



# Koma Kulshan Chapter WNPS Newsletter

## Inside this issue

p1 President's Corner  
p1 Plant Quest  
p2 Bigleaf Maple  
p2 Photo contest  
p3 Programs  
p3 Field Trips

## Find Koma Kulshan Online

**Website:** [www.wnpskoma.org](http://www.wnpskoma.org)  
**Facebook:** WNPSKomaKulshan

## Burke Herbarium PlantQuest

Interested in helping out the Burke Herbarium? Its PlantQuest Image Project is working to fill plant distribution gaps throughout the state. The Herbarium has posted lists of plants for each county, including Whatcom, that likely grow there but may not have been photographed yet.

You can find PDFs or Excel files by county at <https://biology.burke.washington.edu/herbarium/imagecollection/plantquest.php>. You'll need to follow the link on the page to register in order to contribute photographs.

To assist with identification, you can use the Herbarium's digital identification key: <https://biology.burke.washington.edu/herbarium/imagecollection/keys.php> The key lets you input details on habitat, flower and leaf characteristics, time of year, and other factors to narrow down candidates.

## Winter (January, February, March) 2022

### President's Corner

by Lyle Anderson

#### Going Into the New Year on A Cheerful Note

Those who know me also know that I can often voice the pessimistic side on most any issue. So, to start 2022 I thought I would turn over a new leaf (temporarily, anyway, and pun intended). Thus, this list of some of the things I am thankful for. Admittedly, this requires using a part of my brain that is rarely used and difficult to access.

- Winter Windstorms. The seed (another pun) for and what inspired the theme of this message is that I was out walking a few days ago, and the recent stormy weather had sent lots of Douglas-fir boughs to the forest floor. Perfect for collecting and putting on the mantle and a few other places for the holidays. So, thanks to the wind for providing those (and not sending trees down on the house).
- Koma Kulshan Chapter of WNPS. Who knew there were people so interested and willing to share their knowledge and excitement about native plants? I certainly didn't before I signed up for a hike 15 or so years ago just to get some exercise and meet some new people. Books are essential, but people introducing people to native plants is the real spark. Because of some those generous people (thank you!) I got sucked into learning about trees and shrubs and...well, if you're reading this you know what can happen.
- Pollinators. I've got a bunch of native plants surrounding my house. I see an abundance of butterflies and bumblebees, birds (okay the feeders might have something to do with that) and bugs and insects galore, both winged and crawling that are here because of those plants. It really is like being in some enchanted realm to walk among them (not so much right now, of course).
- Science and Scientists. Science and technology combined with 8 billion people have enabled a lot of the problems we are facing; we read daily about climate change/global warming, pollution; the list seems endless. At the same time, I am encouraged by the intelligence and dedication of meteorologists, geologists, biologists, etc., and yes, botanists, here and all over the world speaking truth to power.
- WNPS State Office. I didn't really think much about it before being in this position, but the people who help support the dozen local chapters throughout the state are a dedicated staff doing their best to advance the goals of the society while balancing the diverse desires and needs of its members. Also, Douglasia! Study weekend! Botany Washington! <http://wnps.org>!
- Native Plant Nurseries, Conservation Districts and WNPS Chapter Plant Sales. I suppose, back in the day, if you wanted a native plant in your yard, you either had to go out and collect plants/cuttings/seeds and learn how to propagate them or buy property that still had natives on it. The native plants in my yard are there thanks to nature putting them there (rarely) or buying them from the sources listed above. Still, one must use good botanical sense to make sure they thrive (I'm working on it!)
- Apps and Field Guides. Being a dedicated and lazy amateur (oxymoron?), I largely rely on pictures to help me identify a plant. So, thanks to books and websites for help (email me, or anyone on our board, if you would like suggestions). Beyond that, the monumental publication (the 1973 original and 2018 update) *Flora of the Pacific Northwest*, still popularly referred to as "Hitchcock", is a must-have for positive ID, and, for photos, its associated website (in my mind, anyway) <https://biology.burke.washington.edu/herbarium/imagecollection.php>

If you have native plant testimonials or experiences you would like to share, regardless of your time or expertise in studying native plants, please share them ([lyleand2@comcast.net](mailto:lyleand2@comcast.net)) and you might find yourself published in a future edition of the Koma Kulshan Chapter WNPS newsletter.

## Koma Kulshan Chapter WNPS Newsletter

### Bigleaf Maple Decline Tied to Changing Climate

by Jim Kling

Bigleaf maple (*Acer macrophyllum*) is a woodland staple in the Pacific Northwest. It grows best where there is a lot of soil moisture, such as river terraces, floodplains, seepage sites, and of course temperate rainforests. Their stumps often resprout after logging to form thick, new stands. It is one of the few trees that can support epiphytes within urban and suburban forests. It provides habitat for wildlife and is an important cultural species.

But like some other native trees, it is declining. Reports in 2011 detailed deformed and wilted leaves, crown dieback, and tree mortality. Initially, researchers suspected changes in nutrient cycling, introduction of toxins, or shifts in the climate beyond the tree's ability to adapt. Other reports had suggested that these stressors lead to reduced growth in forests overall and several individual species.

To better understand what is happening to Bigleaf maples, researchers at the University of Washington, the US Forest Service, and the Washington Department of Natural Resources examined their distribution in space and over time in urban, suburban, and wildland forests in Western Washington. They collected samples from the soil and foliage to determine the levels of specific elements, and also looked for various pathogens. They extracted stem cores to determine spatial and temporal patterns of healthy and declining trees.

The researchers found no associations between decline and tree age or size, plant pathogens, or insects. That suggested that the cause of the decline was not biologic. Instead, greater decline occurred in regions with higher mean and maximum temperatures. Previous researchers had shown that heightened temperatures are linked to declines in other trees species.

There was also more decline among trees near paved surfaces and development, and in the presence of the metal chromium in the soil and arsenic in the foliage. Both elements are linked to industry. Though the researchers couldn't tie these toxins directly to tree growth, they did find higher levels of the element silicon in stems that didn't show signs of decline. Silicon has long been known to benefit plants under drought and high-salinity conditions, though the specific mechanism isn't known. It is even being considered as an additive to improve the yield in crops under stress.

Core samples showed high levels of growth variation in Bigleaf maples since 2011. Where it was growing alongside Douglas Fir, the researchers found that Bigleaf maple grew at lower rates. Bigleaf maple growth rates were also lowest in years with the hotter, dryer, summers.

"We provide evidence that warm temperatures and local site conditions, particularly hotter urban sites that are associated with high concentrations of Cr and As, are predisposing *A. macrophyllum* to decline, even in the absence of a detectable biotic agent. Given the lack of detected biotic agents, abiotic factors could be directly causing mortality to *A. macrophyllum*, and could also sufficiently weaken trees, making them vulnerable to opportunistic biotic agents that might otherwise not cause mortality," the authors wrote.

The new study conflicts with earlier work that simulated future climate conditions and predicted that Bigleaf maple's adaptive ability would counter warming temperatures. The authors of that study suggested that Bigleaf maple may adapt to changes more easily because it can reproduce quickly after disturbances, and because its seeds can travel long distances. However, other studies have shown that Bigleaf maple is declining in other parts of its range. All of this suggests that the vulnerability of Bigleaf maples to heightened temperatures and drought conditions may have been under-estimated.

Source: Jacob Betzen, et al. Bigleaf maple, *Acer macrophyllum* Pursh, decline in western Washington, USA. *Forest Ecology and Management*. Published online September 16, 2021.

## WNPS Photo Contest

It's time for the Washington Native Plant Society (WNPS) photo contest, open now for entries through the end of January. Top photos will appear in the 2023 WNPS calendar (and it's not too late to purchase the 2022 WNPS calendar: <https://www.wnps.org/store/>).

Last year's entries included 168 photos from 39 photographers, so there is plenty of room for more entries. The contest is only open to WNPS members, and the photos must be of Washington natives.

In a lengthy blog post for WNPS, our very own Mark Turner offered some suggestions for photographing native plants. Here are a few of his suggestions, but much more can be found on the original post: <https://www.wnps.org/blog/enter-the-wnps-photo-contest>.

The photo should have an emotional impact, and it helps to have a clear subject and a strong focal point in the photo. Illumination by sunrise or sunset, or the lighting following a storm, can boost impact.

When it comes to composition, the subject should dominate the photo frame, with little blank space around it. Judges note that photo subjects are often too small, or centered in the frame with few other details to complement it. Lines and diagonals in the landscape might emphasize the subject by pointing to it. A sharp focus on a plant or flower and a soft background, or strong color contrasts, give the photo a feeling of depth.

Camera height is an oft-overlooked element. The standard shot comes from eye level, but consider a bird's or lizard's eye view, or the height of a blossom, or even below it. Also watch the edges of the frame. Is the flower or plant fully contained? Are there distracting elements that could be shifted or moved?

## Winter (January, February, March)

### Chapter Meetings

Unfortunately, due to ongoing COVID-19 concerns, the decision has been made to continue the virtual format of Koma Kulshan meetings through the winter of 2022. To register for Zoom meetings, go to the state events website (<http://wnps.org/events>) and click on Koma Kulshan events. There you can also find other Zoom webinars sponsored by WNPS. Meetings begin 7:00 PM.

#### January 19: Getting Native Plants into the Ground: Lessons learned from 30 years of habitat restoration projects in Whatcom County

Current methods related to planting native plants and habitat restoration in Whatcom County will be presented. Case studies, best management practices, education methods, and lessons learned will feature riparian restoration sites in Whatcom County and urban public sites in Bellingham's Happy Valley neighborhood. Bring your native plant restoration questions or observations you'd like to share!

Darrell Gray (M.S.) has been Project Manager for the Nooksack Salmon Enhancement Association (NSEA) for over 25 years. He leads NSEA's instream and riparian restoration projects with designs, permits, and implementations. He coordinates NSEA's native plant nursery, restoration crews, project funding, as well as federal, state, county, and landowner partnerships.

Wendy Scherrer (M.Ed.), retired environmental planner, educator, and NSEA Executive Director, has been dedicated to the use of environmental education as a tool to address development, restoration, and sustainability issues relating to watershed health since 1977. She was a co-author on the curriculum guide *Celebrating Wildflowers: An educator's guide to the appreciation and conservation of native plants of Washington*, which was a collaboration between WNPS and North Cascades Institute.

#### February 16: Floristics in the Alpine Zone of the Cascade-Sierran Axis: Is there a Continuum?

Climate change has resulted in an elevational retreat of endemic alpine flora and has further reduced the already limited habitats of the alpine zone. Graduate student LiAnn Noonan's thesis project aims to evaluate whether endemic alpine flora between the southern Cascades and the northern Sierra Nevada are capable of migration to determine potential areas of conservational priority.

LiAnn is originally from Oahu. She earned her bachelor's degree from Western Washington University (WWU) in the spring of 2019. She is currently a graduate student in the Biology Department at WWU, under the guidance of botanist Michael Williams. She writes: "I dabbled in marine biology since it was closer to home, but my heart was set on herbaria and its application in research as soon as I started collections in systematic botany at Western. I'm stoked to present what I have so far and value your questions and feedback. Mahalo!"

#### March 16: Climate-wise Landscaping with Northwestern Native Plants

There are many reasons to choose native plants for use in your home landscape. Let's talk about some of the more attractive and readily available species that help us build climate resilience around our homes. Brenda Cunningham is a biologist and artist. Before retiring she worked for the National Park Service, the Washington Department of Fish & Wildlife and Skagit Land Trust. She now manages the Washington Native Plant Society's display garden in Mount Vernon and is a Master Gardener.

### Field Trips/Work Parties

Washington state COVID safety guidelines continue to affect our field trips. In general, face masks are required outdoors only for large gatherings.

#### January 22, Saturday, 9:00 AM to 12 Noon: Invasive plant removal in Maritime Heritage Park

Bellingham Parks and Recreation is making some changes to trails in Maritime Heritage Park. We will be working to remove invasive species, especially blackberry and bittersweet, in the areas where the changes are occurring. This workday is also preparation for the March 12 workday. The city will provide tools, but bring your own gloves and favorite tools if you want. Meet at 9:00 at the park pavilion on Holly Street next to Whatcom Creek. Dress warmly and wear your rain gear if it is wet weather, and bring water and any snacks that you may need. For further information and to RSVP contact Janet Murray at [jfaymurray@gmail.com](mailto:jfaymurray@gmail.com)

#### February 5, Saturday, 9:00 am to 12:00 pm: Winter Trees and Shrubs in Whatcom Falls Park

In 2019 and 2021 WNPS and Bellingham Parks and Recreation jointly presented a six-week stewardship class. Join 2019 graduate John Bremer and Koma Kulshan Stewardship Committee Chair Allan Richardson on a walk through Whatcom Falls Park woodlands and wetlands. Most of our common lowland tree and shrub species are found in the Park. Explore two decades of restoration challenges and progress. Meet at 9:00 at St. Clair Park, located at the end of St. Clair Street south of Alabama Street in Bellingham. We will walk down the stairs to Woburn Street, across Whatcom Creek and back up to the lower bridge below the falls, with a tour of the new Cemetery Creek restoration. Group limited to twelve; please rsvp. For details or to rsvp: [johnpaulbremer@gmail.com](mailto:johnpaulbremer@gmail.com).

#### March 12, Saturday, 9:00 AM to 12 Noon: Planting party at Maritime Heritage Park

Our chapter stewardship committee is working with Bellingham Parks and Recreation to rejuvenate and expand the Native Plant Trail at Maritime Heritage Park. We will be clearing brush, preparing the ground, and planting a number of new plants to go with new (and relocated) signs. The city will provide tools, but bring your own gloves and favorite tools to be sure. Meet at 9:00 at the park pavilion on Holly Street next to Whatcom Creek. Dress for the weather and getting dirty, and bring water and any snacks that you may need. For further information and to RSVP contact Allan Richardson at [asrichardson5@gmail.com](mailto:asrichardson5@gmail.com).

## Koma Kulshan Board

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## Koma Kulshan Chapter WNPS Newsletter

If you would like to join WNPS

Please return the membership application form to:  
Washington Native Plant Society  
6310 NE 74th St., Suite 215E  
Seattle, WA 98115

Please make checks payable to WNPS  
(outside US add \$5 to dues)

or join online at <https://www.wnps.org>

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Koma Kulshan Chapter    Total Enclosed: \_\_\_\_\_

Membership Category:

\$20 Budget (Senior/Student)  
\$40 Individual  
\$55 Family  
\$75 Club/Institution

The Koma Kulshan chapter of WNPS is dedicated to the preservation and study of native plants and vegetation of Washington State and the education of the public to the values of native flora and its habitat.

WNPS -- Koma Kulshan Chapter  
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