



# Koma Kulshan Chapter

## WNPS Newsletter

### Inside this Issue

- p1 President's Corner
- p1 Study Weekend
- p1-2 Plant Research Roundup
- p3 Programs
- p4 Field Trips

### Find Koma Kulshan online

**website:** [www.wnpskoma.org](http://www.wnpskoma.org)  
**Facebook:** WPNKomaKulshan

### Study Weekend 2015 Islands in the Sky

The Koma Kulshan chapter is hosting Study Weekend this year, featuring Mount Baker, Heather Meadows, and the North Cascades. To register, refer to the summer issue of *Douglasia* or go to [www.wnps.org](http://www.wnps.org)

Highlights will include talks:

- David Giblin, "Revising Flora of the Pacific Northwest"
- Walt Lockwood, "The Splendor of Mount Baker"
- Andy MacKinnon, "Mycoheterotrophs: The Fungal Connection"

and over 30 hikes, and an option to "just hang out" each day.

Deadline: July 25. \$70 registration, optional \$130 for lodging/meals

## Summer (July, August, September) 2015

### President's Corner

Ellen Kuhlmann

*(Barry is teaching a field class in the Yukon this summer, expect to hear all about it this fall.)*

In just a few weeks, our chapter will be hosting the WNPS Study Weekend, when we will indulge our passion for plants to the fullest, the joy magnified by sharing it with a 100+ like-minded enthusiasts. Study weekends I've attended seem to go by in the blink of an eye, in a whirl of beauty, laughter, good food, and satisfied tiredness. The last time our chapter hosted this event, rain and black bears competed with the wildflowers for top billing. What will be the defining moments of this year's event? Whether our hot, dry weather continues unabated or we get some rain and cooler weather, one thing I know –we will have moments of discovery, camaraderie, and hilarity during **Islands in the Sky: A North Cascades Adventure August 14 to 16.**

If you haven't signed up yet, there is still time to join us at Mt. Baker. Either send in your registration form in the Summer issue of *Douglasia* or sign up online at [www.wnps.org](http://www.wnps.org). If you are already on board, get ready for a heck of a good time. In mid-July we'll be starting to get ready to roll out the welcome mat, figuring out details like signs to direct people where to go, nametags, and other stuff. We'll need volunteers to help with registration, directing people, and general event organization. The saying "many hands make light work," is old, but oh so true. If you have a bit of extra time to give we'll be happy to have your aid. I've never regretted going to a Study Weekend, and think those of you going this year will feel the same. Hope to see you in August.

### Plant Research Roundup (Cont'd on p 2)

Adapted from news releases from the University of California, Davis, the Botanical Society of America, and Duke University.

**Disappearing wildflowers:** According to a study from the University of California, Davis, native wildflowers in California are losing species diversity after multiple years of drier winters. The work, published in the Proceedings of the National Academy of Sciences, provides the first direct evidence of climate change impacts in the state's grassland communities.

## Plant Research Roundup (Cont'd from p 1)

Researchers conducted 15 years of monitoring about 80 sampling plots at McLaughlin Reserve, part of UC Davis' Natural Reserve System. "Our study shows that 15 years of warmer and drier winters are creating a direct loss of native wildflowers in some of California's grasslands," said lead author Susan Harrison, a professor in the Department of Environmental Science and Policy. "Such diversity losses may foreshadow larger-scale extinctions, especially in regions that are becoming increasingly dry." Dormant seeds may rescue species, but if California's drought intensifies in the future, as expected, the seeds may never get a chance.

**Genome sampling of herbarium specimens:** When groups of plants show very little genetic differences, a large genomic data set for large numbers of samples is necessary to understand the evolutionary processes within these groups and to accurately assess species diversity. To really get at the important and exciting question in biology, it is often necessary to have not only "big data" but also "big sampling." With recent, rapid advances in next-generation sequencing technologies, large genomic data sets are becoming increasingly obtainable. The bottleneck of many studies has now shifted to the number of species and individuals of each species that can be included in the study. That's a particular challenge when working with species-rich groups. Going to the field and collecting fresh plant material for hundreds of species is often not feasible.

In the June issue of *Applications in Plant Sciences*, James Beck of Wichita State University and John Semple, at the University of Waterloo, described a method to couple existing herbarium samples with next-generation sequencing technologies to better understand plant diversity.

Beck and Semple tested the method on the goldenrods (genus *Solidago*), a notoriously difficult group of plants in the sunflower family. They extracted DNA from almost 100 herbarium specimens collected between 1970 and 2010. They collected sufficient data for 98% of samples, data which identified genetic groups that frequently matched morphologically defined species.

**The evolutionary origins of eastern forests:** Plant hunters traveling between North America and Asia in the 1800s noticed a bizarre pattern: collections they brought back from China and Japan were strikingly similar in their leaves, flowers and fruits to plants from southern Appalachia. A new analysis of DNA studies shows that over half of all the trees and shrubs in the southern Appalachians can trace their ancestry to relatives a half a world away in Asia. Most of the rest likely arose within North America, the researchers say.

"Our southern Appalachian tree species split from their closest relatives in eastern Asia at many different times over the last 65 million years," said lead author Paul Manos, a biology professor at Duke University. "It didn't happen all at once."

The temperate forests of the southern Appalachians that stretch southeast to northeast from Georgia to Virginia are home to more tree species than anywhere in North America. Species range from spruces, firs, birches, oaks and maples to magnolias, hickories, hollies and hemlocks.

Fossil evidence suggests that similar forests were once widespread throughout the Northern Hemisphere, when Asia, Europe and North America were still joined in the supercontinent called Laurasia. But when the climate of Laurasia began to cool, only the forest remnants in what are now China, Japan, Appalachia and small parts of Europe survived the periods of climate change and glaciation that followed.

By combining results from molecular studies of more than 250 species of trees and shrubs in the southern Appalachians, the researchers pinpointed when and where each species diverged. Overall, the results suggest that half of the trees and shrubs in eastern North America can trace their relatives to eastern Asia.

The alternate-leaved dogwood, for example, split from its closest relatives in eastern Asia some 22 million years ago. That was about when much of Laurasia's deciduous forests started to die out, after which the continents were only intermittently connected by land bridges -- shallow parts of the ocean floor that were exposed when ice age glaciers tied up vast amounts of ocean water and sea levels were lower.

A quarter of the tree species we see in the southern Appalachians today likely arose within eastern North America, such as hawthorns and oaks. Most of the rest arose in western North America and eastern Mexico and relatively few in Europe, the researchers say.

## Summer (July, August, September) 2015

### Chapter Meetings

Meetings begin at 7 pm in the Sustainable Living Center education room at the ReStore (2309 Meridian St.). The entrance is off the back alley and the SLC is upstairs. For more information, call Vikki Jackson at (360) 319-6988.

September 16th: TBD

### Field Trips

#### July 23, Thursday, 8 am to 5 pm: Alpine Cryptograms

Join the Licheneers on an alpine cryptogam field trip. We will meet at 8:00 am in the Safeway parking lot (in the Sunset Square shopping center on Mt. Baker Highway Rte 542 I-5 exit 255) at the southeast end. We'll investigate the lichens (and other living things) along and off the Huntoon Point trail from Artist's Point (elev. 5100 feet). This is about 1/2 mile trail with modest (couple hundred feet) elevation gain. Bring sunscreen, a lunch and water, hand lens and, if you drive, make sure you have a forest parking permit (or we can stop in Glacier to get one). Depending on interest and daily heat (let's hope it cools down some), we'll return to Bellingham between 4 and 5 pm. Please contact Fred Rhoades at 733-9149 or [fmrhoades@comcast.net](mailto:fmrhoades@comcast.net), if you plan to come, so we'll wait for you

#### July 29, Wednesday, 7:30 am to 5 pm or later: Anderson and Watson Lakes

We will visit Anderson and Watson Lakes east of Baker Lake near the North Cascades National Park. These secluded subalpine lakes should not be very crowded mid week. In fact, we may not see any other hikers. Late July should be perfect for huckleberries this year, so bring an appetite for berries. It is a long drive to the trailhead with more than 12 miles on a gravel road. Meet to carpool at the west side Fairhaven park and ride at the south end of 32nd Street at 7:30 am. A Forest Service permit for parking will be necessary. To sign up contact Jim Davis at 360-296-5159 by phone or by email at [jimdavispc@comcast.net](mailto:jimdavispc@comcast.net).

#### August 23, Sunday, 7:30 am to 6 pm or later: South Twin Sisters Exploration

We will be returning to the area that we visited last year in the olivine-rich dunite rocks and related soils of the Twin Sisters Mt Range. The outing will begin at the south trailhead of the Elbow Lake Trail at the end of Forest Road 12 south of Mt Baker. At the 2500' level we will leave the trail and traverse into one of the two basins off to the west. One goal is to see Dwarf Blueberry (*V. caespitosum*) in fruit. The trip will be lead by Allan Richardson and Abe Lloyd. Meet at the Fairhaven Parkway park-and-ride (west side of I-5 at the south end of 32nd St) at 7:30 am to form carpools. Contact Allan at 733-5477 or [boghill@earthlink.net](mailto:boghill@earthlink.net) with any questions.

#### September 9, Wednesday, 8:30 am to 5 pm: Bogs of lower BC

Burn's Bog and the Richmond Nature Preserve are both extensive peat bogs just across the border in British Columbia. With excellent representations of Ericaceous vegetation we can expect to see some rare blueberries such as Bog Blueberry (*Vaccinium uliginosum*) and Velvet-leaf Blueberry (*V. myrtilloides*), as well as Highbush Blueberries (*V. corymbosum*) gone wild. The keen eyed may spot Lowbush Cranberry (*V. vitis-idaea*) and the tiny vines of Bog Cranberry (*V. oxycoccos*). Burn's Bog is the largest raised bog on the west coast of North America. Meet at the SE corner of the Sunset Square parking lot at 8:30 am. Bring your passport, a lunch, sandals or boots, and some gas money. Contact trip leader Abe Lloyd ([arcadianabe@yahoo.com](mailto:arcadianabe@yahoo.com)) if you have questions.

#### September 20, Sunday, 8 am to 6 pm: Ridley Creek Trail

Rediscover this recently reopened trail, which begins with a safe crossing of the Middle Fork Nooksack River, then wanders through damp woods before climbing to subalpine meadows at Mazama Park. The hike is 2.9 miles and 1800' elevation gain one-way. This trail was the route used in the Mount Baker Marathon in 1911 and in the recent round-trip run from Bellingham Bay to the summit of Baker. Meet at the southeast corner of Sunset Square parking lot out from the Safeway at 8 am. Contact Allan Richardson at 733-5477 or [boghill@earthlink.net](mailto:boghill@earthlink.net) to confirm.

**Koma Kulshan Board**

Elected Officers

**President**

Barry Wendling: (360) 671-8403  
wend1061@aol.com

**Vice President**

Abe Lloyd: (360) 303-1339  
arcadianabe@yahoo.com

**Secretary**

Katrina Poppe: (360) 303-7806  
katrinallee\_98@yahoo.com

**Newsletter Editor**

Jim Kling: (360) 671-1156  
jkling@gmail.com

**Treasurer**

Don Hicks: (360) 733-4815  
hicks46@netzero.net

Committees

**Program Chairs**

Katrina Poppe: (360) 303-7806  
Vikki Jackson: (360) 319-6988

**Field Trip Chair**

Allan Richardson: (360) 733-5477

**Backyard Habitat Liaison**

Molly Porter: (360) 714-0781

**Greenhouse Chair**

Lyle Anderson: (360) 527-3025

**State Board Representatives**

Mark Turner (at large)  
(360) 671-6851

**Koma Kulshan 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)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Postal Code: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Koma Kulshan Chapter      Total Enclosed: \_\_\_\_\_

**Membership Category:**

- \$20 Budget (Senior/Student)
- \$35 Individual
- \$45 Family
- \$65 Club/Institution
- \$50 WNPS Friend
- \$100 WNPS Special Friend
- \$500 WNPS Best Friend
- \$1000 WNPS Sustaining Member

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  
Newsletter Editor  
1610 Grant St.  
Bellingham, WA 98225