	101 to 300	Conboy Lake NWR	USAFWS
<i>Triglochin palustris</i>	9	S	8/11/2023	No		Sullivan Lake RD, Colville NF	USAFS
<i>Trillium albidum</i> ssp. <i>parviflorum</i>	54	S	3/30/2023	No		Scatter Creek WA	ST DFW

2023 RARE PLANT MONITORING RESULTS (CONTINUED)

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Trillium albidum</i> ssp. <i>parviflorum</i>	7	S	4/8/2023	Yes	100,000+	Scatter Creek WA	ST DFW
<i>Trillium albidum</i> ssp. <i>parviflorum</i>	31	S	5/6/2023	Yes	2030	WSDOT - Olympic Region	ST WDT
<i>Veronica lanuginosa</i>	9	T	7/1/2023	Yes	10,001-100,000	Hood Canal RD, Olympic NF	USAFS
<i>Veronica schizantha</i>	1	E	7/15/2023	Yes	100+ clumps	Pacific RD, Olympic NF	USAFS

ADDENDUM TO 2022 RARE PLANT MONITORING RESULTS

Species Name	EO Num ¹	State Status ²	Visit Date	Species Found	Pop. Size ³	Managed Area	Owner
<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	8	S	7/3/2022	Yes	10,001 to 100,000	Conboy Lake NWR	USAFWS
<i>Cypripedium parviflorum</i>	18	S	6/12/2022	Yes	170	Colville NF Three Rivers RD	USAFS
<i>Fritillaria camschatcensis</i>	3	S	6/26/2022	No		Mt Baker-Snoq NF Darrington RD	USAFS
<i>Leptosiphon minimus</i>	5	T	6/30/2022	Yes	10,000 to 100,000	Anacortes Community Forest	LOCCTY
<i>Leptosiphon minimus</i>	6	T	5/16/2022	No		Anacortes Community Forest	LOCCTY
<i>Isoetes nuttallii</i>	14	S	6/13/2022	Yes	101 to 300	Private	PVTUUU

TABLE NOTES

1. EO num is the element occurrence number assigned to the site by the Washington National Heritage Program
2. State Status: E = endangered, R1 = review species (group 1), R2 = review species (group 2), S = sensitive, T = threatened, X = possibly extinct or extirpated from Washington
3. Population size estimate represents individuals unless otherwise noted.
4. Potentially new site that may not be in WNHP database.
5. Site identified by land owner or other party and may not be in WNHP database.

ABBREVIATIONS

ACEC - Area of Critical Environmental Concern
LOCCTY - City Municipality or County
NAP - Natural Area Preserve
NF - National Forest
RD - Ranger District
ST DFW - Washington State Department of Fish and Wildlife
ST DNR - Washington State Department of Natural Resources
ST SPR - Washington State Parks and Recreation
ST WDT - Washington State Department of Transportation
NWR - National Wildlife Refuge
USABLM - Bureau of Land Management
USAFS - United States Forest Service
USAFWS - United States Fish and Wildlife Service
PUD - Public Utility District
WA - Wildlife Area
PVT - Privately owned