

Douglasia

VOLUME 31, NO. 1 WINTER 2007



Journal of the
WASHINGTON
NATIVE PLANT
SOCIETY

*To promote the appreciation
and conservation of Washington's
native plants and their habitats
through study, education,
and advocacy.*

Seeds of Success

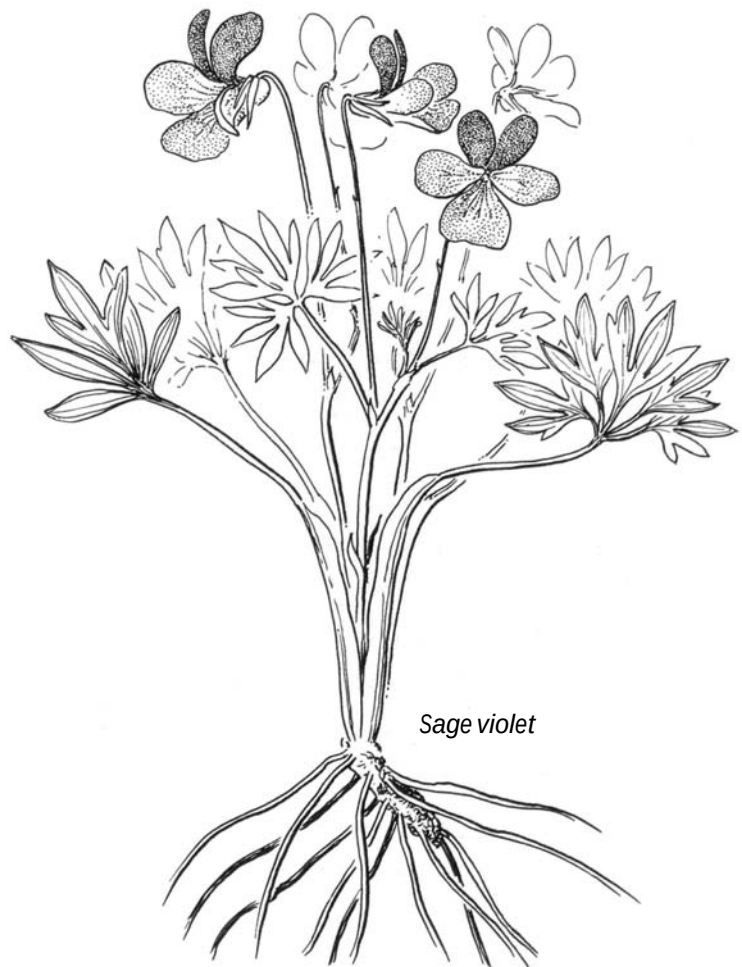
Page 5

Study Weekend July 20-22

Page 15

Palouse meadow-steppe

Page 20



Contents

Features

Walla Walla demonstration garden, <i>Nancy Berlier</i>	3
Walla Walla update, <i>Laura Maier and Nancy Berlier</i>	4
Botany Washington announcement	4
Seeds of Success, <i>Ellen Kuhlmann</i>	5
Member profile: Ellen Kuhlmann, <i>Peg Pearson</i>	8
WNPS's 30 th anniversary	10
U.W. Herbarium's 2006 field season, <i>David Giblin and Ben Legler</i>	11
<i>P. ramorum</i> training module, <i>Norm Dart</i>	14
WNPS 2007 Study Weekend, <i>Mark Turner</i>	15
Arthur R. Kruckeberg—2006 Peter Raven Award recipient, <i>Richard G. Olmstead</i>	17
Palouse meadow-steppe, <i>Bertie J. Weddell and David M. Skinner</i>	20
New 2007 State Noxious Weed List, <i>Jane Wentworth</i>	23
Noxious weed alert: <i>Soliva sessilis</i> , <i>Alison Halpern</i>	24
Memorial: Harvey Manning, <i>Fred Weinmann</i>	25
Memorial: Ann Lennartz, <i>Heidi Bohan</i>	26

Departments

Conservation update, <i>John H. Browne, Jr.</i>	1
Plant lists available online	25
WNPS list serve	28
Information for contributors	28
Advertise in <i>Douglasia</i>	28
Welcome new members	28
Thank you for your generosity—2006 Donors	29
Earth Share: Giving at the workplace	32
Join WNPS	32

Douglasia

(ISSN 1064-4032) is published quarterly by the Washington Native Plant Society.

See inside back cover for a WNPS directory and for subscription and membership information.

Douglasia logo designed by Louise Smith of Seattle.

Printed on acid-free paper using 30% post-consumer waste.

Editorial Board, Chair

Kathy Murray
kandmmurray@verizon.net

Managing Editor

Karen Gatrell
gatrellk@msn.com

Layout Editor

Kimberly Galimanis

Editor Emeritus

Dr. Arthur R. Kruckeberg

Assistant & Contributing Editors

Joe Arnett
Elizabeth Binney
David Giblin
Catherine Hovanic
Linda Storm
Anna Thurston
Fred Weinmann
Jane Wentworth
Kathleen Winters

WNPS Fellows*

William Barker**
Nelsa Buckingham**
Tom Corrigan
Melinda Denton**
Lee Ellis
Betty Jo Fitzgerald
Mary Fries
Amy Jean Gilmartin**
Al Hanners
Lynn Hendrix**
Karen Hinman**
Art Kermoade
Don Knoke
Arthur R. Kruckeberg

* To become a WNPS Fellow is the highest honor given to a member by our Society. This title is given to those who have made outstanding contributions to the understanding and/or preservation of Washington's flora, or to the success of WNPS.

** Deceased

Joy Mastrogioseppe

Lou Messmer
Joe Miller
Margaret Miller
Mae Morey
Brian O. Mulligan**
Ruth Peck Ownbey
Jim Riley**
Ron Taylor**
Richard Tinsley
Ann Weinmann
Fred Weinmann

Editor's note

As I write, it's mid-January, and I'm looking out at 6 inches of frozen snow that blankets my neighborhood here in Federal Way. The sub-freezing temperatures have been here for days—unusual for Western Washington—and the snow (or rather, ice) refuses to melt. It has been a wild winter so far—the wildest part being the major windstorm that hit in December, which left so many in the Puget Sound region without power (4 days for our neighborhood). As beautiful as winter can be, it can also be rather harsh; perhaps I'm not the only one looking forward to the softer, gentler days of spring.

With the new year, WNPS is pleased to welcome Kathy Murray as the new Editorial Board Chair. Kathy comes to us with an impressive resume, and will be providing vision and long-term planning for *Douglasia* as well as oversight and guidance in the production of Occasional Papers.

Continued on page 2

Corrections to Fall 2006 Douglasia:

p. 11: Under the section "Revegetation of the Wellington Trailhead of the Iron Goat Trail," the nonprofit organization Volunteers for Outdoor Washington (VOW), which has been partnering with the U.S. Forest Service to build the Iron Goat Trail, was inadvertently referred to as "Volunteers of Washington" twice in the article.

p. 14: In the photo caption of South Whidbey Island Native Plant Stewards, the first name listed should be Mark Fessler instead of Mark Sheehan. Also, the byline for the South Whidbey Island Native Plant Stewards should read Spring 1999 and Fall Classes 2000-2005; Fran Abel took a spring class in 1999 and is the first trained steward.

WNPS State Board of Directors: Meetings 2007

April 14, 2007

October 20, 2007

For more information on agenda and location contact the WNPS office two weeks ahead of the meeting date.

Conservation update

by John H. Browne, Jr., WNPS Conservation Committee Chair

With winter wrapped around us, conservation, at the surface, at least, gets a little break. Cooling air masses and cooling real estate markets combine with shorter days; and the pace of industrial endeavors slows a bit, allowing us all some breathing room, and time to take stock of our general situation, along with a few particulars.

Point Wilson

The recovery of a plant community at Point Wilson is progressing well... and there are indications that it will be a great and enduring educational opportunity, in an area where that can make a lasting impact. Port Townsend is a popular destination in all seasons, and the beach around the Point Wilson lighthouse, on the edge of the Fort Worden complex, is often a busy place. This means that there are challenges and opportunities beyond simply getting invasive plants out and endemics in. The Olympic Peninsula Chapter has made solid progress with this project from the first efforts; and it will be a wonderful contribution to this region of a shard of an ecosystem that was never common, and has been built over and/or ignored in so many locations around our inland sea.

Badger Mountain and Columbia Basin

Just a few miles south of Richland, across the Yakima River (and a big canal that they call a “lateral,” over there), Badger Mountain rises seemingly straight up. It does gain about 700 ft. in that last quarter-mile to the buckwheat- and erigeron-encrusted lithosols across the two peaks. Another great “peek” from this vantage point is a look at the extent of the Tri-Cities in the foreground, and, on those special days, a view of all of the Hanford site—the heart of the Columbia Basin—all the way to the White Bluffs, some 30-plus miles away. I have seen the Saddle Mountains beyond those bluffs, on one occasion, and was told that one can watch the Fourth of July fireworks in Walla Walla from this very spot. I mention this because a great deal of effort has been expended to keep this uplifting spot in the public domain, by a broad collaboration of local and regional organizations (under an umbrella organization, “Friends of Badger Mountain”) and individual efforts.

The collaboration continues to include members of the Columbia Basin Chapter, whose responsibilities include creating informational kiosks at trailheads, and ongoing restoration of the plant community.

The Columbia Basin Chapter is also working on restoration of a “natural area” within a large park complex in Richland, near the Columbia River. An area prepared this past fall will be planted soon, to native grasses and forbs. This area will also be an educational display that may help demonstrate the beauty and facility that local plant species have to offer, while also showing the importance of landscaping in urbanized areas in providing habitat for birds. (In my own recollection of 13 years of attendance in schools on both sides of the Cascades, I don’t recall a single occasion of any classroom discourse that touched upon our native flora, specifically. That’s one reason why projects like this give me a sense of hope—and why I feel a personal debt to the volunteers who are out there, weeding, raking, seeding, and explaining. We all can be part of “the way things change—for the better”.)

Other issues

Other issues that have seemed germane to plant (and habitat) conservation include:

- ✎ the “Future of Washington’s Forests Project,” an evaluation for DNR (and, ostensibly, the rest of us) and a group of other entities (that includes timber harvesters), under a UW umbrella, which is to provide both economic and ecological inputs, and attempt to “balance” them (see www.nwenvironmentalforum.org and/or www.dnr.wa.gov);
- ✎ the DNR proposal of a “Natural Area Preserve” within a proposed “Natural Resource Conservation Area” that would include a goodly stretch of Lacamas Creek, right on the edge of the burgeoning urban sprawl of Vancouver (to be honest, suburban sprawl will surround this area on its other three sides, in what was once oak/camas bottomland, a kind of “last chance” for an enclave of contiguous bottomland between the Lewis and Columbia Rivers, as Greater Portland pushes on);
- ✎ and a lawsuit aimed at stopping the proposed “Cross-Base Highway,” a part of the combined “Sound Transit-Regional Transportation” (aka RTID) plan, upon which many of us will have a

chance to vote, sooner or later. The highway in contention is designed to bifurcate the largest single unified patch of oak prairie left in our state, which lies between Ft. Lewis and McChord AFB.

Timber harvesting

One very recent announcement, of a suit to challenge the “green” status of timber products from Weyerhaeuser and Plum Creek, may possibly lead to better harvesting practices by these huge corporations, which may, in turn, provide the regions that they control with a greater resemblance to “forests,” and less to “agribiz monoculture,” a situation that may, eventually bode well for those genera of plants who share space with the economically desirable species (or once did). Those of us who have giants as neighbors must press on to promote the best behavior that we can elicit from the Lords of corporate feudalism.



Woodbrook Nursery

Growing NW Native Plants

Over 120 types of native plants

**For plant list check our web site
(www.woodbrook.net)**

**Hours: Fri. & Sat. 10 AM to 4 PM
(Except some holidays – check website)**

**Farm site: 5919-78th Ave NW
Gig Harbor, WA**

**Mail & Office: 1620- 59th Ave NW
Gig Harbor, WA 98335**

**Phone: (253) 265-6271 (Office)
Fax (253) 265-6471 (Office)
Cell (253) 225-1900 (Farm)**



Kathy has also graciously agreed to take over authorship of the Editor's Note beginning with the next issue of *Douglasia*. As much as I enjoy writing the Editor's Note, my plate is rather full with putting *Douglasia* together, and while I will miss adding my own 2-cents worth to each issue, I'm sure you will enjoy reading Kathy's perspective in this space.

Inside this issue, you'll read about two Society members: WNPS Fellow Dr. Art Kruckeberg, who recently received the Peter Raven award; and Ellen Kuhlmann, who recently stepped down from the State Board of Directors after serving for the past nine years. We think you'll enjoy reading Peg Pearson's profile of Ellen inside, along with Ellen's own article about the successful “Seeds of Success” project.

And be sure to mark your calendars: Inside you'll find the dates of this year's Study Weekend and Botany Washington. We hope you'll enjoy these articles and the many other articles inside this issue. Thank you to all the authors—and to all the behind-the-scenes folks (there are many)—who contribute to *Douglasia*. Special thanks, as always, to Kim Galimanis for doing such a great job on the graphic design, and to Catherine Hovanic who helps in countless ways.

On a final note, the President's Message will not be appearing in this issue of *Douglasia*. We are sad to report that Dean Longrie lost his wife unexpectedly in December. We wish to extend our heartfelt sympathies to Dean and his family.

Karen Gatrell



**Governor Gregoire proclaims
April 29th through May 5th, 2007
Native Plant Appreciation Week**

For more information see:
www.wnps.org

A unique native plant demonstration garden at the Walla Walla Humane Society

by Nancy Berlier, Walla Walla Subchapter of the Columbia Basin Chapter

In 2002 when Randal Son was still the director of the Walla Walla Humane Society, he implemented the purchase of land and the building of a new facility on George Street southwest of the Veteran's Memorial Golf Course. At the same time, the Walla Walla subchapter of the Columbia Basin Chapter became interested in developing a native plant garden to demonstrate how plants indigenous to Walla Walla would be attractive in home gardens AND would use much less water than the usual landscaping species.

Our first introduction to the Humane Society building site was discouraging. The financing had run out before the building was complete, and we viewed what looked like an abandoned building, all boarded up with plywood, amongst a sea of invasive weeds. Our designated spokesperson, Betsy Kaiser, a forester and silviculturist for the USDA Forest Service on the Walla Walla Ranger District, approached Randal with our idea. He was very interested and willing for us to landscape part of the grounds. We didn't want to bite off more than we could chew, so, after looking at the building lot and landscape plans, we suggested planting the six parking lot "bump-outs" and the two corner plots on the southeast and southwest of the parking lot. Randal agreed and Betsy wrote up our proposal, which was accepted.

Our budding subchapter was off and running. We searched our own gardens, as well as areas of the national forest where ground-disturbing activities provided opportunities to salvage native plants. With a list of proposed native plants, a detailed landscape plan was developed, but first we needed a weed control plan. A county work crew pulled and mowed the weeds surrounding the building. Then, Butch Bosley, the county weed control coordinator, sprayed the eight areas to be planted.

Meanwhile, Jim and Susan Swayne had many penstemon seedlings to contribute; Betsy, Priscilla Dauble and others had potted native plants; and Laura Maier, Linda Sutor, Maryanne Uyeda and I salvaged plants along Highway 204 in the Tollgate area to begin our fledgling native plant garden.

In the spring, summer and fall of 2003 we began planting the eight designated areas. We cultivated, fertilized with Laura's lovely composted leaf material, planted, watered and nurtured our small seedlings which seemed doomed to succumb to the summer's heat waves. However, the native plants thrived except when some erstwhile Humane Society volunteer mistook our precious native plants for

weeds and sprayed them! After that we carefully labeled each plant, and even placed rocks and short picket fences around each area.

We learned so much from this initial native plant project. For one thing, to plan the watering system BEFORE planting! Laura, Diane Ackerman, Donna Johnanssoen and others got very tired watering the eight planting areas two or three times a week during the summer. Finally, Maryanne and Linda came to the rescue by installing a drip system off the existing sprinkler system.



(Left to right) Maryanne Uyeda, Nancy Berlier, Laura Maier and Betsy Kaiser pose with the sign for the Walla Walla Native Plant Demonstration Garden. PHOTO: LINDA SUTOR

In 2004 and 2005 we continued to add new plantings of rose, oceanspray, blue elderberry, sedum, strawberry, and many more species. Under Betsy's direction, a Whitman College intern produced a brochure listing the plants and their location in the eight areas.

Each of us spent time weeding and appreciating our efforts as more of the plants began to thrive and bloom. We oohed and aahed over the penstemons, the columbine and the mallow. Our plantings flourished and we felt success within our reach, a NATIVE PLANT DEMONSTRATION GARDEN! Wow and whoopee!

Laura was inspired to write a grant to the Washington Native Plant Society for a large garden sign and eight bed signs; Maryanne's family provided funding for other work; and we held plant sales to pay for printing the brochures. When the signs arrived we had a gathering last March to celebrate another major step. Since our first agreement with the Humane Society was complete, we discussed continuing the landscaping since no funds were available

(Left to right) Linda Sutor, Betsy Kaiser, Nancy Berlier, Laura Maier hold signs for four of the eight garden beds. PHOTO: MARYANNE UYEDA



in their budget. Betsy approached the new director with several suggestions which were quickly endorsed. Betsy wrote up a second agreement which included planting grass along the front and side perimeter, and shrubs along the back fence on the northside.

Buffalo grass was chosen to plant along the front and sides; and, although not a native, this species of grass has properties of very low water needs and could withstand trampling by volunteer dog-walkers. In the heat of the summer, our intrepid gardeners began to spade the four-foot by one-hundred-foot construction-compacted area. The buffalo grass was seeded and is a very successful addition.

Betsy and Laura felt the garden needed a bench to provide a place to rest for the animal caregivers, volunteers, the weeding group, and for visitors. Not just any bench, but a bench to fit around one of the trees! Betsy found plans on the Internet, and Laura discovered that the WaHi shop students would build the bench under the direction of Mr. Robert Maib. The only cost would be for the material. I got into the act when Laura suffered a bike accident, putting her in the hospital with a broken femur. I presented the plan to Mr. Maib, and consulted with him on the best wood for the construction. Laura, Betsy and I discussed the possibilities and settled on redwood treated with a preservative. The students figured out the amount of material needed to build the bench, Mr. Maib purchased it, and five students worked on building the bench. When the bench was complete, Larry and I loaded it in our pickup, and Betsy and Laura met us at the Humane Society for the bench delivery and set-up. So, for one-fourth the cost, the garden now has a beautiful bench to rest on and view the garden. The next time you are in Walla Walla, track down the Humane Society and see for yourself!



Walla Walla update

by Laura Maier and Nancy Berlier

The wind didn't blow and the sun didn't shine in November when Anitra Breit, Nancy Berlier and Laura Maier arrived at the Currans family farm for the "fescue rescue." They had been told that the Currans had the remnants of a field of Idaho fescue that they could "salvage" and transplant in the Demonstration Garden. In half an hour, they had sixty clumps of Idaho fescue in pots and plastic bags, which they immediately transplanted in the garden.

Now the garden has three fledgling plant groups: the stunning green prairie junegrass on the east end, the Idaho fescue in the middle, and sedge on the west end of the back bank. The amazing green prairie junegrass (*Koeleria cristata*) that Betsy Kaiser grew from seed and carefully planted last spring survived the terrible summer heat and the recurring weeds on the bank of leftover construction soil. Prairie junegrass often grows in association with Idaho fescue on open dry ridges. This grass can be 1-2 feet tall and has dense spike-like panicles.

Also planted at the garden during November were a Douglas fir, a paintbrush grown by the Currans, along with bluebunch wheatgrass, another mountain ash and Scouler's willow by the shed, a lovely cushion phlox in the prairie junegrass area, and several alliums.



Mark your calendars

**Botany Washington 2007
June 22 – 24**

Blue Mountains and Walla Walla

*Watch for registration information in
the spring issue.*

Seeds of Success: A twenty-first century hunter-gatherer

by Ellen Kuhlmann, WNPS Koma Kulshan Chapter

Looking across the ground, shades of brown, gray, and green blend one into the other far into the distance. There are only a few splashes of bright color, denoting where flowers dot the landscape. Not an arresting palette for many, but I bend down, and look closely at a plant no more than four inches high. I see a pod beginning to open, exposing round, light brown seeds. It is time. I pluck, straighten, and put the pod in my sack. The harvest of sage violet (*Viola trinervata*) seed for the Kew Millennium Seed Bank has begun.

Dreaming big

Have you ever wondered what you'd do if a large amount of cash came your way? The Millennium Commission in the United Kingdom (UK) invited people to do just that. Timed to coincide with the new millennium (2000), the commission said dream a magnificent dream, write it down and send it to us, and perhaps your dream will come true.

Kew Gardens was one of the groups with a glorious dream, an idea so vast that it spanned the globe. A dream in which people all over the world would put seeds in paper bags and cloth sacks, send the bags and sacks to Kew, and then those seeds would be put in special jars and stored underground, in a vault the size of a football field. An endeavor never before attempted—the collection of native flora seed on a grand scale. They dreamed a big dream, and



The Welcome Trust Millennium Building, home of the Kew Millennium Seed Bank. PHOTO: www.kew.org/msbp

submitted their proposal to the Millennium Commission. The Kew proposal was one of the projects selected by the commission, and thus the Millennium Seed Bank was born. The grant from the Millennium commission totaled £30 (US \$58) million. Funding from other sources have been added to the original grant; it is estimated that by 2009 total funds utilized will be over £80 (US \$154) million.

Conserving and protecting

The Millennium Seed Bank project's goals span a ten-year period. The overall aim of the project is to encourage plant conservation worldwide. Kew provides training in seed collection as well as providing access to, and transfer of, relevant seed conservation techniques to partner organizations and other interested parties. One of the primary goals, which has nearly been reached, is that of seed banking all of the UK flora (over 94% of UK species are now in the seed bank).

One extraordinary goal is to have seed of ten percent of the world's flora, close to 30,000 species, stored in the seed bank by 2010. (Estimates of the total number of plant species worldwide varies from 300,000 to 422,000 depending on the source of the information, according to Michael Way, Kew Gardens, UK.) This ten percent will mainly consist of species from drylands, the seeds of which respond well to established seed drying and storage techniques. When properly processed and stored, seeds can remain viable for hundreds of years. Seed banking is an important technique used in plant conservation as it increases the level of genetic and species diversity that is secure from extinction.

However, Kew doesn't want the seed collections of the Millennium Seed Bank to only be safely stored through the years. They want collections large enough to support the development of germination protocols, to conduct periodic viability testing, and to have



Maturing pods of sage violet. PHOTO: ELLEN KUHLMANN

the ability to fulfill research requests for seed or to support a restoration effort in the wild.

Kew has created partnerships with countries all over the world to accomplish the goals of the Millennium Seed Bank. In the United States, they have partnered with the Bureau of Land Management (BLM). The BLM has named the U.S. effort “Seeds of Success,” and aims to gather seed from 4,000 species by 2009. Kew estimated that as of March 2006 the BLM was a little less than halfway to that goal, with about 1,600 collections of different species completed.

With the money Kew provides, the BLM has set up collection teams in BLM offices across the country, and in turn the BLM has partnered with botanic gardens to augment the efforts of BLM personnel. Botanic gardens were chosen as collaborators because many gardens are skilled in seed collection and seed banking techniques. Washington Rare Plant Care and Conservation (Rare Care), part of the University of Washington Botanic Gardens, is one such partner with the BLM in the Seeds of Success project.

Anatomy of a seed collection

Rare Care became part of Seeds of Success in 2004. I joined the team in early 2006 to lead Rare Care’s seed collection efforts. Before joining Rare Care, I had had little interest in, or experience with, seeds and seed collection. I usually timed my wildflower excursions to coincide with flowering periods. Professionally, I had often worked in one area throughout an entire growing season, so I learned to identify many species from the seedling through the senescent stages. But I had rarely looked at the seeds; they were only of interest if needed to make a definitive species identification.

So now I was facing something new. Questions crowded my mind. How long did it take for seed to develop to maturity? How long would the seed be mature and available for collection, that is, not dispersed? And at a fundamentally important level—what does a mature seed look like? How do you know when it is fully-grown and developed?

These questions had no easy answers. I learned that the rate of seed development varied by species and also within a species as maturation rates are affected by weather conditions and habitat. Seed size, shape, and color also vary among species; there are no absolutes. But there are some common trends in seed development. A rough estimate of maturation time from flower to mature fruit is four to six weeks for many native species in Washington State. Immature seeds are usually green, and become beige or

brown throughout when mature. Seeds with viable embryos inside are plump, and the presence of an embryo can be confirmed by cutting the seed open and peering inside.

Many factors go into a successful seed collection. Wild plants resist modernization, growing where it best suits them; no neat rows of field edges mark population borders. One needs to go on a hunt of sorts to find them, using your senses and skills: a sharp eye to recognize the pattern of a specific species, persistence to search for and watch a population as the seed matures, a keen sense of timing to be there when the seed is ripe, the dexterity to harvest it, and the knowledge of how to process the seed and package it for long-term storage.

As a large amount of seed is desired for each collection made for the Seeds of Success project (10,000 to 20,000 viable seeds), you need to locate a population large enough to support gathering the necessary amount of seed without impacting the long-term population viability. The protocol used for Seeds of Success calls for harvest of no more than 20% of the available seed within a plant population. To get a good cross-section of the genetic diversity of a population, it is recommended that you collect seed from approximately fifty different individual plants.

When you’ve found a population that you’ve determined is large enough to support seed collection, and you’ve made a good estimate of when it will be ready for harvest, then the collection team is assembled. Although Kew provides funding for the project, it is not enough to hire many collectors. Most teams have at most one paid staff member, while volunteers are needed to provide the many hands needed to harvest the seed. This past summer, I relied upon the aid of fourteen valiant souls who participated in many aspects of the program.



Seeds of Success Collection Team, (left to right) Alan Yen, Ken Kailing, Gail Nickel-Kailing, and Ellen Kuhlmann.

PHOTO: ALAN YEN

Volunteers scouted populations, made herbarium voucher specimens, checked on the fruits as they matured, and gathered the seed. Depending on the species and the terrain, harvesting seed varies from being easy and quick to rather arduous and slow. The adage “many hands make light work” certainly applies to seed collection.

Travails and triumphs

Even the best-laid plans can go awry. This past season, we encountered several pitfalls that complicated our seed collection efforts. A few chosen populations, including ones of great red paintbrush (*Castilleja miniata*) and mountain arnica (*Arnica latifolia*), had little seed maturation due to insect infestation. Populations of beadlelily (*Clintonia uniflora*) and devil’s club (*Oplopanax horridus*) had plentiful fruit development, but the local fauna beat us to the harvest. I had a couple of heated debates with Douglas squirrels over this issue. You can guess who won in the end.

Human manipulation or extreme weather can also interfere with seed development and subsequent collection. Although a successful collection was made, portions of the targeted population of Columbia River wormwood (*Artemisia lindleyana*) were completely submerged for part of the fruit maturation period. The species grows within the riparian zone of the Columbia River, and the river level rose due to manipulation of the water level by dam operators. Another species dried to a crisp while flowering, so obviously no fruit was produced.

Given all that can go wrong, there is a well-deserved sense of accomplishment when everything comes together and a seed collection is made. The Rare Care team completed a total of twenty-two collections for the Seeds of Success project in 2006. The myriad tasks undertaken to achieve a good collection gave each collector a heightened sense of the value of seeds. More than one volunteer admonished me to take special care of the seed they had collected; the seed had become precious cargo to be safeguarded from all possible harm.

When you feel the sun on your face, the wind is blowing gently, the birds are twittering, and the seed is plentiful, seed harvesting is a fine endeavor. When I pick up a seed I feel a connection, not just to the earth, but to all those who have walked the land before me: seeking, waiting, deciding, and collecting. I’ve joined the ancestral chain of seed gatherers that stretches back to the misty beginnings of human society.

In an age where information travels around the globe nearly instantaneously, collection of wild plant seed has



Precious seeds. PHOTO: ALAN YEN

changed little across the millennia. It’s a good feeling, knowing that some things change slowly, one I savor as my sack slowly fattens with sage violet pods and I bend over once again to pluck another fruit full of beautiful brown seeds, seeds full of promise, full of possibility.

Afterword

Rare Care will be back out on the seed-gathering trail in the spring of 2007, along with other Seeds of Success collection teams. For more information on the project, and to find out how you can volunteer, contact Ellen Kuhlmann ekuhlman@u.washington.edu, or Rare Care at rarecare@u.washington.edu. If you’d like to read more about Seeds of Success or the Kew Millennium Seed Bank, visit the Seeds of Success web site at <http://www.nps.gov/plants/sos/>. I wish to thank Nicola Cotton and Michael Way of Kew Gardens for information they provided for this article.

Ellen Kuhlmann is a member of the Koma Kulshan Chapter of WNPS. Previously Ellen has belonged to the Wenatchee Valley chapter and served on the WNPS State Board of Directors. She has an M.S. in Biology from Western Washington University. Prior to her position with Rare Care, Ellen worked for the U.S. Forest Service in the Wenatchee National Forest, and for the PNW Research Station’s Forestry Sciences Laboratory in Wenatchee, WA.

AK

Ellen Kuhlmann

by Peg Pearson, WNPS Central Puget Sound Chapter

Last November, Ellen Kuhlmann stepped down after a total of nine years on the WNPS State Board, including three years as treasurer. Walt Lockwood praises her service, remarking that she “has been a stalwart of strength to WNPS for years at both chapter and state levels. Her administrative skills are unsurpassed. When it comes to sound management to achieve goals, no one does it better. She excels at the macro and micro levels, teaching us that the sum of little things locally is what WNPS is all about.”

Ellen came to Washington in 1990 for graduate school and was introduced to WNPS by her botany professor, Dr. Ronald J. Taylor. When a core group of the year-old Wenatchee Valley Chapter recruited her to take over as chair, Ellen finally joined in the fall of 1995. She planned programs, organized hikes, helped produce the newsletter—tasks usually handled by separate committees. She guided the chapter to formalize operations and introduced winter socials with a silent auction. Susan Ballinger remembers Ellen as a gentle leader who deftly squeezed in a month-long trip to China and Tibet while co-coordinating the May 1997 annual study weekend at Lake Wenatchee with Alan Yen. Ellen also gave a keynote synopsis of research on rare plants in the Wenatchee Mountains and led walks through lands blazed by fires in 1994 that changed forests of Ponderosa pine and Douglas-fir into emerging meadows, pointing out high-versus low-intensity burn effects.

As Wenatchee Valley Chapter chair from 1996 to 1999, Ellen attended the state board meetings. President Joan Frazee encouraged her to become an at-large director in 2000. The other board members promptly elected her to be state treasurer. A second term followed from 2003 to 2006. Since 2000, Ellen has been a valued participant on the WNPS financial task force that advises on financial matters, helps the current treasurer formulate a budget, and discusses investment issues. A highly regarded photographer herself, Ellen continues to serve on the WNPS photo contest committee to select members’ photos for media uses, Appreciation Week posters, and calendars. Concurrent with her board

duties, she found time to volunteer as the program chair for Koma Kulshan for three years upon moving back to Bellingham in 1999.

Ellen’s love of wild places took root in her childhood. Long walks with her father in the prairie remnant and hardwood forest preserves of northern Illinois, summer vacations at a family cabin on a northern Wisconsin lake, and Girl Scout activities helped develop her deep regard for nature. Two summers during college working at a Yellowstone National Park dining hall allowed her to hike and camp two days a week. That terrain became as familiar as the Wenatchee Mountains are for her now.

Born in Hillary Clinton’s hometown of Park Ridge northwest of Chicago, she majored in biology at Augustana College, IL. After graduation, instead of attending physical therapy school, Ellen took a job caring for rented tropical plants. Soon mastering that, she hired on at Carlson Laboratories that specializes in Vitamin E and other nutritional formulas. She wrote sales and technical pieces, researched new products, and worked with quality control. When realizing that her favorite part of the week was watering the plants on Fridays, she applied to graduate school.

In 1990, Ellen moved to Bellingham to begin her masters at Western Washington University. She recalls that ecologist Dr. Richard W. Fonda taught her how to be a scientist and connected her love of nature to the study of plant communities. Botanist and WNPS Fellow, Dr. Ronald Taylor, taught her to love the plants within their communities.



Ellen collects seeds for the Seeds of Success project on the Baker Ridge Trail in the summer of 2006. PHOTO: ALAN YEN

In grad school, Ellen was a teacher's assistant for Dr. Taylor. During the summers of 1991 and 1992, she first met and teamed up with Alan Yen, then a botany grad student at the University of Washington, to assist Richy Harrod with rare plant inventories and grazing surveys in the Leavenworth Ranger District of the Wenatchee National Forest. She worked at the Wenatchee Forestry Sciences Laboratory (WFSL) of the U.S. Forest Service from 1993 to 1995, where she designed, tested and wrote the final protocols for rare plant assessment and monitoring. She collaborated with Rich Everett in researching the effects of shade on morphology, biomass, and reproduction of the state-threatened Wenatchee larkspur (*Delphinium viridescens*). Ellen designed and analyzed experiments on planting lab-propagated starts of *Hackelia venusta*, the endangered showy stickseed that exists worldwide only in the Wenatchee Mountains. Dr. Ann E. Camp, now a lecturer and research scientist at the Yale School of Forestry and Environmental Studies, avers that Ellen's "participation on WFSL projects assured excellence—from data collection to analysis." Noting that "few achieve the level of her scholarship and, especially, her quantitative acumen," Ann holds Ellen as the standard by which she now evaluates her graduate students.

After receiving her M.S. in biology (emphasis botany) in 1994, Ellen worked five years as a botanist for the U.S.F.S. Leavenworth and Wenatchee River Ranger Districts, where she focused on rare species mapping, their habitats, watershed restoration and fire recovery. One of Ellen's most memorable life experiences was walking every day through the Leavenworth Hatchery Creek area burned by the 1994 fires and witnessing how plant communities respond to and recover from such a disastrous disturbance. Her research on the effects of fire on rare species based on data for *Iliamna longisepala*, the state sensitive long-sepal globemallow, was presented at an international conference in 1998. For the Okanogan National Forest, she developed a rare plant habitat database. On contract, she conducted and prepared a thorough yet accessible field report on a reclaimed mine site for the Chelan-Douglas Land Trust. Ellen resumed work with the Wenatchee Forestry Sciences Laboratory from 1999 to 2005, most notably analyzing climate data using ecological statistical techniques, a new approach that was published in *Ecological Applications* (April 2005).

Along with work, Ellen has often donated her time and talents on behalf of conservation. Testing a new protocol



Ellen photographs a pink tinted Blue-eyed Mary (*Collinsia parviflora*) on the Iron Horse Trail near Lake Easton in 2002. Limestone in the rock caused the usually blue flower to change color. PHOTO: PEG PEARSON

for the Washington Department of Ecology, she and Susan Ballinger volunteered to gather functional assessment data on a series of sagebrush-steppe depressional wetlands in 1998-99. Susan, a board member of the Chelan-Douglas Land Trust, considers Ellen "one of the top shrub-steppe botanists in the state after identifying tiny annuals in the spring and doing fall 'forensic' botany on dead stalks" with her. Four years ago, Ellen taught ecology classes at Holden Village, a Glacier Peak wilderness retreat where she had been an outdoor "maverick" one summer. Each spring, over 600 first-graders are introduced to larkspur, lupine, balsamroot and other shrub-steppe wildflowers, thanks to Ellen generously donating her photos and securing a WNPS education grant for that Wenatchee School District curriculum project.

As evidenced by her years of work for the U.S. Forest Service, Ellen has devoted herself to plant ecology, native plant conservation, plant identification, and rare plant biology. In 2001, she joined the first group of volunteers to monitor rare flora through the Washington Rare Plant and Conservation Program (Rare Care) in support of the state's Natural Heritage Program. Rare Care manager, Wendy Gibble, hired Ellen in January 2006 to lead fieldwork for the new Seeds of Success project (see Ellen's article about the Seeds of Success program in this issue of *Douglasia*). Wendy credits Ellen's expert knowledge, especially with eastern Washington flora, and extensive contacts for the training and mobilization of the many volunteers necessary to locate and harvest 10,000 seeds per native species. In total, 22 seed collections of ecological and ethnobotanical significance were completed in one season.

Ellen's skills as taxonomist, plant ecologist, writer, editor, and photographer plus creative flair make her contributions invaluable to the Rare Plant Photo Guide now in production, says Pam Camp, botanist of the Wenatchee office of the Bureau of Land Management. The guidebook, a joint project of the BLM, Natural Heritage Program, U.S. Forest Service and WNPS, aims to further awareness and conservation of Washington's sensitive, threatened and endangered flora, and will be available in bookstores.

Fascinated with why things happen and how people relate, Ellen is also keenly interested in history. In much of her spare time, Ellen will be found hiking, taking photos, and sketching, especially in the Ponderosa pine and sagebrush-steppe plant communities—her favorites. She also goes kayaking and cross-country skiing. In addition to photography, she likes many expressions of creativity including poetry, art, theater, film and knitting. Ellen started Tai Chi classes in the 1980s and attends an annual summer camp on Orcas Island. She credits Tai Chi with helping her focus on the here and now.

As her scientific skills are regularly regarded as outstanding, the people interviewed for this article sing equal praise for Ellen's personal qualities. Alan Yen, a friend

for 15 years, shares that "Ellen is an astute observer of nature and people. Her calm nature, good listening and high empathy make her a valued friend." Ann Camp describes her as "a person who makes the best kind of friend," and

Barry Wendling says, "I know my life is certainly richer for knowing her."

Ellen says WNPS has helped her connect with folks for whom plants are a passion and offers varied opportunities to enjoy their fellowship. When asked if there have been any unexpected benefits of membership, Ellen replies, "I've been surprised by the depth of my commitment to the

group. My involvement is not dependent on where I live or who is in a particular chapter. It's become like a family. I care about the organization unconditionally and think I'll always be a part of it." WNPS is fortunate and grateful that Ellen has been a friend and leader for over ten years and looks forward to her continued involvement.

Many thanks to the following for providing background on Ellen: Susan Ballinger, Ann Camp, Pam Camp, Joan Frazee, Wendy Gible, Catherine Hovanic, Walt Lockwood, Barry Wendling, and Alan Yen.

81



Ellen takes photos of yellow gumweed (*Grindelia*) near Leavenworth in 1996. PHOTO: MARK ELLIS

WNPS ends 30th anniversary year on a high note

The Seattle Foundation awarded \$30,000 to the Washington Native Plant Society to provide funding support for the next two programmatic years of Stewardship Programming in King County. Gifts to the Seattle Foundation from the following entities made this possible:

Bill and Melinda Gates Foundation Fund
Chester D. and Minnie A. Clinton Fund
Carrie M. Bunn Fund
Dorothy Malone Fund
DE Ette McAuslan Stuart Fund

Additional funding support for the WNPS Stewardship Program in King County will be provided by Seattle Parks and Recreation through a grant from the King Conservation District.

From the sound to the sagebrush: Notes from the University of Washington Herbarium's 2006 field season

by *David Giblin, Collections Manager*
Ben Legler, Database Manager

In 2006, University of Washington Herbarium (WTU) faculty, staff, and volunteers ventured from Puget Sound islands to the sagebrush desert to document the region's flora. In between, we made multiple trips to two national parks (North Cascades and Mount Rainier), located a few wetland areas to collect from in the East Cascades, and visited several lakes in lowland Western Washington. For the first time since 2003, all of our collecting trips were to destinations within Washington's boundaries.

As in years past, many of our trips were collaborative efforts with support from federal and state agencies (U.S. Fish and Wildlife, National Park Service, U.S. Forest Service, Bureau of Land Management, Washington State Parks, Washington Department of Natural Resources), and The Nature Conservancy. In all we collected over 3,450 specimens, which included many new county records for the WTU collections and several new records for Washington State. Below are brief summaries of many, but not all, of the trips that we took this field season.

San Juan Islands

(April 26-28; May 30-June 1; September 6-8)

In 2005, we partnered with Peter Dunwiddie of The Nature Conservancy to survey the flora of the small islands throughout the San Juan Islands Archipelago. A Research Grant from the Washington Native Plant Society has been invaluable to the success of this work. In 2006, we conducted three 3-day collecting trips in which we surveyed 24 new islands. Thanks to generous support from an anonymous donor to the Friends of the Herbarium Fund, we were able to revisit 10 of these islands (and seven from 2005) in September in order to collect species that were neither flowering nor fruiting during our early season trips. In all, we made over 1,450 collections, and were joined in the field by WNPS members Pam Camp and Rod Gilbert, The Cascade Land Conservancy's John Floberg, University of Victoria undergraduate Victoria Wyllie-Echeverria, and

Joe Bennett, Emily Gonzalez, and Tara Martin from the University of British Columbia. A full report on the results of this project to date will be the subject of an article in an upcoming issue of *Douglasia*.

Protection Island

(May 3)

On a mild sunny day in early May, we visited Protection Island near Port Townsend, with boat access provided by the U.S. Fish & Wildlife Service. Fred Weinmann (past WNPS president) was instrumental in initiating and coordinating this trip. Currently owned and protected by the USFWS, Protection Island provides a haven for many bird species; however, a long history of human land use has left its impact on the vegetation. Our group of 14, which included Anette de Knijf (USFWS), Peter Dunwiddie (The Nature Conservancy), and Joe Arnett (WA Natural Heritage Program), made 110 collections of 77 different plant species. We observed, but did not collect, another 45 species. A species list compiled by Jim Hayward noted 140 species for the island; we added 32 new species to his list. Our survey of the island fits into the broader context of the Herbarium's work in the San Juan Islands, while also expanding upon the island's known species list and providing locally held vouchers for future research and study.

Padilla Bay National Estuarine Reserve

(May 5, 23; August 23; September 15; October 16)

This year we initiated a partnership with Padilla Bay staff to survey the vascular plant diversity throughout the Reserve. Our interest in the flora of the Reserve ties into our ongoing efforts both in the San Juan Islands and in the tidal marshes of the Puget Sound. Reserve Director Dr. Doug Bulthuis and Sharon Riggs were tremendously supportive in facilitating our efforts by providing us with maps, plant lists, and a tour of the properties. They also coordinated boat transportation (navigated by Paula Margerum and Andy Windham) for two trips to Saddlebag Island, which is located in the northwest corner of Padilla Bay adjacent to Guemes Island.

In all, we made 257 collections and added over 30 species to the Reserve's list. Saddlebag Island, which is about 23 acres in size and has a Washington State Park campground on it, turned out to be remarkably diverse

relative to the islands we have surveyed to date in the San Juan Archipelago to the west. This increased diversity is consistent with island biogeography theory, which predicts that islands closer to a mainland should have more species due to increased opportunities for dispersal. We were joined on the trips by Peter Dunwiddie and UW undergraduate Jessica Ni.

The only bad news that came out of our work at Padilla Bay was a species that Peter Zika noticed and collected near the Padilla Bay Interpretive Center on our first trip in early May. Shining geranium (*Geranium lucidum*) is a serious nonnative invader in the Willamette Valley in Oregon and in other parts of California. This was the first collection of this species in Washington, and it appeared to be spreading along the ditch in which Peter collected it. Pictures of this species can be found at the Herbarium's Plants of Washington Image Gallery (<http://biology.burke.washington.edu/herbarium/imagecollection.php>).

Lind Preserve and Colockum Wildlife Area (May 17-18)

In 2003, we began a partnership with The Nature Conservancy to survey reserves they hold in Washington. This year, Don Knoke joined us to survey the Lind Preserve located in Adams County. The Preserve is a sagebrush prairie remnant approximately 45 acres in size. You may recall that we had a heat wave in mid-May, and this summer-like weather coincided with our outing. Even Don, a life-long Eastsider, found the 90+-degree heat in the shade a bit uncomfortable (of course, there is no shade in the sagebrush!). Nevertheless, we made 26 collections and added seven species to the list that Herbarium Curator Dick Olmstead had generated as a graduate student working for The Nature Conservancy 25 years earlier. Among the species we added were annual agoseris (*Agoseris heterophylla*), slender phlox (*Phlox gracilis*), and narrow-leaf Collomia (*Collomia linearis*).

That night we camped at Scootenay Reservoir in Franklin County, where Don and David unknowingly set up their tents adjacent to the lawn sprinklers that came on at 2 a.m. After drying out in the morning, we collected in the sagebrush remnants around the reservoir before heading back across the Columbia River and on towards the Colockum Pass area. The 4000' change in elevation from where we started the day brought the temperature down about 20 degrees, making the collecting much more pleasant. The Colockum area was absolutely beautiful and the meadows were filled with various species of balsamroot (*Balsamorhiza*), lupines (*Lupinus*), and desert-parsley (*Lomatium*). We even came across a herd of elk that numbered nearly 40 in size. The difference between the first and second day in terms of species collected served as a great reminder of how quickly the interior flora changes with large differences in elevation over short distances.

North Cascades National Park (June 27-30; July 28-31)

In 2002, the Herbarium began a partnership with North Cascades National Park to help document the park's vascular plant species' richness, with one or more multi-day trips conducted by the Herbarium in the park each year since. Two trips to North Cascades were made this year, led



(Left to right) Anders Huseeth, Vicky Gempko, Cherly Lowe, Diane Doss, and Dale Blum on slope of Mt. McGregor, North Cascades National Park. PHOTO: DAVID GIBLIN

by Ben Legler and park botanist Steve Hahn, and joined by an enthusiastic group of volunteers. Our first trip was to the diverse and species-rich Stehekin Valley at the head of Lake Chelan in late June, chosen in part to help the valley's resource managers build a reference collection of the plants they manage. Warm sunny weather, transportation to and from collecting sites, and accommodations in a park-owned house made this trip feel cushy compared to our normal routine of backcountry camping! Notable finds included slim-leaf onion (*Allium amplexans*), giant helleborine (*Epipactis gigantea*), four species of moonworts (*Botrychium* sp.), and *Spiraea xpyramidata* (hybrid between *S. betulifolia* and *S. douglasii*). A total of 299 collections were made comprising about 249 species.

Our second trip to North Cascades National Park was to Dagger Lake in late July, accessed by a 6-mile hike south from Highway 20 starting near Rainy Pass. The park provided stock support to haul our collecting gear in and out. Dagger Lake sits in a remote subalpine basin surrounded by Stiletto Peak to the north and Hock Mountain to the south. A large wetland area surrounds the lake and a huge boulder- and larch-filled cirque on the north face of Hock Mountain. We faced hordes of mosquitoes and mixed weather, which even spat snow on us, to bring back 167 collections of 153 plant species. Interesting finds included alpine chickweed (*Cerastium beeringianum*), wedge-leaf saxifrage (*Saxifraga adscendens*), Lyall's saxifrage (*Saxifraga hyallii*), and 13 species of sedges (*Carex* spp.).

11th Annual Foray in the Wenatchee Mountains (July 6-10)

For the first time since 2003, Herbarium Curator Dick Olmstead and David Giblin chose a location in Washington to hold the Annual Herbarium Foray. The Wenatchee Mountains was an easy choice because of their renowned plant species richness, and their central location would attract participants who weren't able to make the previous two years' far-flung destinations to Oregon and Idaho. U.S. Forest Service Botanist Viva Worthington was extremely helpful and generous with her time in facilitating our efforts. Viva coordinated the necessary permits, provided us with maps of Forest Service lands, and gave us great suggestions for areas in which to collect.

Our center of operations was the U.S. Forest Service's Swauk Campground along Highway 97, and over the course of three days our collecting areas included the east flank of Table Mountain, Lion Rock near the top of Table



Participants in the 2006 Herbarium Foray to the Wenatchee Mountains. PHOTO: DAVID GIBLIN

Mountain, Old Blewett Pass, Haney Meadows, Esmeralda Basin, Beverly Creek, Ingalls Lake trail, Tronsen Ridge, and the area around the Swauk Campground. The species we collected included scarlet gilia (*Ipomopsis aggregata*), big-head clover (*Trifolium macrocephalum*), four species of collomia (*Collomia grandiflora*, *C. heterophylla*, *C. tinctoria*, *C. tenella*), bitterroot (*Lewisia rediviva*), naked broomrape (*Orobancha uniflora*), and nine species of penstemon. The decision to go to the Wenatchees was a good one, as we set records for the greatest number of participants (28) and number of collections made (649). We now have our hands full identifying all of these collections, which we do in part by meeting one night a month in the Herbarium to key plants out (we call these Foray Work Parties, but they feel more like work than a party!).

Mt. Rainier National Park (July 18-20; August 7-9)

In 2004, the Herbarium received additional funding from the National Park Service to expand its survey work to Mount Rainier. This year we conducted two trips to Mount Rainier, targeting species-rich and undercollected areas to assist the park in documenting its flora. Ben Legler was joined by park botanist Pete Del Zotto in leading these trips. Our first trip in mid-July was to Owyhigh Lakes on the east side of the mountain. This lesser-visited area of the park sits in a subalpine basin flanked by steep cliff-topped Governor's Ridge to the east and extensive meadows on the ridge to the west. Mild sunny weather allowed us to cover much of the area with interesting finds made around the lakeshore and on the talus on Governor's Ridge, where we encountered rare (for the park) plants such as globe anemone (*Anemone multifida*), Cascade rockcress (*Arabis*

furcata), green spleenwort (*Asplenium trichomanes-ramosum*), and Flett's senecio (*Senecio flettii*). Elsewhere we collected two species of mistletoe (*Arceuthobium abietinum* and *A. tsugense*). We made 80 collections of 72 species, many of which are new records for the Park's own herbarium. Several members of our group saw a female black bear with two cubs near the lakes.

Our second trip in early August was originally planned for Golden Lakes on the west side of the park. However, access difficulties forced us to change plans in mid-trip. After a short deliberation among our group, we headed to Mowich Lake in the northwest corner of the park. Here we botanized the meadows, ridges, and wetlands near the lake, initially enjoying sunny skies, which then gave way to steady rain on the last day. However, our enthusiastic group of volunteers was not the least deterred by the rain and we managed a wet but enjoyable last day of collecting. Among



Don Knoke (left), Jessica Ni, and Ben Legler on collecting trip to wetland areas near Swauk Pass. PHOTO: DAVID GIBLIN

our 147 collections of 134 species, we found four that have not previously been reported for the park and were not included in David Biek's Flora of Mount Rainier National Park: water sedge (*Carex aquatilis*), single-spike sedge (*Carex scirpoidea*), wandering fleabane (*Erigeron peregrinus* var. *peregrinus*), and *Spiraea xhitchcockii* (hybrid between *S. douglasii* and *S. splendens*). Other unusual finds included pale larkspur (*Delphinium glaucum*), Anderson's sword-fern (*Polystichum andersonii*), and Strickland's tauschia (*Tauschia stricklandii*).

Final thoughts

Unfortunately, there isn't space to report about several other collecting trips that we took that included the wetland areas around Swauk Pass, the South Fork Meadows below Cle Elum Ridge, and our ongoing work to survey the aquatic flora, which this year took us to Baker Lake in Whatcom County, and Skagit County's Lake McMurray. There is still plenty to learn about Washington's rich and distinctive flora, which is one of the reasons why we continue to collect. The activities associated with gathering this information is very rewarding, and requires the support of federal and state agencies, professional and amateur botanists, and a group of dedicated volunteers in the Herbarium who help process these specimens. It also requires financial support. We are grateful to donors to the Herbarium Endowment, for it is their generosity that made several of these trips possible. Thank you to everyone who helped in 2006, and we look forward to reporting about the upcoming year's plant collecting adventures and finds.



New training module on *P. ramorum* for nurseries

by Norm Dart, Washington State University

Washington State University has released a new training module on *Phytophthora ramorum* for nurseries. The training module is available in English and Spanish and is accessible online free of charge.

The presentation provides training on recognizing *P. ramorum*-like symptoms, and presents management considerations aimed at keeping *P. ramorum* out of nurseries, providing ways to reduce the economic impact if detected on site, and to reduce the risk of spreading the pathogen into the natural and urban landscape.

Please find the online training module on the WSU *P. ramorum* Research and Education web site at <http://www.puyallup.wsu.edu/ppo/resources.html>.

WNPS Study Weekend July 20-22, 2007

Fire and ice: Botanizing the Mt. Baker area

by Mark Turner,
WNPS Koma Kulshan
Chapter

The Koma Kulshan Chapter of the Washington Native Plant Society, based in Bellingham, invites you to join us for a weekend of botanical exploration in the northwest corner of the state. The North Cascades, relatively accessible from the Mt. Baker Highway, are home to a diverse flora from wetland species along the river bottoms and shallow ponds to true alpine on the rocky ridges and peaks of our rugged mountains.

Full details and a registration form will be published in the spring issue of *Douglasia*, but mark your calendar now and plan to join in the fun July 20-22.

In keeping with the idea that less driving and more botanizing is better, study weekend headquarters will be the White Salmon day lodge at the Mt. Baker Ski Area. It is located about 52 miles east of Bellingham on Hwy. 542 at 3600' elevation. The lodge has a spectacular view of Mt. Shuksan and won the 1996 Best New Day Lodge in North America award for its Cascadian architecture.

The area immediately around the lodge is beautiful and botanically interesting, so even if your body says "no" to extended field trips, you'll find much to explore at a leisurely pace without traveling far.

Field Trips

The heart of any Study Weekend is a selection of field trips to explore the flora of the area. We'll have enough trips—with a variety of physical challenges from easy wheelchair-accessible trails to day-long hikes on rough trails—to satisfy most everyone. Almost all of the field trip trails are on Green Trails No. 14, Mt. Shuksan, with a

few on the adjacent Mt. Baker map, No. 13. Many hikes are described in *100 Hikes in the North Cascades*, published by The Mountaineers Books. Many trips are into wilderness areas, with a party limit of 12. Some trips will repeat on Saturday and Sunday, and there will be short excursions on both Friday afternoon and Sunday morning to accommodate travel plans. Complete field trip details will be in the next issue, but here are some of the places you can expect to be on the list:

Focus Trips: Look for field trips that focus on sedges, ferns, lichens, flowering plants, and forest ecosystems, as well as an introduction to using a dichotomous key.

Table Mountain: Short steep climb from Artist Point to a relatively flat subalpine-alpine zone at 5500'-5700' with spectacular views to Mt. Baker and Mt. Shuksan.

Ptarmigan Ridge: A long day's hike (8 mi RT, 1530' gain) from Artist Point to the alpine zone on the shoulder of Mt. Baker. Coleman Pinnacle will be the end point.

Chain Lakes: A moderate loop to Mazama, Iceberg, and Hayes Lakes with diverse floral habitats from moist lakeside marshes to rocky outcrops. (5.25 mi RT, 1900' gain)

Bagley Lakes: Easy short hike exploring the flora near Bagley Lakes and the Heather Meadows visitor center.

Lake Ann: A full-day hike, beginning at Austin Pass, to a little alpine gem of a lake at the foot of Mt. Shuksan's Curtis Glaciers, passing through forest, riparian meadows, and exposed rocky slopes. (7.25 mi RT, 1100' gain each way with the low point in the middle)

Heather Meadows: Easy short hike botanizing around Picture Lake and the Heather Meadows visitor center on the wheelchair-accessible trails.

Nooksack Fen: Bring your rubber boots for this foray into the wetlands along the Nooksack River around 2000' elevation to look for sedges, willows, and other plants that thrive with soggy feet. This is a short-distance off-trail hike which starts along FS 34.

Nooksack Cirque: A long river valley hike, which may involve bushwhacking through slide alder or wading the river to reach a classic glacial cirque. Very little elevation





Chain Lakes Loop trail. PHOTO: KIM GALIMANIS

gain, but expect a challenge, including fording Ruth Creek at the beginning. Lush old-growth forest, gravel bars, and spectacular views of the cirque at the end. Not for the faint of heart. (12 mi RT, 1000' gain)

Price Lake: Rugged off-trail hike to an alpine lake at the base of Price Glacier on the shoulder of Mt. Shuksan. (7.5 mi RT, 2000' gain)

Goat Mountain: Hike up a good trail through several forest zones to spectacular subalpine meadows filled with heather and huckleberries, and grand views across the valley to Mt. Shuksan. (8 mi RT, 3300' gain)

Hannegan Pass and Peak: A long hike through diverse habitats from valley bottom, avalanche chutes, narrow cascading waterfalls, wet meadows, subalpine forest, and a rocky alpine summit. Along the way are grand views into the Cascades. (8 mi RT to Hannegan Pass, 2000' gain; add another 1000' to the peak)

Twin Lakes and area: High-clearance vehicles may be able to drive to Twin Lakes, a pair of subalpine gems tucked between Winchester Mtn. and Goat Peak at 5200'.

Winchester Lookout: A relatively short, but steep hike up from Twin Lakes (4 mi RT, 1300' gain)

High Pass: A subalpine to alpine traverse from Twin Lakes toward Mt. Larrabee on the east slope of Winchester Mtn. with lots of meadows to explore. (5 mi RT, 500' gain; may require an ice axe to cross the snowfield at the beginning)

Silesia Creek: Descent from Twin Lakes to Silesia Creek through old-growth forest on a little-used trail that may

offer the challenge of scrambling over blowdowns. (9 mi RT, 2600' loss going in, 2600' gain coming back out)

Yellow Aster Butte: A stunning subalpine area dotted with glacial tarns amid vast meadows and open rocky areas. The trail begins on the Twin Lakes road and climbs toward Gold Run Pass before traversing a spectacular hillside and climbing again toward Yellow Aster Butte. (8 mi RT, 3100' gain to Butte)

Fern Foray to Yellow Aster Butte: Tim McNitt will lead this exploration of ferns in the subalpine meadows and serpentine slopes of Yellow Aster Butte. We can expect to see 20-25 taxa of ferns and lycophytes, including the elusive Green Spleenwort (*Asplenium trichomanes-ramosum*), and serpentine endemic Shasta Fern (*Polystichum lemmonii*) and Kruckeberg's Holly Fern (*P. kruckebergii*). The Yellow Aster Butte trail traverses a portion of the Bell Pass Mélange, a complex geological region of sedimentary and volcanic rock interspersed with large blocks of metamorphic and ultramafic rock. The resulting landscape supports a rich diversity of vascular plants. We will focus on the effects of geology and microenvironments on the distribution and evolution of ferns. This is a strenuous, 7-mile round-trip hike with a total elevation gain of 2200 ft. Group size is limited to 12.

Chowder Ridge: One of the premier high alpine botanical destinations in the Nooksack area. This is a long hike, and access depends on whether Wells Creek road has been repaired from flood damage. (10 mi RT, 3100' gain to Hadley Peak)

Skyline Divide: This is one of the prettiest places to approach Mt. Baker up close, with a nice forest to hike through on the way up and spectacular meadows on the ridge. Once on the ridge, how far to hike and explore depends on the interest and strength of the group because one can go for miles and end up on Chowder Ridge. (6 mi RT to knoll, 1700' gain)

Heliotrope Ridge: The climber's approach to the Coleman Glacier route on Mt. Baker, this trail passes through forest, crosses numerous streams, and breaks out into subalpine and alpine meadows. (7 mi RT, 2300' gain)



In August 2006, Art Kruckeberg was awarded the Peter Raven Award, given annually by the American Society of Plant Taxonomists to "a plant systematist who has made exceptional efforts at outreach to non-scientists." The following article was written as a tribute to Dr. Kruckeberg in honor of his receiving the award, and is also being published in the March 2007 issue of Systematic Botany.

Arthur R. Kruckeberg – Recipient of the 2006 Peter Raven Award

*by Richard G. Olmstead, Department of Biology and
Burke Museum, University of Washington*

Arthur (Art) Kruckeberg turned 86 on the first day of spring, 2006. This means he has been Professor Emeritus at the University of Washington for 18 years. Being emeritus hasn't diminished his tireless energy, though; it just means that he has been able to devote himself full-time to educating the world, especially those who live in the Pacific Northwest (PNW), to the joys of native plants, gardening, taxonomy, conservation, and whatever else the self-proclaimed "All-purpose Botanist" thinks people ought to know or would like to know. I can't imagine any systematist more deserving of the Peter Raven Award for "*exceptional efforts at outreach to non-scientists*."

Art was born into a family in which the family business helped spread the word of plants and their appreciation. His father, and grandfather before him, operated the Kruckeberg Press in Los Angeles, which published gardening and horticultural publications and plant catalogs.

As a young man, Art also worked at the press and fully expected to take over the family business one day. That was not to happen, however.

Upon graduation from Occidental College in 1941, Art was invited by Ira Wiggins to apply to Stanford for graduate school, which he did. This created a dilemma for the young botanist who had assumed he would follow his father into the family business. He worried that his father

would disapprove of a career choice that would lead him into academics. His father, of course, blessed his decision to pursue his chosen career, but admonished him not to isolate himself in the ivory tower, but rather to use his expertise to make science relevant to the public. This message was taken to heart, and, throughout his long and illustrious career, Art Kruckeberg has reached out to a community that extends far beyond the University.

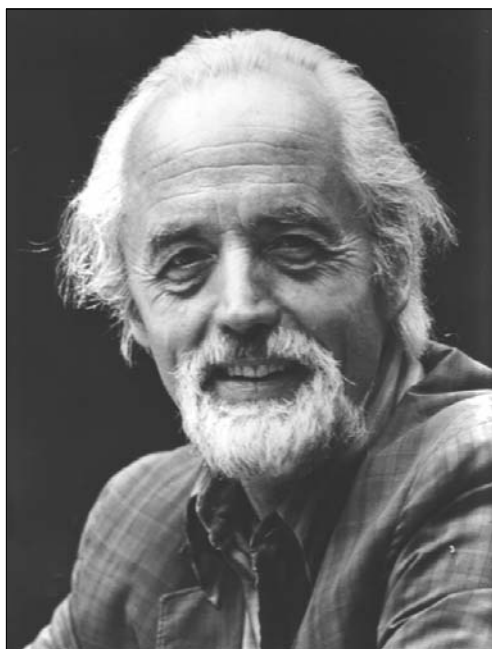
Prior to starting grad school, in the summer of 1941, Art was hired as the field assistant to Drs. Jens Clausen, David Keck, and William Heisey of the Carnegie Institution in Palo Alto. Imagine the good fortune for a beginning graduate student to spend the summer in the Sierra Nevada working on what was the premier experimental field evolutionary biology research project of the day! However, things didn't work out exactly as they might have, given the timing of events in world affairs.

After a year in grad school, which saw the entry of the United States into World War II following the attack on Pearl Harbor, Art enlisted in the Navy. Art had just married Lyle Moore, whom he had met during summer vacations

from college on the Rogue River in Oregon. In addition to Botany, Art had always loved and had a predisposition for learning languages. So, he was a logical choice for the Navy Language School, where he was trained in Japanese. There followed a 14-month, intensive language training in Boulder, Colorado, where Lyle gave birth to their first daughter, Janet. He then shipped off to the Pacific, where he spent the remainder of the war years translating captured documents and acting as an interpreter during interrogation of captured Japanese soldiers. Following the war, he was stationed in Japan to help with the occupation before returning home to be united with his family,

which had grown in his absence by the addition of a second daughter, Patricia, born about nine months after he shipped out.

Art was keen to return to his studies, but realized that the center of botanical study on the west coast was the University of California at Berkeley, where he enrolled in 1946 with the assistance of the GI Bill. He began his fascination with the factors that controlled the distribution



Art Kruckeberg. PHOTO: D. HENDERSON



ASPT President Richard Jensen (*right*) presents the Peter Raven Award to Art Kruckeberg. PHOTO: RICHARD OLMSTEAD

of plants following a class by Herbert Mason, who had become interested in the effects of serpentine soils on plant distributions. Art undertook a thesis on the serpentine plants in Lake County, California, under the direction of Mason and with Hans Jenny and G. Ledyard Stebbins on his committee. Those were exciting times at Berkeley, with a cohort of Botany graduate students that went on to do great things (included among them another Peter Raven Award winner, Charles Heiser).

Upon completion of his Ph. D. in 1950, Art was offered a position at the University of Washington, which has been his professional home for 66 years. Before he was able even to move to Seattle, he was off traveling around the West during the summer of 1950, teaching field botany with C. L. Hitchcock, a partnership that was to continue for many years. To this day, Art's field trips are legendary. There is hardly a botanist in the Pacific Northwest who has not been on a field trip led by Art. Besides the summer field classes, he has led numerous trips for the Washington Native Plant Society, the North Cascades Institute, the Siskiyou Institute, and, most recently, Botany Washington—an informal assemblage of professional and amateur botanists who get together annually to learn about the flora of the

Pacific Northwest while making new connections and refreshing old ones.

In 1952, Art suffered a personal tragedy with the death of his wife, Lyle, after 12 years of marriage and shortly after their third child, Caroline, was born. Art was remarried in 1953, to Mareen Schultz, a Botany student at UW. They had two children, Arle and Enid. Art and Mareen formed a remarkable team in the development of what later came to be known as the Kruckeberg Botanic Garden and MsK Nursery (see below).

Art's early professional career was that of a typical academic botanist: teaching, research in the field, lab, and greenhouse, and publishing scholarly papers in scientific journals. However, that changed after achieving tenure and promotion to full professor. By this time he had established himself as an authority on the flora of the Pacific Northwest and on the vegetation and ecology of serpentine floras in western North America. Two other events also conspired to move Art into a more public arena. In 1958, he purchased a new home on a 4-acre tract of land north of Seattle, where he began growing plants, both native and exotic, that interested him botanically, and, in 1970, his senior colleague, C. L. Hitchcock, retired. Due to declining health, Hitchcock could no longer bear the mantle as the leading authority on the flora of the Pacific Northwest, which now fell to Art's shoulders.

The 1970s saw the birth of the modern environmental movement with an increasing interest in conservation and preservation of the natural world. Art became the leading activist in the state of Washington in organizing efforts to implement conservation measures. In 1972, he helped lead the movement to create the Washington Natural Area Preserves Act, which led to the establishment of more than 80 preserves designated with the highest conservation value of all state-owned lands, and served on the Natural Areas Advisory Council from 1975-1978. In 1973, he developed the first list of rare and endangered plant species for Washington and subsequently served on the state's Endangered Plant Species Task Force. In 1976, he was instrumental in founding the Washington Native Plant Society, an organization that has grown to include 11 active chapters and over 2,000 members statewide, and its quarterly journal, *Douglasia* (he served as editor from 1982-1992). Beginning in the 1970s and continuing for many years, Art served on the US Forest Service, Region Six, Research Natural Area Commission, charged with identifying Forest Service sites of particular botanical interest and establishing Research Natural Areas to protect them. In 1982, he helped persuade the state legislature to amend the Natural Area

Preserves Act to create the Washington Natural Heritage Program, within the Department of Natural Resources, to oversee the Natural Area Preserves and rare species management in the state. More recently (1997), Art founded Botany Washington, an informal group of serious amateur and professional botanists described above.

Beginning with his interest in the effect of serpentine soils on plant ecology and evolution, Art's interest in how the landscape and geological processes governed plant distributions and patterns grew well beyond his specific research interests. These interests, combined with the admonition from his father to reach out to the public, led to the publication of a series of books aimed at an educated public interested in natural history. Three of these deal specifically with the role of soils and other geological factors in determining what plants grow where: *California Serpentine* (1985), *Geology and Plant Life* (2002), and *Introduction to California Soils and Plants: Serpentine, Vernal Pools, and other Geobotanical Wonders* (2005). His *Natural History of Puget Sound Country* (1991) is a detailed description of the physical and biological forces that have acted to create the landscape and flora and fauna of the Puget Sound region. He also teamed up with a well-known Pacific Northwest nature photographer, Ira Spring, to produce *Best Wildflower Hikes in Washington* (2004). As I write this, *Plant Hunters of the Pacific Northwest* (in press) is in final stages of production; Art is co-editor and author of several short biographies of plant collectors who contributed to our knowledge of the Pacific Northwest flora.

In addition to the books, Art has written dozens of articles on conservation, native plants, gardening with native plants, and so forth for popular publications. Literally too many to count, or at least Art says he's never kept track. A scan of the cumulative index of *Douglasia*, the quarterly journal of the Washington Native Plant Society, shows an even 100 entries for contributions by Art to that journal in its first 30 years (1976-2005). He has written numerous articles for several other popular publications, as well. Art also is in demand as a speaker, having given dozens of talks to garden clubs, the Native Plant Society, and just about every other organization with an interest in natural history, gardening, conservation, or the environment of the Pacific Northwest.

In his 5-volume *Flora of the Pacific Northwest* (1955-1969), C. L. Hitchcock made comments about the horticultural potential of many species, most of which had never been grown in cultivation. When Art moved his family to their new 4-acre home in 1958, he started experimenting with cultivation of many of these plants. He soon amassed a wealth of information at a time when the public in the Pacific Northwest was gaining an aesthetic appreciation for native plants (largely through Art's efforts!) and translated that knowledge into the first of his several books aimed at the knowledgeable lay public, *Gardening with Native Plants of the Pacific Northwest: An Illustrated Guide* (1982). This book won the "Governor's Award" when it first appeared and has been a perennial bestseller among gardeners in the Northwest (an updated second edition was published in 1997). With Art as technical advisor and seed collector, his wife Mareen (deceased in 2003) established the MsK Rare Plant Nursery in 1970, specializing in native plants for the garden at a time when native plants were rarely found in commercial nurseries. The combination of the book and the nursery are generally recognized as catalyzing the movement to garden with native plants in the Pacific Northwest.

Art also was obsessed with seed lists from around the world and often requested seed of unusual plants that struck his fancy to grow in his garden. The result today is a garden that provides a living legacy of Art's eclectic botanical interests, including several Washington State "Champion" trees (the largest of the species known in the state). The Kruckeberg Botanic Garden will soon become a public garden owned by the City of Shoreline and managed along with the



Peter Raven (left), Director of the Missouri Botanical Garden and the person for whom the award is named, with Art Kruckeberg. PHOTO: RICHARD OLMSTEAD

MsK Rare Plant Nursery by the non-profit Kruckeberg Botanic Garden Foundation.

Art Kruckeberg has created a lasting legacy in the Pacific Northwest through his consistent efforts to promote both the scientific and aesthetic value of native plants and their conservation. His efforts are mostly regional in scope, but many of them have provided examples for others to follow elsewhere. It is fitting that the American Society of Plant Taxonomists recognizes Art as the 2006 recipient of the Peter Raven Award.

References:

Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1955-1969. *Flora of the Pacific Northwest* (5 volumes). Seattle: University of Washington Press.

Kruckeberg, A. R. 1982. *Gardening with Native Plants of the Pacific Northwest: An Illustrated Guide*. Seattle: University of Washington Press.

Kruckeberg, A. R. 1985. *California Serpentine: Flora, Vegetation, Geology, Soils, and Management Problems*. University of California Publications in Botany 78: 1-180.

Kruckeberg, A. R. 1991. *Natural History of Puget Sound Country*. Seattle: University of Washington Press.

Kruckeberg, A. R. 1997. *Gardening with Native Plants of the Pacific Northwest: An Illustrated Guide*. Second Edition. Seattle: University of Washington Press.

Kruckeberg, A. R. 2002. *Geology and Plant Life: The Effects of Landforms and Rock Types on Plants*. Seattle: University of Washington Press.

Kruckeberg, A. R. 2004. *Best Wildflower Hikes in Washington*. Seattle: The Mountaineer Books.

Kruckeberg, A. R. 2005. *Introduction to California Soils and Plants: Serpentine, Vernal Pools and other Geobotanical Wonders*. California Natural History Guides. Berkeley: University of California Press.

Kruckeberg, A. R. and R. Love, eds. In press. *Plant Hunters of the Pacific Northwest*. Seattle: University of Washington Press.



Rare plants and invasive species in Palouse meadow-steppe

by Bertie J. Weddell, *Lewis-Clark State College*
David M. Skinner, *USDA-NRCS Plant Materials Center*

Many of us had an ecology course at some time in the past, in which we learned about succession in plant communities. The concept has an intuitive appeal: after a plant community is disturbed, for instance by fire or logging, the site is invaded by pioneer species that are able to tolerate the rather harsh conditions in the cleared area. By its very existence on the site, the pioneer community moderates environmental conditions, providing shade and reducing fluctuations in temperature. This sets the stage for a new community adapted to the modified environment. The process repeats itself, leading to a sequence of transitional, or seral, stages that replace each other until a stable climax eventually develops. According to this model, the stable climax that terminates a successional sequence is capable of persisting under the conditions it creates, so it remains until the process is set in motion again by another disturbance. Early champions of this concept viewed communities as tightly integrated associations of species. Some ecologists even went so far as to suggest that plant communities are superorganisms.

The succession model fits reality well in some instances. For instance, much of western Oregon and Washington is capable of supporting mature forests of western hemlock (*Tsuga heterophylla*). When these forests are clearcut and then burned to remove slash, a predictable sequence of stages typically occurs. Sometimes there is a transient stage of mosses and liverworts, or the first post-logging stage may consist of invasive forbs and residual species. After several years, weedy perennial herbs such as bracken fern, common thistle, and fireweed invade. Gradually, shrubs supplant this stage, followed by deciduous trees. Eventually Douglas-fir becomes dominant, and if the stand does not experience a major disturbance for several hundred years, western hemlock finally replaces the Douglas-fir.

But some types of communities don't fit the succession model very well. For instance, the model does not accurately predict patterns of vegetative change in the Palouse region of eastern Washington and northern Idaho. (The Palouse is sometimes defined more broadly, to encompass areas of true steppe west of the meadow-steppe zone and, even more broadly, zones where steppe and meadow-steppe communities are prevalent in Montana, northeastern

Oregon, and southern British Columbia.) Characterized by rolling hills and deep, fertile, loamy soils, the Palouse is a meadow-steppe zone capable of supporting the relatively mesic Idaho fescue-common snowberry (*Festuca idahoensis*-*Symphoricarpos albus*) association. This community, popularly known as Palouse Prairie, is dominated by perennial bunchgrasses (bluebunch wheatgrass, *Pseudoroegneria spicata* [= *Agropyron spicatum*]; Idaho fescue, *Festuca idahoensis*; and prairie junegrass, *Koeleria macrantha* [= *K. cristata*]) accompanied by low shrubs and a diverse assemblage of native forbs. Much of the region's native vegetation has been converted to cropland, and meadow-steppe communities remain only in small, isolated remnants. This situation is exacerbated by the fact that the agricultural landscape harbors numerous invasive plant species.

The Palouse Prairie communities that existed prior to large-scale disturbances by agriculture did not typically go through a sequence in which an early stage of pioneering annuals gave way to a stable climax dominated by perennials. From 1912 to 1914, J. E. Weaver, who regarded the climax community as “an actual organism” that was inevitably preceded by transient “developmental” communities, studied Palouse vegetation, but he found no pioneering stage leading to mature meadow-steppe. Later work by Rexford Daubenmire showed that Palouse meadow-steppe was able to recover from burning without going through a transitional stage of annuals. Fire damaged primarily the aboveground parts of perennial grasses and forbs, allowing

them to regenerate from underground storage organs. As a result, it took only a few years for meadow-steppe to return after burning. On a smaller spatial scale, physical and biological disturbances—such as frost-heaving, burrowing by worms and small mammals, and trampling by displaying Sharp-tailed Grouse—undoubtedly created bare areas that annuals colonized, but these microsites were within a matrix dominated by perennials. Apparently, annuals did not form a pioneering community that preceded climax meadow steppe. (It is important to keep in mind, however, that meadow-steppe vegetation also occurs on sites capable of supporting shrub thickets or dry coniferous forests. In these situations, the meadow-steppe assemblage is itself a transitional stage in a sequence potentially leading to a different community such as a hawthorn thicket or a ponderosa pine forest.)

Things changed dramatically when Euroamericans settled the Palouse. At first, the pioneers thought only the stream bottoms were moist enough to support crops, but once they discovered that the hillsides could be farmed, Palouse Prairie rapidly succumbed to the plow. This resulted in a dramatic change in disturbance regime: bare areas became more widespread and more prevalent. Cultivation was especially destructive to perennials, because it not only removed vegetation growing above ground but also killed roots, effectively preventing perennials from regenerating. Not surprisingly, native annuals, such as fiddleneck tarweed (*Amsinckia* spp.), benefited. The situation was exacerbated



Meadow-steppe and hawthorn thickets form a mosaic on a north-facing slope adjacent to cropland.

PHOTO: DAVID M. SKINNER

with the arrival of exotic annuals, such as medusahead (*Taeniatherum caput-medusae*) and cheatgrass (*Bromus tectorum*), that were preadapted to the Palouse environment. The change in community dynamics that resulted led to a new stable state in Palouse vegetation. Instead of returning to predisturbance assemblages, disturbed Palouse Prairie communities—and steppe communities throughout the Intermountain West—now tend to remain in a stage dominated by exotic species, particularly annuals. Because many of these annuals are highly invasive and exclude other species, this change is accompanied by a decline in biological diversity.

This loss of diversity is particularly worrisome because Palouse meadow-steppe communities include several native forbs with limited geographic distributions, as a result of which they are globally rare. We have been studying the distribution and population dynamics of four of these: Palouse goldenweed (*Pyrrocoma* [= *Haplopappus*] *liatri-formis*), Palouse milk-vetch (*Astragalus arrectus*), Spalding's catchfly (*Silene spaldingii*), and Jessica's aster (*Symphotrichum* [= *Aster*] *jessicae*). Except for Spalding's catchfly, which has disjunct populations in western Montana, these species are known only from eastern Washington, central Washington, northern Idaho, and northeastern Oregon. Typical habitat for Palouse milkvetch, Palouse goldenweed, and Spalding's catchfly consists of communities dominated by perennial bunchgrasses, with or without a shrub component, whereas Jessica's aster, a rhizomatous species that forms large clones, can occur in bunchgrass/shrub communities, riparian zones, or margins of dry coniferous forest.

We searched for these species within potential habitat (uncultivated areas supporting meadow-steppe) in eastern Whitman County (T 14-18 N, R 43-45 E) between June 29 and September 6, 2005. In addition, for each of these species, two sites that were ranked as being in moderate or good condition (by us or according to element occurrence reports in the Washington Department of Natural Resources Natural Heritage Program plants database) were selected for intensive sampling to obtain data on population dynamics and associated species.

Palouse goldenweed, Palouse milkvetch, and Spalding's catchfly were quite closely associated with native bunchgrasses. We found these grasses in all our plots containing Spalding's catchfly and in most of the plots containing Palouse milkvetch and Palouse goldenweed. In addition, bunchgrass cover tended to be high and annual grass density tended to be low in the immediate vicinity of individual Palouse milkvetch and Spalding's catchfly plants.

All the meadow-steppe communities we visited contained alien annuals. The annual grass ventenata (*Ventenata dubia*) is particularly worrisome, because, although it is a relative

newcomer to the Palouse, it has become widespread and common in meadow-steppe remnants. In his extensive studies of eastern Washington's meadow-steppe communities, which was published in 1970, Daubenmire did not mention this species, nor did he report it at three cemeteries where we found that it is now abundant.

We didn't find any evidence that annuals are restricted to recently disturbed microsites (such as rodent runways or burrow entrances), or that assemblages of annuals represent a transient stage in the process of returning to a meadow-steppe climax. Instead, annuals establish themselves even in spots that do not appear to have been disturbed recently, and once they arrive in a community they perpetuate themselves at the expense of native perennials. These observations suggest that disturbed meadow steppe communities are not seral stages that will spontaneously return to a climax of perennial grasses and forbs.

For these reasons, we recommend a multi-pronged approach to conserving Palouse Prairie, involving the following: protection of privately-owned remnants through voluntary conservation easements; judicious, carefully targeted integrated pest management of invasive species; propagation of native species grown from local seed; and use of agricultural practices that minimize threats from invasive species. This approach requires a high level of commitment to education about the loss of Palouse Prairie, cooperation among different interest groups in the region, and additional research. For more information, go to <www.palouseprairie.org>.

Acknowledgement: We would like to thank the Washington Native Plant Society for funding this project.

References:

- Daubenmire, R. F. 1970. Steppe vegetation of Washington. Washington Agricultural Experiment Station, Washington State University, Technical Bulletin 62.
- Daubenmire, R. 1975. Plant succession on abandoned fields, and fire influences, in a steppe area in southeastern Washington. Northwest Science 49:36-48.
- Franklin, J. F. and C. T. Dyrness. 1988. Natural Vegetation of Oregon and Washington. Oregon State University Press [Corvallis].
- Mack, R. N. 1981. The invasion of *Bromus tectorum* L. into western North America: An ecological chronicle. Agroecosystems 7:145-165.
- Mack, R. N. 1986. Plant invasion into the Intermountain West: A case history. Pp. 191-213 in H. A. Mooney and J. A. Drake, eds. Ecology of Biological Invasions of North America and Hawaii. Ecological Studies Vol. 58. Springer-Verlag, New York. >

New 2007 State Noxious Weed List

by Jane Wentworth, WNPS Central Puget Sound Chapter

Each year the Washington State Noxious Weed Control Board holds a public hearing in November regarding amendments to the state weed list for the following year. Three species have been added to the 2007 weed list, officially Chapter 16-750 of the Washington Administrative Code (WAC) and ratified in January (see right).

No changes were made to the Class A category. Changes in designation areas (where a species is required by law to be controlled), occurred for orange hawkweed (*Hieracium aurantiacum*), and for houndstongue (*Cynoglossum officinale*), both currently class B weeds.

For more information about these species, details about the weed list, and control designations in specific regions within the state, see the State Weed Board's web site at http://www.nwcb.wa.gov/weed_list/weed_list.htm.

Palouse continued from previous page

Mack, R. N. and J. N. Thompson. 1982. Evolution in steppe with few large, hooved mammals. *American Naturalist* 119:757-773.

Tausch, R. J, P. E. Wigand, and J. W. Burkhardt. 1993. Viewpoint: Plant community thresholds, multiple steady states, and multiple successional pathways: Legacy of the Quaternary? *Journal of Range Management* 46:439-447.

Weaver, J. E. 1917. A study of the vegetation of southeastern Washington and adjacent Idaho. *University Studies* 17(1). Lincoln, NB.

Weddell, B. J. 2001. Fire in steppe vegetation of the Northern Intermountain Region. *USDI Bureau of Land Management, Idaho State Office, Technical Bulletin* No. 01-14.

Weddell, B. J. 2002. *Conserving Living Natural Resources in the Context of a Changing World*. Cambridge University Press. Cambridge.

Youtie, B., J. Ponzetti, D. Salzer, and J. Soll. 1998. Controlling annual exotic grasses on relict grasslands (Oregon). *Restoration and Management Notes* 16:2.



Additions to the state weed list:

Class B:



Common fennel (*Foeniculum vulgare*) except the bulbing variety (var. *azoricum*). PHOTO: ALISON HALPERN



Spurge laurel (*Daphne laureola*). PHOTO: ALISON HALPERN

Class C:



Yellow archangel (*Lamium galeobdolon*). PHOTO: ALISON HALPERN



Noxious weed alert: *Soliva sessilis*

by Alison Halpern, Education Specialist, Washington State Noxious Weed Control Board and member of WNP South Sound Chapter

The Washington State Noxious Weed Control Board is seeking your help in locating populations of the Class A Noxious Weed *Soliva sessilis*, commonly known as lawnweed or carpet burweed. Native to South America, this small winter annual is a nuisance plant typically associated with managed recreational grass areas subject to heavy foot

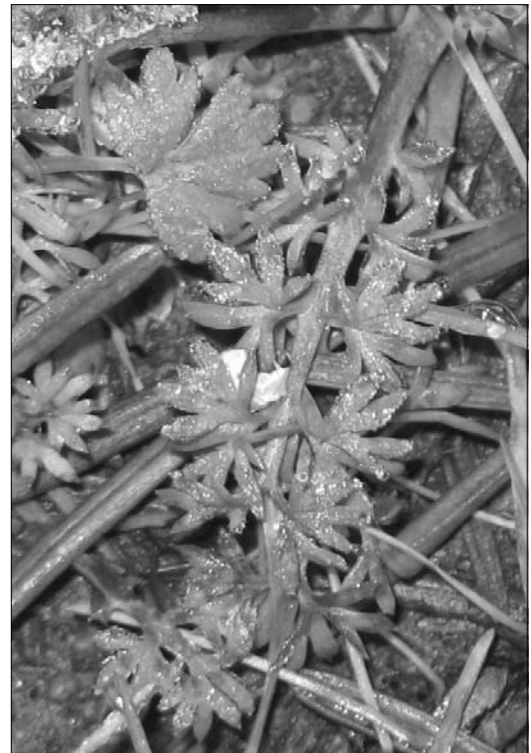


Soliva sessilis appears to be limited to disturbed turf areas in Washington, such as this one at Flowing Lakes Park in Snohomish County. PHOTO: ALISON HALPERN

traffic, including boat launches, public swim areas, golf courses, lawns, and walkways. *S. sessilis* produces painfully sharp, spiny achenes that puncture skin and tires and attach to clothing, camping gear, and fur, thereby facilitating its dispersal. In Washington State, *S. sessilis* appears to be limited to high-traffic recreational turf areas within parks and does not seem to be spreading into natural areas. For example, Dale Kolbe, the lead Habitat Steward for Snohomish County Parks and Recreation, has actively surveyed the adjacent natural areas at Flowing Lake Park, where *S. sessilis* has colonized the turf and gravel areas near the lake and playground, and she has not seen it growing in the deeply shaded coniferous park regions, most likely due to light limitation. However, in British Columbia, a recent survey has revealed that *S. sessilis* has been spreading into non-forested natural areas, including the rare Garry oak ecosystems and coastal bluffs. The plant is also dispersing between RV camps, probably as a result of its spiny seeds.



S. sessilis, a winter annual, growing under ice and snow in late December. PHOTO: ALISON HALPERN



The pinnately compound leaf of *S. sessilis* (center) and the palmately compound leaf of *Aphanes* (top left). PHOTO: ALISON HALPERN

We are trying to determine if it is spreading into natural areas here in Washington as well, and your help would be greatly appreciated.

Soliva sessilis is a low-growing plant in the Compositae family, typically only reaching a height of two inches. The basal rosette has a diameter of up to six inches, although the plants will likely be a lot smaller now because they began germinating in fall. Each plant has between one and

ten stems, and the leaves are pinnately divided. Flowering has been observed in British Columbia between March and July, with seed production beginning in May. The disc flowers lack rays and are inconspicuous, light green, and translucent. The small achenes are hard to see on the ground, but are very easy to feel! Early stages of *S. sessilis* can be confused with another non-native, low-growing



Early *S. sessilis* rosette in late December. Approximate diameter is 6 cm. PHOTO: ALISON HALPERN

plant: parsley-piert (*Aphanes* spp.); however, these leaves are palmately dissected and lack the ferny appearance of *S. sessilis*.

If you think you've come across *Soliva sessilis*, please contact the Washington State Noxious Weed Control board (noxiousweeds@agr.wa.gov; 360-902-2082) or your local county Noxious Weed Control Coordinator.



Plant lists available online

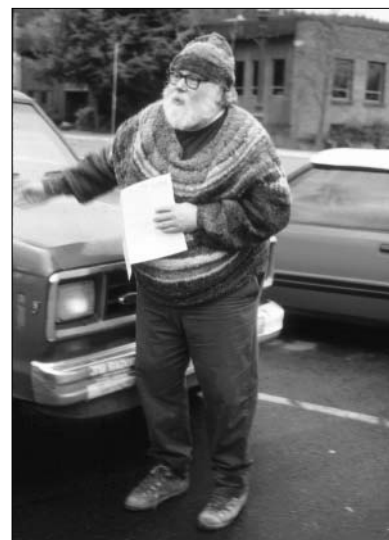
Before you set out on your next hike, check out the "Native Plant Lists" link at the WNPS web site www.wnps.org. Here you'll find plant lists from more than 500 sites throughout the state, compiled by some of the most respected names in Washington botany. Updates will be done once a year and members are invited to contribute their own lists. If you have suggestions about the plants lists or would like to contribute a plant list, please contact Don Knoke at donknoke@yahoo.com.



In memory of Harvey Manning: July 1925 – November 2006

by Fred Weinmann, WNPS Olympic Peninsula Chapter

Drive across the East Channel Bridge to Bellevue and continue east to Issaquah, preferably after dark. Look up and to the right. There in silhouette, is the heart of the Issaquah Alps; no lights on the high slopes of these mountains, just urban wilderness, exceeding 20,000 acres with over 150 miles of hiking trails. The Issaquah Alps were christened by Harvey in 1976. He spent the next 30 years cajoling public officials; recruiting, training and mentoring volunteers; writing letters and guidebooks; leading hikes; and establishing and leading a hiking club 2,500 members strong—all of this to support his vision of creating a fully protected urban wilderness accessible via metro bus. It happened, and Harvey was the physical and spiritual leader. But it is just a portion of his legacy. Multiply this many, many times. Harvey was a major advocate and leader in establishing the Alpine Lakes Wilderness Area and the North Cascades National Park, not to mention his role in establishing familiar wilderness areas across the state: William O. Douglas, Juniper Dunes, Indian Heaven, to name a few.



Harvey Manning. PHOTO: FRED WEINMANN

I first met Harvey vicariously via my 1966 edition of *100 Hikes in Western Washington*. This book not only introduced me to the mountain trails of Washington, but to the history and vision of wilderness protection in Washington. Via the introductions to 30-plus guidebooks over the next 40 years, Harvey would lay out (usually in association with Ira Spring), in his inimitable and entertaining way, the philosophy, goals and needed actions to protect wild Washington. It is amazing how much of what he suggested has been achieved and how much he had to do with it. These books stand today as the most accurate and readable accounts of the history of wilderness protection in Washington.

I met Harvey in person when I decided to update his 1981 checklist of plants of the Issaquah Alps, which he

titled *The Blooming of the Issaquah Alps*. Harvey was helpful and gracious, and even suggested that his name could be removed as an author.

In later hikes with Harvey I found that he was an extraordinarily careful observer. He kept track of every tree, shrub and wildflower he saw, and if he didn't know the name, he kept asking until he learned it—and he had a terrific memory. Hiking with him was never dull!

Harvey made another more specific contribution to the story of the Issaquah Alps and native plants. In about 1995 he pointed at two acres of Scot's broom low on the slopes of Cougar Mountain (a former placer mining and ball field area) and said to his daughter Penny something to the effect that the area would be a fine meadow to restore. This became the Cougar Mountain Meadow project developed by Penny Manning and supported over the years by WNPS funding and hundreds of volunteers.

Ed Alverson who helped Harvey with the original Issaquah Alps plant checklist sent this out to the WNPS list serve:

"...Newer WNPS members may not be fully aware of his conservation legacy. Certainly he played an important role in the establishment of North Cascades National Park and the Alpine Lakes Wilderness in the 1960s and 1970s, and his authorship of 100 Hikes type books was at its essence a strategy to promote wilderness conservation.

But his most important legacy, in my estimation, was the promotion of what he called the Wilderness Within, that is, conservation of the natural areas as part of the urban and suburban matrix in which most of us live...His 1986 memoir, Walking the Beach to Bellingham is one of my favorite books (and mine too—FW). In it, he promoted the importance of what he called low adventure—forget gaining a little knowledge about a lot and strive to learn a lot about a little." (My favorite Harveyism is "go slower to make the world bigger."—FW)

Ed is right on!

The Seattle Post-Intelligencer published an article after his death in November of 2006. It is well worth looking up for further information on Harvey's character and his life. I particularly liked the comment by Rick McGuire, former president of the Alpine Lakes Protection Society and Harvey's long time friend: *"I feel like one of the great cedars of the North Cascades has fallen. It's hard to sum up a man like Harvey. He was a force of nature."*

To say Harvey was eccentric is to say the sun is slightly warm. He never did give up his manual typewriter; during thousands of nights in the mountains he never slept in a tent (the only reason people needed tents was if they were

afraid of the dark, or doing something they didn't want anybody to see); he never switched from wool to fleece, and eschewed Gore-Tex.

With all Harvey did for conservation in the last 40 years, we sometimes forget that he was also a lead author for the first edition of the classic northwest climbing manual, *The Freedom of the Hills*. As a long-term supporter of the Washington Native Plant Society, Harvey's life is an inspiration for all of us. His work was instrumental in the protection of literally hundreds of thousands of acres of native plant habitat. We will miss his energy, his effervescence, the power of his pen, and even his curmudgeonly and cantankerous nature. Washington's wild lands and our Society will never have a better friend and there will never be anybody quite like Harvey Manning.



Memorial: Ann Lennartz

by Heidi Bohan, WNPS Central Puget Sound Chapter

Ann Lennartz was a true friend of the native plant community, and a rare patron of the people who shared her vision of recreating native plant communities in the Seattle urban area and beyond. When she left us on September 6, after quietly fighting a long, personal illness, she left behind a



Ann Lennartz. PHOTO: THE STARFLOWER FOUNDATION

legacy of literally millions of native plants growing in Seattle parks and school grounds, and a community of people who were touched by her generosity, intelligence and great thoughtfulness.

Born and raised in the Great Plains, an Iowa girl from a wealthy family in a small town, Ann was intensely private about her personal life. What was important to Ann was not who she was, but what she could do to help. Ann did

not want public recognition, but she valued the opinion of her peers for her work, and was very proud of the projects she so dedicated herself to. I write this article for her peers, in order to dedicate a moment of our time, in memory of her enormous gift, to encourage ongoing stewardship of her legacy, and, yes, to give Ann the recognition she so deserves for her great, personal outpouring.

Inspired by the prairie restorations in her homelands, her first major project in Seattle was the creation of the Seward Park native plant garden. It was there that she began her long and respectful relationship with Seattle Parks and began to work with Charles Anderson, landscape architect, who openly acknowledges her role in his successful career.

As a community member she threw herself into the restoration of a landfill now known as Genesee Meadows. At this time, in 1997, she formed an organization to support this work, the Starflower Foundation, and began to generously provide resources for the reconstruction and restoration of other Seattle parks, including: Pritchard Beach and Roxhill Bog which involved massive earthwork to recreate the original wetlands; the reintroduction of native plants to the historic Colman Park; and the creation of meadow mound trials at Greg Davis Park. She continued to generously support other organized efforts large and small, throughout the state. In 1998 Ann helped to found the Seattle Urban Nature Project which has surveyed and mapped vegetation and habitat on public lands in Seattle that remain naturalized. All of these projects serve as models for other regions and organizations.

Ann took great pride in the fact that, when showing others her work here, she took people not to constructed environmental learning centers, but to living, breathing learning environments—forests returning to lands that had been, only years before, ball fields and landfills. One of the great examples of how Ann viewed learning is “the tree that fell in Lake Washington” at Colman Park. Ann and others fought hard to successfully preserve this single fallen willow that had breached that precious barrier between shore and water. In the years that followed, this willow became the heart of a restored shoreline filled with native shrubs and accompanying wildlife. Literally thousands of people have learned about the value of a fallen tree as they observe first-hand, without signage, the sunning turtles, the feeding muskrat, and the waterfowl that use this important resource in their barren landscape. To Ann this was the ideal learning model, everything else needed to simply support this opportunity.

Ann also took great, secret delight, like a school girl, when she unleashed some particular native seed back into the

community forevermore. That seed-bank is her legacy, lying underneath the acres of public lands that are now growing back to forest under her care. They are also the insurance of a future for this native plant community. That seed-bank cost Ann a small fortune, roughly \$10 million over 10 years during her work through Starflower Foundation. That money was used to increase plant diversity and push natural plant succession in Seattle public parks, which now serve as models for others. It was also used to experiment with restoration techniques, to increase the availability of plant diversity through local nursery suppliers, and to educate thousands of children and adults.

It occurred to me, while I visited and photographed her many projects for her memorial, that she nurtured another seed-bank with her work. That seed-bank includes people like me, people who thrived under her support, were allowed to experiment, explore, study, and have thoughtful conversation with her. And we are another legacy, another form of insurance for the future of native plants in the Seattle area, with the knowledge and experience we carry. I invite everyone who was touched by her to keep this in mind as we pay watchful attention to these precious restored places in Seattle.

Ann was a most unlikely crusader, often found in some corner of a project in frumpy clothes, reading glasses dangling from around her neck, sunhat and bucket of weeding tools in hand, and great smile on her face. She saw the future in the time frame of 500 years, and she did what she could to ensure that a healthy native plant community will be thriving in urban Seattle when that day comes. And she leaves us as stewards of that hope.

Heidi Bohan worked with Ann at Starflower Foundation for nearly nine years, assisting with the design and implementation of school gardens, and development of education programs and materials, including, soon to be released, native plant and weed identification cards and habitat education activities for children.



Sign up for WNPS list serve

Want to get involved with discussions about native plants and related issues with other WNPS members? The WNPS list serve offers announcements, news, and discussion relevant to native plants and the WNPS membership.

How to sign up: Email wnps@wnps.org and ask Catherine Hovanic to be added to the list. You must be a current WNPS member. Catherine will forward your request to our list provider who will add you to the list and email you with instructions for posting and unsubscribing.

Information for contributors

Members and others are invited to submit material for publication in *Douglasia*. Articles, book reviews, poetry, photography or illustrations are welcome. All materials submitted should relate to the study of Washington's native plants. Acceptance will be based on space and appropriateness, and materials are subject to copyediting (substantive editing with author's permission). Contributors are reminded that the *Douglasia* audience ranges from professional botanist to the interested enthusiast. For more information about how to contribute, see http://www.wnps.org/douglasia/douglasia_contributors.html.

Email submissions to: gatrellk@msn.com

Deadlines for submission

Deadline	Issue	Members receive approximately
January 1	Winter	March 1
March 1	Spring	May 1
June 1	Summer	August 1
September 1	Fall	November 1

Advertise in *Douglasia*

See http://www.wnps.org/douglasia/douglasia_advertising.html

Welcome new members

9/20/2006 through 1/18/2007

Central Puget Sound Chapter

Kim Alessi, Sandra Banducci, Gloria Bryce, Peggy Campbell, Sharon Chastain, Heather Chubb, Rebecca Foster, Carolle Foucault, Nona Ganz, Stephen Hale, Anne Hayden, Cynthia Hickey, Barbara Klee, Brian Kurtz and Family, Bridget Lamp, Heidi Marks, Melissa Martin, Robert Mast, Peggy Miller, Janice M. Murphy, Cort Odekirk, Spencer Orman, Marnie Frisch, Marielle Orman, Jason Paulus, Cory and Robert Peterson, Kara Pomeroy, Dennis Sampson, Thomas Tokarz, Leslie and Thomas Tregillus, Laetitia Ward, Lynn Watkins, Russ Wiecking and Laura Fox, Joanne Wood, Renee Ziemann

Central Washington Chapter

Cragg Bryant, D.M. Clampitt, Lily Cohan

Columbia Basin Chapter

Linda Andrews, Robert D. Belden, Wilma Benz, Jon and Mary Campbell, Traci Degerman, Gregory Park, Ann L. Stewart, Susan Weiler

Koma Kulshan Chapter

E.V. (Emme) Bethke, Karen Chervenock-Gift of Erin Chervenock, James Kling, Walt Roberts

Northeast Chapter

Rebecca Brown, Kathleen Dellwo, Dave Plemons, Wayne and Joann Rounseville, Vicki Sola

Olympic Chapter

Lois Bellamy, Ann and John Daly, Mary Ann Kirby-Gift of Jane Wentworth, Rick and Liz Klawitter, Ellen Larkin, Jessica Salmonson, Debra Teachout, Hank and Raedell Warren

Salal Chapter

Jean Ferrier, Lindsay Huettman

San Juan Islands Chapter

Carolyn Fiscus

Suksdorfia Chapter

Wayne and Carol Chandler, Susan Kirkbride, Larry and Maureen Stauffer, Marilyn Walther

South Sound Chapter

Joanne Babic, Patricia G. Fetterly, Joyce Hamrick-Gift of Karen Nansel, David M. Hansen, Lee Hiatt, Carri Marschner, Sharon Parsons, Joy and Paul Polston-Barnes, Megan Wilkerson

At Large

Janet Dorrow, Michael Grieneisen

WNPS Donors in 2006 – *Thank you for your generosity*

As 2006 came to a close, we looked back on a year of many visible accomplishments. Native plants made the news in newspapers around the state thanks to a monthly column by Sarah Gage spotlighting favorite species. Our native plant calendar brought beautiful photographs to members and friends. The limited issue print of the threatened yellow lady's slipper (*Cypripedium parviflorum Salisb.*) found its way onto the walls of major donors to the Society. All of our donors make these new undertakings possible, as well as less visible research and conservation efforts on behalf of native plants. Thanks go to everyone on the list below for their financial support in 2006.

WNPS Patrons

\$5,000 or more

Dr. Linda S. Park
Peg Pearson

WNPS Sustaining Members

\$1,000 or more

Anonymous
Catherine Conolly and Rodney Brown
Thomas Gedosch
Maren Gribskov and Prentis Sumrall
Hull Family Charitable Fund
Scott Moore
Fred and Ann Weinmann

WNPS Best Friends

\$500-\$999

Elizabeth Binney
Scott and Susie Blackstock
Nancy Chapman
Patricia Cirone
Lars Crabo and Carolyn Coughlin
Bob and Judy Fisher
Jan Gombotz
Chet Hinman
JKU Foundation
Don and Ruth Knoke
Jim and Jo Ann Roberts
Claudia Tidball

WNPS Special Friends

\$250-\$499

Gail Adams
Lois Bellamy
Dr. Julia Bent
Kristine and Todd Biernacki
Dale Blum
Carolyn Wren Clark

David Darrow
Barbara Downward
Jim Evans
Anne Goslin
Clayton Haberman
Margaret Guttersen
Catherine Hovanic and Bill Brookreson
Tiffany Linbo
Walter Lockwood
Anthony L. Longo
Wendy McClure
Seattle Garden Club
Sound Native Plants
Cynthia Wayburn
Julia Welch

WNPS Special Friends

\$100-\$249

Sally Allwardt
Ted Alway
Gene and Barbara Anderson
Anonymous
Anonymous
Clayton Antieau and Naomi Chechowitz
Kristine Ashcraft
Shannon Bailey
Jennifer Bauer
Martha Beard
Arlene Bell
Chrys Bertolotto
Karen Binkhorst
Allan Borden and Norma Kirmmse
Stewart Boyd
Marilyn Boysen
Renagene Brady
Ted Branchflower
Eileen Bryant
Susan Buis and Bill Moody
Mary Carlson
Rebecca and Martin Chaney
Sharon Chastain
Anne Chiller
Joan Christ and Family
Shirley Lou Christenson
Steven Clark
Michelle Connor and Mark Levensky
Dr. and Mrs. Thomas Corrigan
Allen Davenport
Patty Davis
Gary DeWitt

Barbara Dietrich
Janelle Downs and Randy Kirkham
James Duemmel
Sylvia Duryee
Christopher J. Earle
Virginia Lee Ellis
Bill and Alison Engle
Rebecca Foster
Donna Franklin
Donna Frostholt
Raelene Gold
Ursula Haigh
Stephen Hale
Al Hanners and Family
Virginia Hassinger
Elise Hemenway
Amy Hiatt
Joanne and Jim Hicken
Marie Hitchman
Bill Horder
Peggy and Rick Hudson
Max and Jan Hunt
Vikki Jackson and Jeff Brown
Donna Kelleher
Thomas Kelly
Lotchie Kerch
Robert Knowles
Emily Kozie
Art Kruckeberg
Cara Lane
Sally Lawrence
Cynthia Lenz
Ed and Kay Lester
Mary C. Lines
Maxine L. Linial
Susan Holmes Lipsky
Jack Longino and Nalini Nadkarni
Dean Longrie
Louise and Ralph Luce
Stan Lundgaard
Carol and Tor MacIlroy
Michelle Margroff and Jim Ellingboe
Phillip Marks
John Martin
David May
William McGee
Marcia Mellinger and Alex McAlvay
Ruth Ann Mikels and Family
Libby Mills

WNPS Donors in 2006 – *Thank you for your generosity*

Dan and Pat Montague
Christine Mustelier
Louisa Nishitani
Jennifer O'Connor and Family
Margaret Padelford
Glen Pickus
George Pinyuh
Douglas and Shirley Post
Oliver Press
Marcia Rivers-Smith
Joanne Roberts
Ann Scheerer
Trish Shanley
Michael Silence
Michael Skinner
Allan L. Smith
Barbara and Philip Smith
Gary Smith and Jean Yee
Douglas Stevens
Margaret K. Stout
Dorothy Swarts
Robert S. Swenson
Joanne Tallman
Joan Thomas
Earnest L. Thompson
George Thornton and Lee Miller
Margaret and David Thouless
Monica Van der Vieren
Vashon-Maury Island Land Trust
Chiaki Weatherford
Russ Wiecking and Laura Fox
Wildlands, Inc.
Joellen Winter
Joanne Wood
Geoffrey Wright
Alan Yen
Renee Ziemann

WNPS Friends \$50– \$99

Steve Acker
Caren Adams
Richard and Katherine Ambrose
Lyle Anderson
Rebecca Arenson
Mildred Arnot
Patt Ayers
Suzanne Bagshaw
Sharon Baker
Jim Barnard

Kathryn A. Beck
William and Julieanne Belknap
Debbie and Carl Berkowitz
Mary Ladell Black
Dale Blanchard and Family
James L. Boone and Family
Victoria and John Browne Jr.
Carol Burton
Judy Chapman
Don and Pat Clifford
Lily Cohan
Brianne Cohen
Tina Cohen
Melissa Coiley and Tom Meyer
Landry Corkery
Pam David
Susan Dawson and Family
Troy Deady
Amy Dearborn
Richard Decker
Annette deKnijf
Wendy and Marc Descamp
John Dixon
Marilyn Dobbins
Dr. and Mrs. Jack Docter
Dean Dougherty
Patricia Duke
Beth Duncan
Peter Dunwiddie and Family
Jeanne Eisenberg
Michael Elliott and Family
Tom Elliott and Kat Strathmann
Heidi Engle and Rob Sandelin
Kern Ewing
Sylvia Feder
Howard L. Ferguson
Rick and Alice Feser
Jane Finn
Judith Finn
Brenda M.L. Fong
Joan Frazee
Joel and Nani Fung
David Giblin
Charles and Nancy Givens
Pat Gossler
David Hagen and Karen Wayenberg
Heather Coles Halabisky
Cleveland Hall
Jim Hansen
Barbara Heineck

Catherine Helten
Jan Hersey
Ann Hirschi
Lisa Hoffman and Bill Driscoll
Deanna Hofmann
Connie Hoge
Ellen Homan
Deborah Horn
R.K. Howell
Alice Huber
Janice Humeniuk
Jessie and Lennart Johanson
James Johnson
Sharon P. Johnson
Norma J. Kageyama
Jonathan Kemp
Donna Kostka
Dr. N.W. and Phyllis Kronenberg
The Kuebel Family
John A. Lee
Bob Lemon and Annie Prevost
Ed Lisowski
Cherie and Dick Little
J.A. Littooy
Dixie and Dave Llewellyn
Larry Loftis
Michael and Adelaide Loges
John Lombard
Ruth Lowry
Betsy Lyons
Jim Lyons
George Macomber and Family
Emily and Len Mandelbaum
Ed Markham
Gina Massoni
Marjorie McCormack
Jim Mcferson and Carol McCormick
Elliott Menashe
Eric Miller
Carol Anne Modena and Dana Roberts
Mary Monfort
Rita Moore
Sarah Moore and Mathew Root
Melinda Mueller
Miller Myers

WNPS Donors in 2006 – *Thank you for your generosity*

Dr. Richard Old
Reba Olsen
Susan A. Olson
Joann Otto
Patricia Otto
Dan Paquette
Marjorie Parker
Tad Parrington
Kraig Peck and Donna Caditz
Ruth S. Peterson
Cary Peterson and Mully Mullally
Molly Porter
Terry Pottmeyer
Ann Pougiales
Lynn and Norm Prewitt
Lynda Priddy
Pam Pritzl
Kim Ramsey and Steve Gregory
Kathleen Richardson
Darby Ringer
Steve Richmond
Stella Rolph
Rhys Roth
Pam Roy
Steven Roy
Julie Russillo
Richard and Nancy Rust
Hans J. Sauter and Family
Tom Sawyer
Wilbur Saxton and Family
Katherine Schloemer
Lynn Schueler
Kathy Schuler and Family
Fayla Schwartz
Dean and Diane Schwickerath
Gilbert Seely
David Selk and Teresa O'Connor
Sasha and Tim Shaw
Mary Ann Simmons
Leni Skarin
Catherine A. Sloan
Grace Smith
Louise Smith
Randy Smith and Sharon Metcalf
Christine Sophos
Fred Stark
Anne Steele
William Steil and Family
James and Mary Stephenson
Suzy Stockton

Linda Storm
James B. Strong
Prudence Stoudt-McRae and Family
Sue Summers and Alan Ferguson
Ken Swedberg
Ted Thomas
Jon Thompson and Marty Thayer
Anna Thurston
Norman Tjaden
Brenda Tom
Judy M. Tomassene
Karen Tripson
Dennis Tully and Family
Mark Turner
Sally Turner
Lucy Uhlig
Nathan Ulrich
Floie Vane
Pete Van Voast
Tim Wahl
Janet Wall
Jean Warren
Everett Weakley
Gary Wilburn
David Wilderman and Jeanne Ponzetti
David Williams
Veronica Wisniewski
Pamela Yorks and Stephen West
Patricia Youngman
Elsie L. Zarnowitz
Debbie Zook

Other Donors

Mary Bicknell
Leif Bjorseth
John P. Cordell and Family
Sharon Dunn
Vade Donaldson and Stephanie Kellner
Shelley Evans
Elizabeth Fiene
Cora Gardiner
Thelma Gilmur
Chris Hedrick and Family
Michael and Jana Hobbs
Julia Jose
Sue Kacskos
Leach Garden Friends
Evelyn Lester
Heidi Marks
Carol Meadowcroft

Susan Robinson
Virginia Vose
Steve Wang

A special thanks to all who have given through their workplace.*

Caren J. Crandell
Kari S. Gilje
Terry D. Krugel
Anthony L. Longo
Elizabeth McManus

Donations to the Endowment

W. Phelps Freeborn
Laura B. Maier
Brian Miller
Scott Moore
Peg Pearson

In Memory of Ann Lennartz

Jane Wentworth

In Memory of Wilbur Saxton

A. Lorraine Anderson
Audrey Blair
Joanne Booth
Paul and Mary Ferrari
Dorothy Giannobile
Hans Loechelt-Yoshioka
Michael and Adelaide Loges
Alan and Anna Waltar
Whidbey Island Native Plant Stewards
John Wiskerchen

*We wish to apologize to any who have generously given to WNPS at the workplace, but are not listed. We do not receive the names of all people who have given, nor do we always receive information on the amount given. This varies with workplace giving campaigns and donor preferences. We also may not receive information on workplace pledges until six months or a year after the initial pledge. We do receive your donated pledges through Earth Share of Washington in quarterly payments. In fiscal year 2006 we received \$12,407.44. A very big thank-you for your generous support through the workplace!

Giving at the workplace



Workplace giving is a means by which you can donate to WNPS and other charitable organizations through payroll pledges. Giving through automatic payroll deductions makes it easy to give. The Washington Native Plant Society is a member of Earth Share of Washington, a federation of leading environmental and conservation organizations. Many companies sponsor Earth Share of Washington giving campaigns through which you can designate a donation to WNPS. Federal, Washington State (including UW and WSU), King County, City of Seattle and other govern-

mental agencies also sponsor giving campaigns that include WNPS as a charitable option. For a complete list of participating companies check out the Earth Share of Washington web site at www.esw.org. If your company has only a United Way giving campaign, you can still contribute to WNPS by designating Washington Native Plant Society in the "specific organization" or "donor option" section of the United Way pledge form.



Membership in WNPS entitles you to:

- A subscription to *Douglasia*
- Special price on Occasional Papers, studies of native plants
- A chapter newsletter with local news and information
- Field trips to see wildflowers and unusual plant communities
- Classes by expert botanists
- Annual study weekends
- Conservation and restoration activities
- The fellowship of plant lovers from all over the State of Washington

Join the Washington Native Plant Society

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ E-mail _____

☐ New Membership ☐ Renewal ☐ Change of Address

Membership Category (Membership includes one chapter affiliation)

☐ \$15 Budget	☐ \$50 WNPS Friend
☐ \$25 Individual Membership	☐ \$100 WNPS Special Friend
☐ \$35 Family Membership	☐ \$500 WNPS Best Friend
☐ \$50 Club/Institution	☐ \$1,000 WNPS Sustaining Member
☐ \$5 Each additional chapter	☐ \$5,000 WNPS Patron
	☐ Donation \$ _____

Chapter Affiliation

☐ Central Puget Sound (Seattle)	☐ Palouse (Pullman, inactive)
☐ Central Washington (Yakima/Ellensburg)	☐ Salal (Skagit Valley)
☐ Columbia Basin (TriCities)	☐ San Juan
☐ Koma Kulshan (Bellingham)	☐ South Sound (Olympia)
☐ Northeastern Washington (Spokane)	☐ Suksdorfia (Vancouver, WA, inactive)
☐ Okanogan	☐ Wenatchee Valley
☐ Olympic Peninsula	☐ At-Large

Make checks payable to:
WNPS
6310 NE 74th Street, Suite 215E
Seattle, WA 98115

Washington Native Plant Society Directory

Officers & Elected Directors

(Director's term follows name)

President

Dean Longrie 2004-2007
20611 NE 245th Ave
Battle Ground, WA 98604-8803
(360) 687-5148
deanpl@aol.com

Immediate Past President

Fred Weinmann 2006-2009
242 Cedar View Dr.
Port Townsend, WA 98368
(360) 379-0986
fweinmann@cablespeed.com

Vice-President

Dr. Elizabeth Binney 2005-2008
PO Box 4398
Bellingham, WA 98227-4398
(360) 671-2317
atsi2@fidalgo.net

Treasurer

Scott Moore 2005-2008
7009 23rd Ave NW
Seattle, WA 98117-5630
(206) 784-4471
skirpus@msn.com

Secretary

Linda Storm, 2006-2009
3744 SW Ida St.
Seattle, WA 98126-3242
(206) 935-0419
lstorm61@aol.com

Jane Wentworth 2004-2007
8901 Woodbank Dr NE
Bainbridge Island, WA 98110-3486
(206) 842-7178
janew@ckwentworth.com

Walt Lockwood 2006-2009
9007 Shearwater Rd.
Bellingham, WA 98230-5705
(360) 371-3161
siggielock@comcast.net

Brian Miller 2004-2007
4210 E. Woolard Ct
Colbert, WA 99005
(509) 238-3130
bcmiller@earthlink.net

Mike Marsh 2006-2007
3434 14th Ave W
Seattle, WA 98119-1613
(206) 281-8976
swamp@blarg.net

Standing Committees

Conservation

John Browne, Jr, *Chair*
20929 111th Ave SW
Vashon, WA 98070
206-463-9641
jb4juddcreek@webtv.net

Mike Marsh
swamp@blarg.net

Janelle Downs
sagejld@aol.com

George Wooten
george232@centurytel.net

Linda Storm
lstorm61@aol.com
Susan Alaynick
s_alaynick@hotmail.com
Wendy McClure
wendymac3@earthlink.net

Education

Fayla Schwartz, *Chair*
10032 31st Ave NE
Seattle WA 98125-7706
(425) 388-9451 w
fschwartz@everettcc.edu

Diane Doss
Ddoss@spsc.ccc.edu

Joan Frazee
jfrazee@fs.fed.us

Russell Link
linkrel@dfw.wa.gov

Toni Fitzgerald
tjfitz@wsu.edu

Plant Inventory and Research

Pam Camp, *Chair*
1014 Westmorland
Wenatchee, WA 98801
(509) 663-5491
Pamela_Camp@or.blm.gov

Dr. Peter Dunwiddie
pdunwiddie@tnc.org

Lou Messmer
lmessmer@reachone.com

Dr. Sarah Reichard
reichard@u.washington.edu

Dr. Elizabeth Binney
atsi2@fidalgo.net

Terry Lillybridge
tlillybridge@fs.fed.us

Editorial Board

Chair, Kathy Murray
kandmmurray@verizon.net

Dr. Art Kruckeberg
ark@u.washington.edu

Richard Robohm
robohm1@comcast.net

Joe Arnett
joseph.arnett@wadnr.gov

David Giblin
dgiblin@u.washington.edu

Fred Weinmann
fweinmann@cablespeed.com

Linda Storm
lstorm61@aol.com

Anna Thurston
a.thurston@worldnet.att.net

Fundraising

Chair, Vacant
Elizabeth Binney
atsi2@fidalgo.net

Tom Johnson
tfjohns@u.washington.edu

Dr. Steve Link
Slink@tricity.wsu.edu

Helen Roberts
robertsh@earthlink.net

Anna Thurston
a.thurston@worldnet.att.net

Douglasia Editor Emeritus

Dr. Art Kruckeberg (ARK/Doug)
(206) 546-1281 h
(206) 543-1976 w
ark@u.washington.edu

Earth Share Representative

Peg Pearson
5749 29th Ave NE
Seattle, WA 98105-5521
(206) 524-5564

Chapter Chairs

Central Puget Sound

Chrys Bertolotto
13230 6th Ave NW
Seattle, WA 98177-4011
(206) 962-2669
chrysb@peoplepc.com

Central Washington

Charles Hawkins
106 E 17th Ave
Ellensburg, WA 98926-2518
(509) 962-2669
hawkinsc@cwu.edu

Columbia Basin

Robert J. Fortman
70301 2410 PR SE
Kennewick, WA 99337-7739
(509) 582-0105
robertjfortman@aol.com

Koma Kulshan

Mark Turner
2414 C Street
Bellingham, WA 98225
(360) 671-6851
mark@turnerphotographics.com

Northeast Washington

Lawton Fox
2027 E 18th Ave
Spokane, WA 99203-3748
(509) 534-6682
lawton@spokanefalls.edu

Okanogan

Denny O'Callaghan
PO Box 129
Winthrop, WA 98862-0129
(509) 996-3515
dmocallaghan@methownet.com

Olympic Peninsula

Wendy McClure, *Co-chair*
PO Box 395
Poulsbo, WA 98370-0395
(360) 779-3820
wendymac3@earthlink.net

Sharon Schlentner, *Co-chair*
581 Saddle Dr.
Port Townsend, WA 98368--8905
(360) 379-9810
sschlentner@waypoint.com

Salal

Susan Alaynick
13625 11th Ave NE
Marysville, WA 98271-6717
(360) 659-8792
s_alaynick@hotmail.com

Send changes to:

Washington Native Plant Society
6310 NE 74th St, Suite 215 E
Seattle, WA 98115-8171
(206) 527-3210 or
1 (888) 288-8022
wnps@wnps.org

Catherine Hovanik
Administrator
wnps@wnps.org

Linda Ellis
Office & Program Assistant
lindaellis@wnps.org

www.wnps.org



San Juan Islands

Terry Domico
c/o PUGET SOUND BioSURVEY
PO Box 2012
Friday Harbor, WA 98250-2012
(360) 378-3105
biosurvey@mail.com
naturalist@australiainmail.com

South Sound

Anna Thurston
227 Contra Costa Ave
Fircrest, WA 98466
(253) 566-3342
a.thurston@worldnet.att.net

Wenatchee Valley

Julie Sanderson
942 Highland Dr.
Wenatchee, WA 98801-3408
(509) 548-4384
sanderson@genext.net

Palouse

inactive

Suksdorfia

inactive



The Washington Native Plant Society is an affiliate of Earth Share of Washington.

Douglasia

c/o Washington Native Plant Society
6310 NE 74th Street, Suite 215E
Seattle, WA 98115



Nonprofit Org.

US Postage

P A I D

Seattle, WA

Permit No. 3558