



# Koma Kulshan Chapter WNPS Newsletter

## Inside this issue

p1 President's Corner  
p1 Calendar Photo Contest  
p1-2 Research Roundup  
p3 Programs  
p3 Field Trips

## Find Koma Kulshan Online

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

## WNPS Photo Calendar entries

Deadline March 14, 2016.

Help us show the beauty of native plants and share information about their ecology and value in our WNPS Photo Calendar. It is sold by all chapters around the state as a fundraiser.

An award winning photo will also be selected for the Native Plant Appreciation Week poster. This poster is distributed electronically for download in the community to raise awareness of Native Plants around the State of Washington. Please send in up to 5 of your best photos.

Consider the following potential categories for your submission: Native plant portraits, native plants in their communities, native plants and people, native plant habitat protection or restoration, native plant gardens, or seasonal variation of native plants.

The photograph(s) must have been taken by the entrant. Even if you have submitted your photos before, please don't hesitate to send us some of your other great photos. The photo contest is open to all WNPS members. Both amateur and professional photographers may enter.

Rules and entry form:  
[http://www.wnps.org/photo\\_contest/index.html](http://www.wnps.org/photo_contest/index.html)

## Winter (January, February, March) 2016

### President's Corner

by Abe Lloyd

As we complete our journey around the sun and begin another orbit anew, I find it valuable to take a moment to reflect on the year's accomplishments. Hosting a successful Study Weekend for 114 members across the State is at the top of the list. Our Chapter has also led 19 field trips (thanks Allan), including an introductory plant walk series of 5 trips, which grows in popularity each year; we brought in some fantastic speakers for our monthly meetings (thanks Vikki and Katrina); and sold countless native plants at the Flora Fair (thanks Molly). We also partnered with many organizations to further our mission of appreciating and conserving native plants. For example, about a dozen chapter members volunteered as Meadow Stewards to monitor plant-pollinator relationships with the American Alps Legacy Project (thanks Jim Davis); we worked with the Whatcom Land trust to generate species lists on their new property acquisitions; and many of us spent evenings at the Pacific Northwest Herbarium identifying plants from Siberia (thanks Barry). These events were well attended thanks to promotion in our quarterly newsletter (thanks Jim Kling) and website (thanks Mark). We all can thank Barry Wendling for his tremendous leadership managing such a diverse portfolio of activities this year, and for the last 8 years.

I aim to continue in what has proven to be a successful model of leadership, and this year we can look forward to many of the same programs with some exciting opportunities on the horizon. Jim Davis will be serving as our new Vice President and Katrina and Angela continuing as Secretary and Treasurer, respectively. Last year Barry developed a new scholarship program, and he will chair a committee that will develop protocols and review applications. This year we can also look forward to getting involved in the WNPS Stewardship program, and possibly partnering with the University of Washington Botanic Garden Rare Care program to establish a local team that would help monitor and restore sensitive species. If you would like to get more involved with our chapter and either of these potential programs excite you, we will be looking for local program coordinators.

Happy New Year!  
-Abe

### Plant Research Round-Up (cont'd p2)

By Jim Kling

Adapted from press releases from Yale University and the University of Cambridge

#### Ancient People were Slow to Stop Foraging

An analysis of stone grinders from the Neolithic layers of the Haua Fteah cave in Libya, dating from 8,000-5,500 years ago, yields new evidence about people living at a time seen as a turning point in human exploitation of the environment, paving the way for rapid expansion in population.

The work focuses on palm-sized pebbles that were used as grinding tools by people living in North Africa around 7,000 years ago. Tiny specks of plant matter recently found on their surfaces may confirm theories that the transition between nomadic and settled lifestyles was gradual.

In a paper in *Quaternary International*, researchers show that surfaces of the grinders show plant use-wear and contain tiny residues of wild plants that date from a time when, in all likelihood, domesticated grains would have been available to the cave's inhabitants. This and other evidence suggests that domesticated varieties of grain were adopted late, by people who moved seasonally between naturally-available resources.

## Plant Research Round-Up (cont'd)

By comparing the characteristic shape and size of the starch found in the grinders' crevices to those in a reference collection of wild and domestic plant varieties collected in different North African and Southern European countries, the researchers determined that the residues most probably came from one of the species belonging to the *Cenchrinae* grasses.

Various species of the genus *Cenchrus* are still gathered today by several African groups when other resources are scarce. *Cenchrus* is prickly and its seed is laborious to extract. But it is highly nutritious and, especially in times of severe food shortage, a highly valuable resource.

"Haua Fteah is only a kilometer from the Mediterranean and close to well-established coastal routes, giving communities there access to commodities such as domesticated grain, or at least the possibility to cultivate them. Yet it seems that people living in the Jebel Akhdar region may well have made a strategic and deliberate choice not to adopt the new farming practices available to them, despite the promise of higher yields but, instead, to integrate them into their existing practices," says Giulio Lucarini, one of the researchers and an archeologist at the McDonald Institute for Archaeological Research.

Lucarini suggests that North African communities delayed their move to domesticated grains because it suited their highly mobile style of life. "Opting to exploit wild crops was a successful and low-risk strategy not to rely too heavily on a single resource, which might fail. It's an example of the English idiom of not putting all your eggs in one basket. Rather than being 'backward' in their thinking, these nomadic people were highly sophisticated in their pragmatism and deep understanding of plants, animals and climatic conditions," he says.

Evidence of the processing of wild plants at Haua Fteah challenges the notion that there was a sharp and final divide between nomadic lifestyles and more settled farming practices - and confirms recent theories that the adoption of domesticated species in North Africa was an addition to, rather than a replacement of, the exploitation of wild resources such as the native grasses that still grow wild at the site.

"Archaeologists talk about a 'Neolithic package' - made up of domestic plants and animals, tools and techniques - that transformed lifestyles. Our research suggests that what happened at Haua Fteah was that people opted for a mixed bag of old and new. The gathering of wild plants as well as the keeping of domestic sheep and goats chime with continued exploitation of other wild resources - such as land and sea snails - which were available on a seasonal basis with levels depending on shifts in climatic conditions," says Lucarini.

### Early Flowering Plants

The discovery of exceptionally well-preserved, tiny fossil seeds dating back to the Early Cretaceous corroborates that flowering plants were small opportunistic colonizers at that time, according to a new Yale-led study.

Angiosperms, or flowering plants, diversified during the Early Cretaceous, about 100 to 130 million years ago. Based on evidence from living and fossil plants, the earliest angiosperms are usually thought to have had small stature. New data from the fossil record presented here strongly support this notion, but also indicates key differences from modern flowering plants.

In the journal *Nature*, a team of researchers reports the discovery of small seed embryos -- less than 0.3 millimeters in size -- and their surrounding nutrient storage tissues in well-preserved seeds found in eastern North America and Portugal.

The study was led by Else Marie Friis, a professor emerita at the Swedish Museum of Natural History and a Bass Distinguished Visiting Professor at the Yale School of Forestry & Environmental Studies

Using synchrotron radiation X-ray tomographic microscopy -- which allows researchers to examine the internal features of delicate fossils in a non-destructive way -- the researchers analyzed more than 250 mature seeds from roughly 75 angiosperm taxa, some of which had the seed embryo fully preserved. The embryos were tiny (one-fourth to one-third of a millimeter), with excellent preservation of cell structure.

The minute size of the fossil embryos is consistent with the interpretation that seed dormancy allowed the earliest flowering plants to survive through harsh environmental conditions and colonize disturbance-prone habitats.

The discoveries support the concept that small embryos and seed dormancy are basic for flowering plants as a whole. However, the embryo to seed ratio in the fossil seeds is much smaller than in seeds of most living angiosperms and an order of magnitude smaller than has been hypothesized for the ancestral angiosperm embryo based on studies of living plants.

Seed dormancy would have ensured that the seeds of early angiosperms could survive until conditions for germination and seedling establishment were favorable, Friis said. However, the tiny embryo size and modest nutrient reserves would also have been a constraint on the rapidity with which these early angiosperms could have germinated in response to short-lived moisture availability.

"This is important because it suggests that while early angiosperms may have had many characteristics of modern weedy early colonizers, they would have been unable to match the very rapid germination of the many different kinds of angiosperm herbs that evolved later and that ultimately proved even more effective in exploiting ephemeral ecological opportunities," Friis said.

Added Crane: "This is the first time that we have had direct fossil evidence of the embryos of early angiosperms and how they compare with those of living plants. These observations have given us critical insights into the early part of the life cycle of early angiosperms, which is important for understanding the ecology of flowering plants during their emergence and dramatic radiation through the Early Cretaceous."

# Winter (January, February, March) 2016

## Chapter Meetings

Meetings begin at 7pm 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.

### January 20th: Wildfire resilient homes & landscapes: "Firewise" in NW Washington

Jenny Hinderman and Al Craney will provide an overview of the latest research on how to make your home and landscape more resilient to wildfire. Attendees will learn about efforts in the region to better prepare for wildfire in a changing environment and hear about free resources that are available to landowners. Jennifer is the Firewise Program Coordinator for the Skagit Conservation Districts. She also oversees the Firewise efforts of other Conservation Districts across the state, and helps to run a wildfire preparedness learning network. She graduated from Huxley College at Western Washington University. Al is a forester with the Skagit Conservation District with experience in natural resource management, fire, forest genetics, and forest ecology.

### February 17th: Examining the bee's knees

Heather Meadows is a well-renowned park at Mt. Baker Ski Resort with colorful flowers during the spring and summer. Bumblebees that call Heather Meadows home can be deemed responsible for the expanse of this vibrant beauty. A mystery, however, still stands regarding what species of plants the bumblebees target. To answer this question, Beth Skoff has been working with Jim Davis to examine known and unknown pollen samples from Heather Meadows, and Beth will be presenting her findings to us. Beth Skoff is currently a student at Western Washington University studying environmental science. She will be graduating with a Bachelor of Science degree in March 2016.

### March 16th: Forest Giants and Champion Trees

Are you captivated by old growth trees, with the unique ecosystems they harbor and the history they embody? James Luce will share with us stories and images of various old growth canopy research projects he has been involved in. He will also tell us about champion tree registries, managed by American Forests in the U.S. James Luce is a professional arborist that has been involved in canopy research projects. James will share some of his stories and findings from this work.

## Field Trips

### January 16th, Saturday, 9 AM to 2 PM, The Entish Code

If trees could talk, what would you ask them? With silent resilience, trees stand through fire, drought, wind, and snow. Both hard times and good leave their marks for centuries to follow, and this workshop will explore how to measure trees and decipher their Entish code. We will travel to Arcadia—the new property of Abe and Katrina—to estimate tree height and diameter, core, and examine stumps in a grove of mature trees. Tea and coffee provided. Address questions to trip leader Abe Lloyd ([arcadianabe@yahoo.com](mailto:arcadianabe@yahoo.com) 360 303-1339). Meet at 9AM at the Forks Restaurant Parking Lot (intersection of Northshore Rd and Y Rd).

### January 23rd, Saturday, 9 AM to 4 PM, Winter Twigs and Buds of Haner Peak, Stewart Mt

Even in winter, our deciduous trees and shrubs leave little clues that reveal their identity. This field trip will explore the twigs and buds along the route to Haner Peak, in the Lake Whatcom Park reconveyance land. Wear sturdy boots suitable for hiking on snow, and dress for the weather. We will eat lunch in a place with potential views of Lake Whatcom, the San Juan Islands, and Skagit County. Total elevation gain will be about 1500'. Meet at the main, upper Lake Whatcom Park trailhead just before the end of Northshore Road at 9 AM. Bob Lemon, Allan Richardson, and Abe Lloyd will lead this trip. Contact Abe at (360) 303-1339 or [arcadianabe@yahoo.com](mailto:arcadianabe@yahoo.com) if you have questions.

### February 21st, Sunday, 8 AM to 4 PM, Snowshoe outing

Don your snowshoes and head out to explore the conifers and bare branches along one of the side roads leading off from Mt. Baker Highway. The exact destination will depend on the snowpack, but it's likely to be somewhere between the Wells Creek Road (Nooksack Falls) and White Salmon Road below the ski area. We'll look at twigs, buds, and remaining fruits or seeds from last year. Dress for the weather, and bring lunch. Meet at 8 AM at the southeast corner of Sunset Square parking lot out from the Safeway. We might decide to stop for dinner on the way back down the road. Tell Mark Turner <[mark@turnerphotographics.com](mailto:mark@turnerphotographics.com)>, 360-671-6851, you're going.

### March 5th, Saturday, 9 AM to 4 PM: Annual Cryptogamic ramble

This year the cryptogam ramble will be along the trails of Sharpe Park on Fidalgo Island, Skagit County (trail map and info at <http://www.skagitcounty.net/Departments/ParksAndRecreation/parks/sharpe.htm>). There could be some wet and some relatively steep bits. Meet at the Fairhaven west side Park & Ride lot off 32nd Street at 9 AM or the trailhead at 10. Return between 4 and 5 PM. Contact trip leader Fred Rhoades at 733-9149 or [fmrhoades@comcast.net](mailto:fmrhoades@comcast.net) with questions. Bring a hand lens and lunch, and dress for the weather.

### March 12th, Saturday, 8 AM to 4 PM: Lily Lake trail.

We will be looking for early spring flowers on Blanchard Mountain. This will be a little more than six miles round trip with 1,200 foot altitude gain. A plant list is available on the WNPS website. Meet at the Fairhaven west-side Park & Ride (at end of 32nd St.) at 8 AM. To sign up or if you have questions contact Jim Duemmel at 733-3448 or [JimDuemmel@q.com](mailto:JimDuemmel@q.com).

### April 2nd, Saturday, 9 AM to 4 PM: Early Leaves and Flowers (maybe)

This will be a moderately easy early spring hike along Horseshoe Bend Trail and the lower portion of Canyon Creek Road just outside Glacier. Attractions include a heavily shaded riparian conifer forest along the river and a leafless spring deciduous forest along the road. This outing will be a real test of whether our very early flowering last year carries over to this year. Bring a lunch, rain gear (including pants), and shoes that are good for climbing around on bumpy terrain. Meet at 9 AM at the southeast corner of Sunset Square parking lot out from the Safeway. Contact Jim Davis at 360-296-5159 or [jimdavispcp@comcast.net](mailto:jimdavispcp@comcast.net) with questions or to RSVP.

## Koma Kulshan Board

### Elected Officers

#### **President**

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

#### **Vice President**

Jim Davis: (360) 296-5159  
jimdavispc@comcast.net

#### **Secretary**

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

#### **Newsletter Editor**

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

#### **Treasurer**

Angela Nelson: (360) 303-5628  
stormnw@comcast.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**

Jim Lyons: (360) 733-2480

#### **State Board Representatives**

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

## 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)

Name: _____	Membership Category:
Address: _____	\$20 Budget (Senior/Student)
City, State, Postal Code: _____	\$35 Individual
Phone: _____	\$45 Family
Email: _____	\$65 Club/Institution
Koma Kulshan Chapter	\$50 WNPS Friend
Total Enclosed: _____	\$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**  
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