

Recent changes to Washington's flora: new taxa, arrivals, taxonomy, and nomenclature



Corrigiola littoralis ssp. *littoralis*

David E. Giblin, Ph.D.
Collections Manager, University of Washington
Herbarium, BurkeMuseum

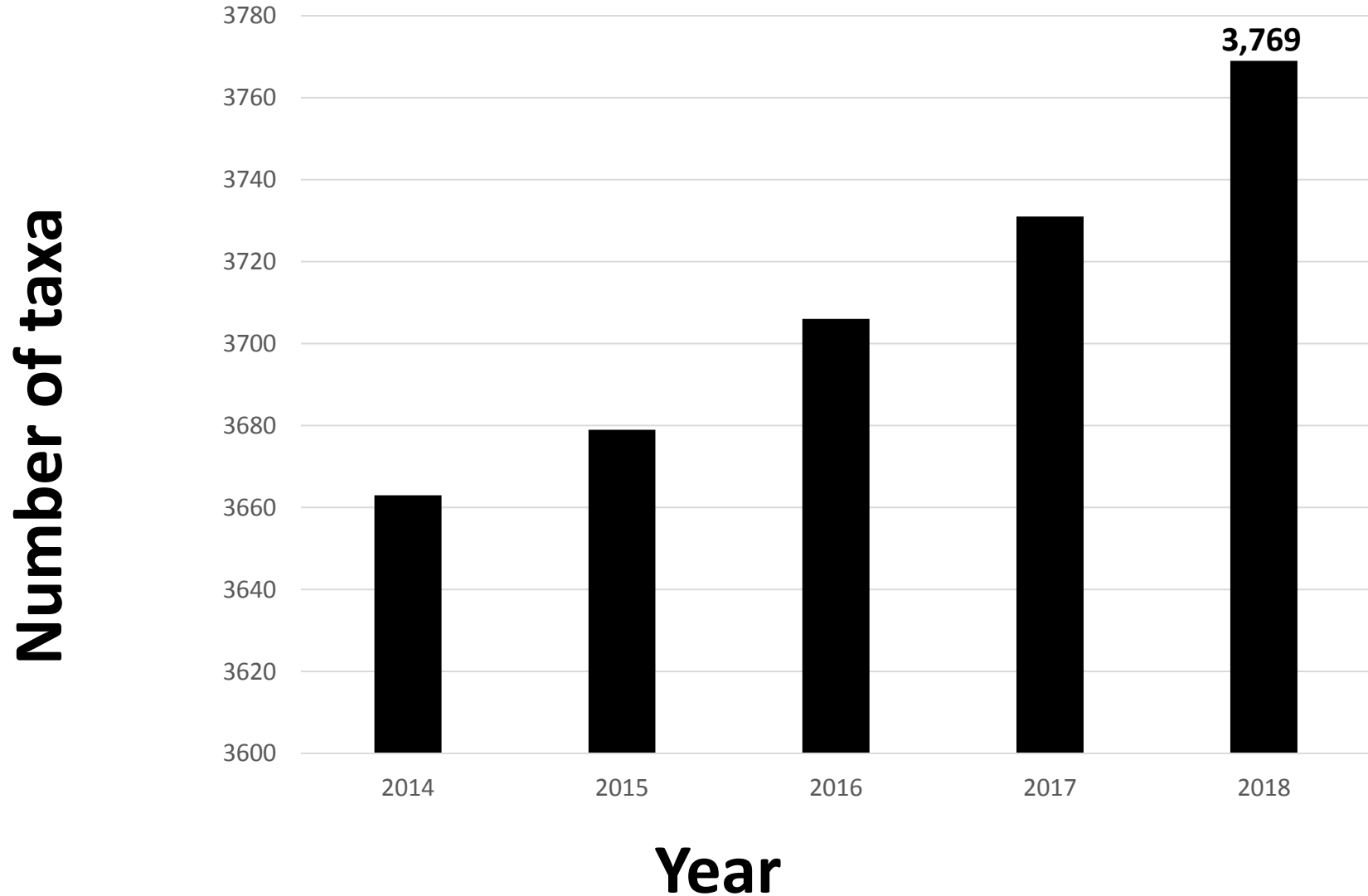
When will new *Flora* be ready?

The image shows the front cover of a book. The cover is a solid, dark blue color with a fine, woven texture. In the upper-middle section, the title "Flora of the Pacific Northwest" is printed in a gold-colored, serif font. The text is centered horizontally and slightly italicized.

Flora of the Pacific Northwest

Increase in Washington Vascular Plant Taxa 2014 - 2018

(Source: Washington Flora Checklist)



Sources of 2017 increases - 38 total

- Taxa new to science: 2 (5%)
- Taxonomic changes: 6 (16%)
- Newly documented native taxa: 8 (21%)
- Newly document nonnative taxa: 22 (58%)

New taxa

Ben Legler: *Phytokeys*. 2017. 81: 79-102

- *Sabulina basaltica* (Caryophyllaceae)
 - first collected in 1930 (J.W. Thompson)
- *Sabulina sororia*
 - first collected in 1939 (C.W. Muenscher)

New *Sabulina* spp.

S. basaltica

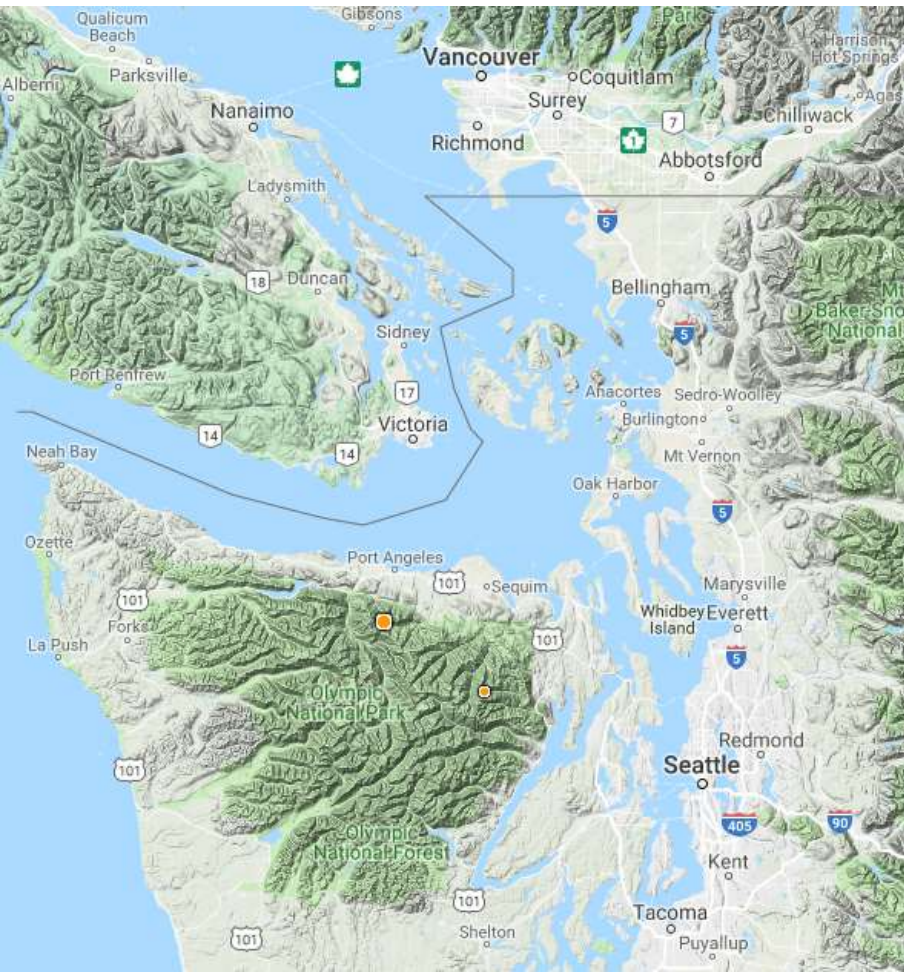
S. sororia

Photos by Ben Legler

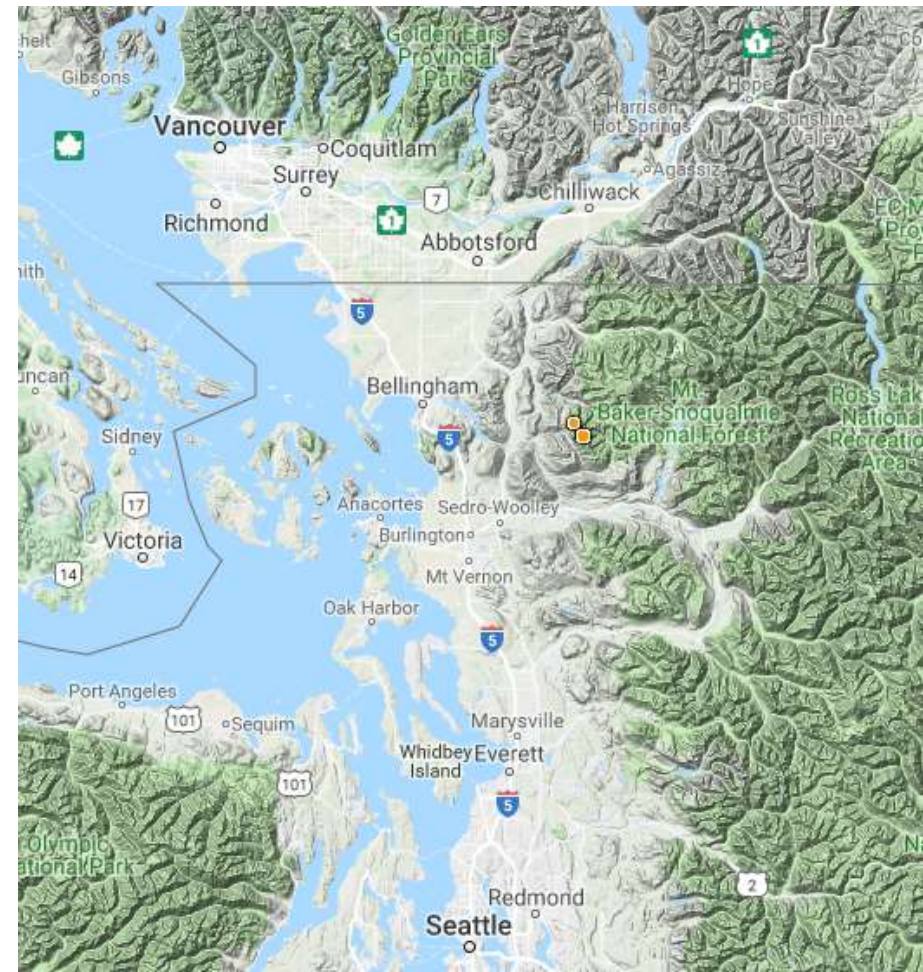


Sabulina spp. distributions

S. basaltica



S. sororia



Notable Newly Documented Native Taxa

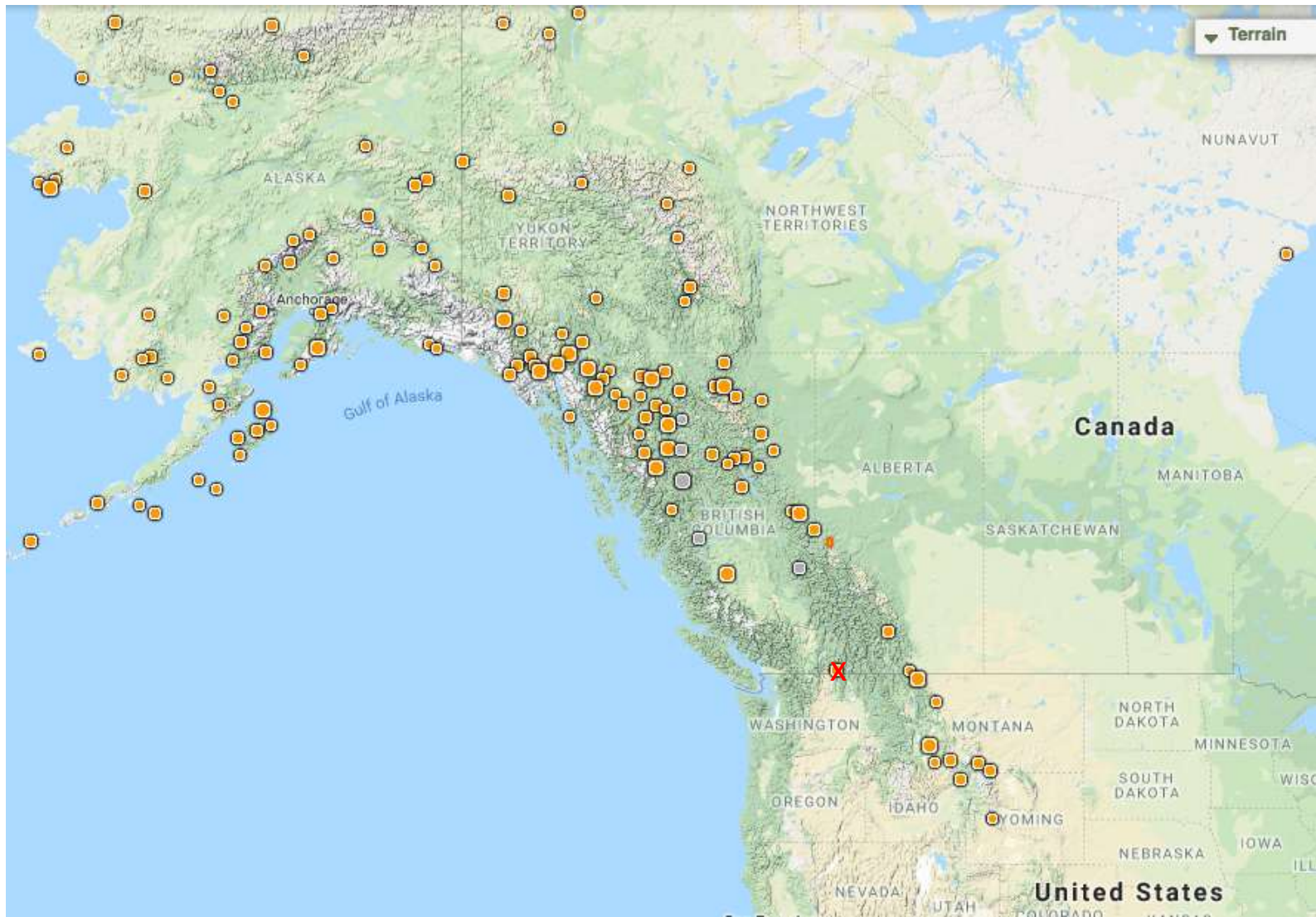
- *Antennaria monocephala*
- *Camassia cusickii*

Antennaria monocephala (one-headed pussytoes)

Skagit County



Distribution of *A. monocephala* in North America



Camassia cusickii (Cusick's camas)
Klickitat County – Susan Kephart

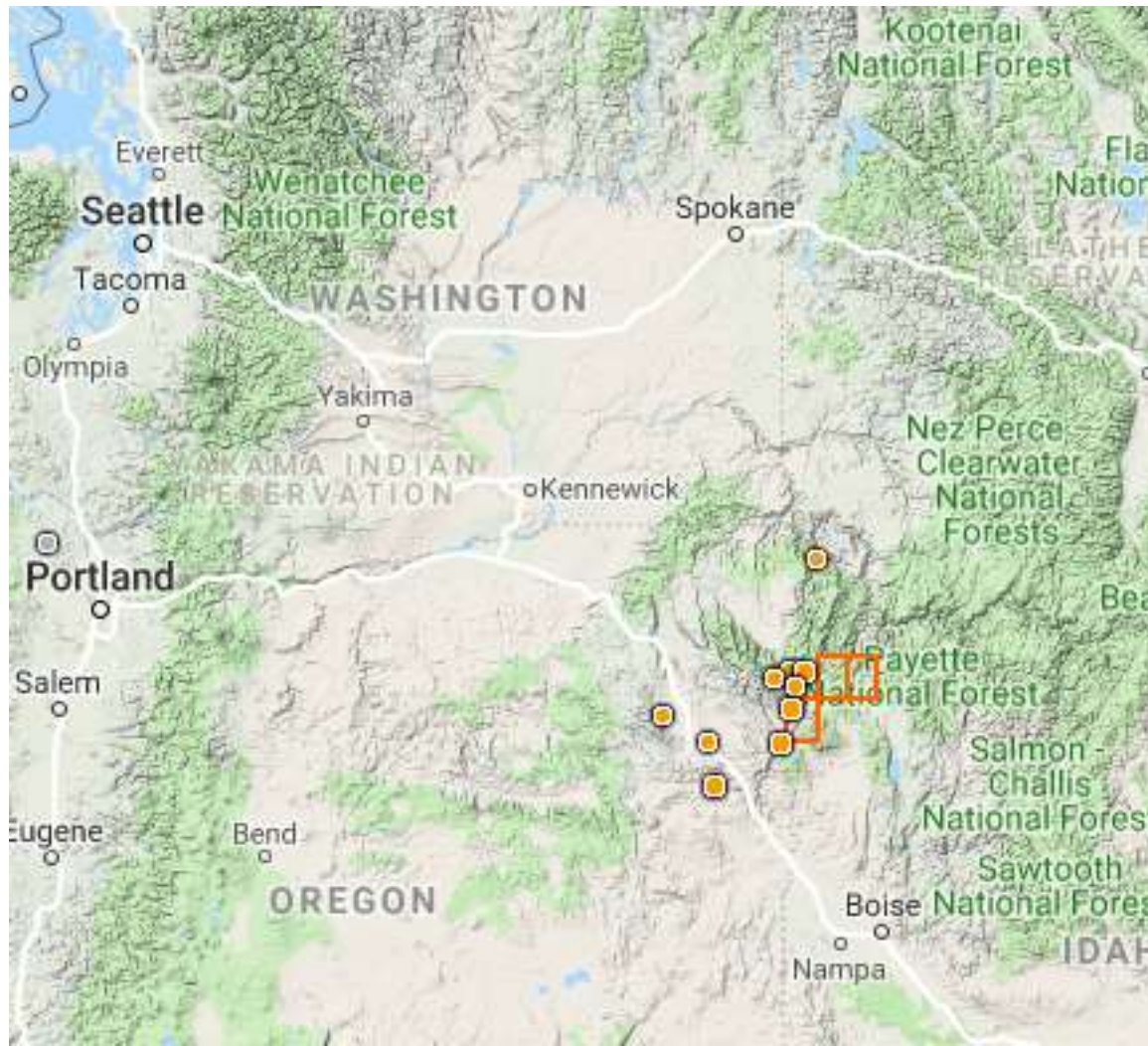


Photo by Susan Kephart



Photo by Jim Kephart

Known Distribution of *Camassia cusickii*



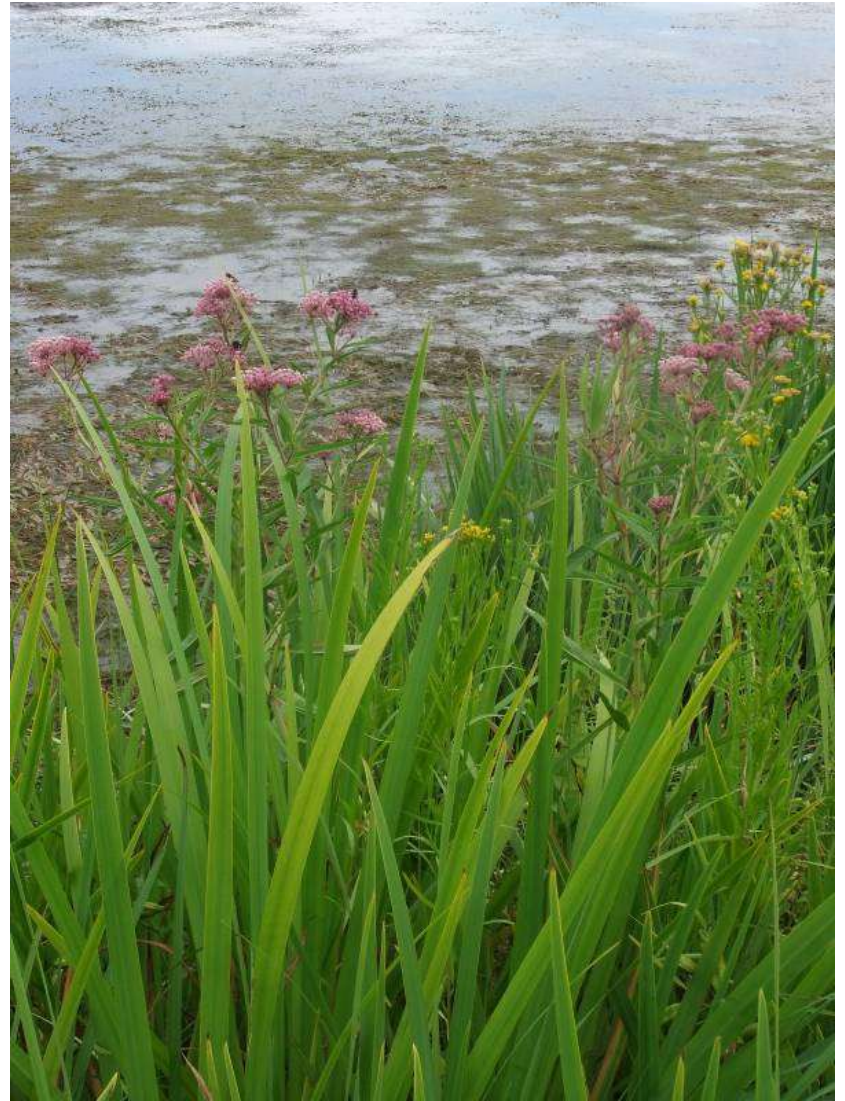
Notable Newly Documented Non-Native Taxa

- *Asclepias incarnata*
- *Juglans ailantifolia*

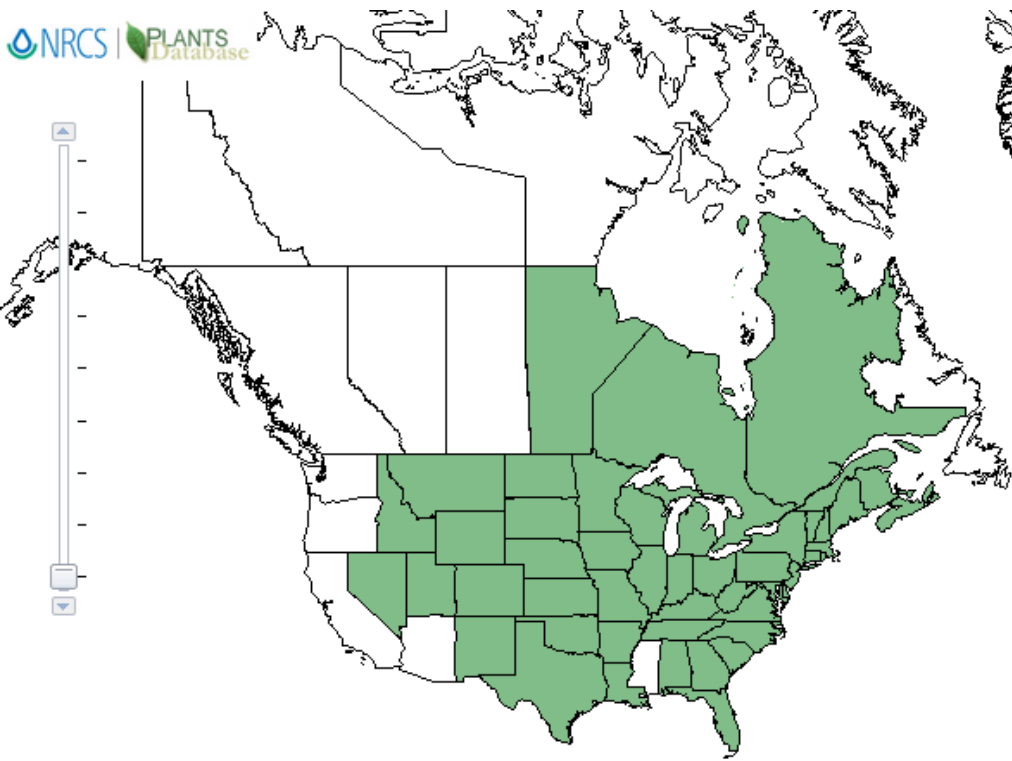
Asclepias incarnata (swamp milkweed) Okanogan County



Photos by Angela Hastings



Distribution of *Asclepias incarnata* in North America and Pacific Northwest



Juglans ailantifolia (Japanese walnut)

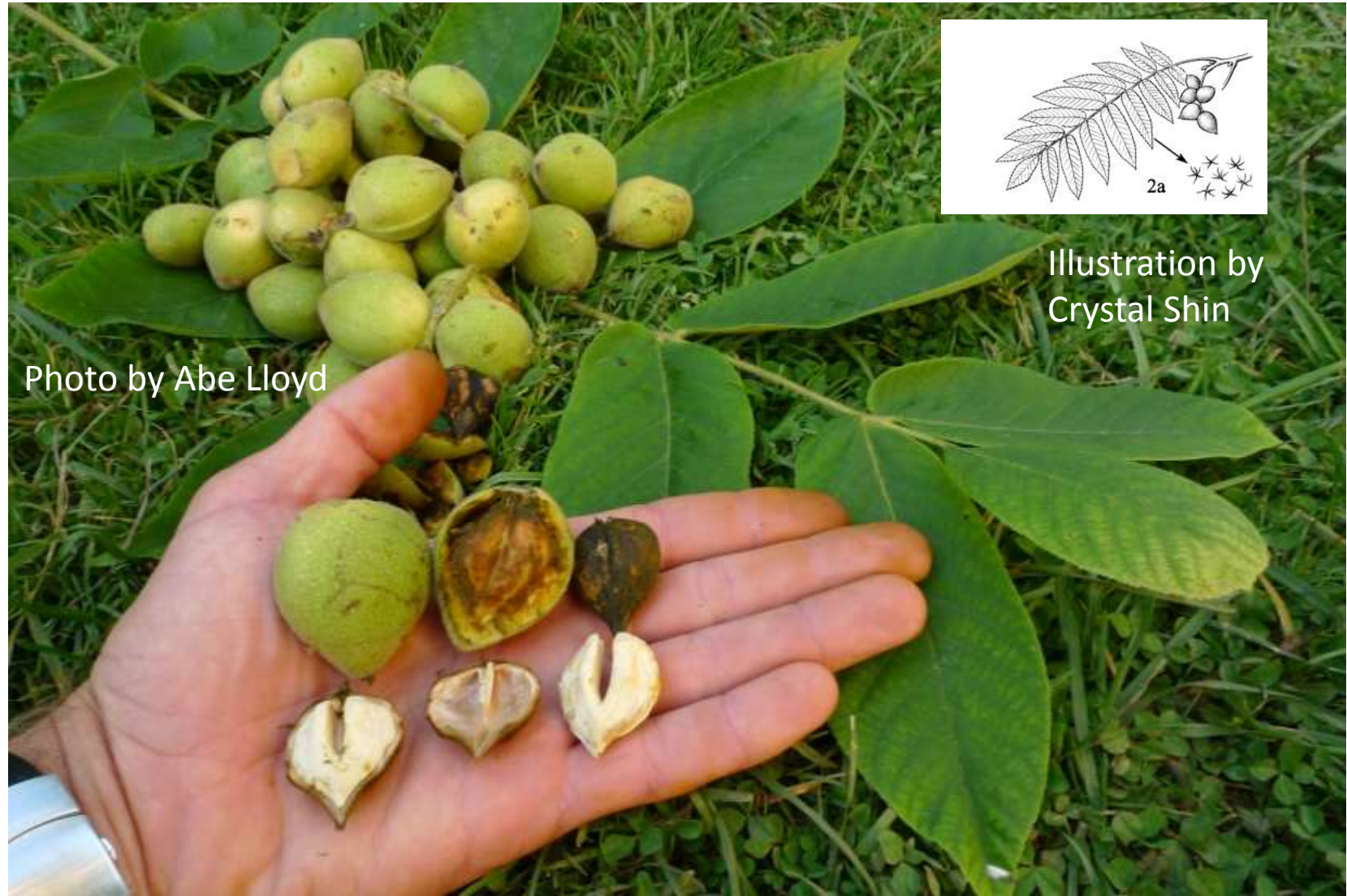


Photo by Abe Lloyd

Illustration by
Crystal Shin



Notable New Taxonomy

- *Aphyllon* carved out of *Orobanche*
- Taxonomy originally used by Asa Gray in 1876
- *Aphyllon* and *Orobanche* lumped by Beck (1890)



A. uniflorum (G.D. Carr)



A. pinorum (F. Weinmann)

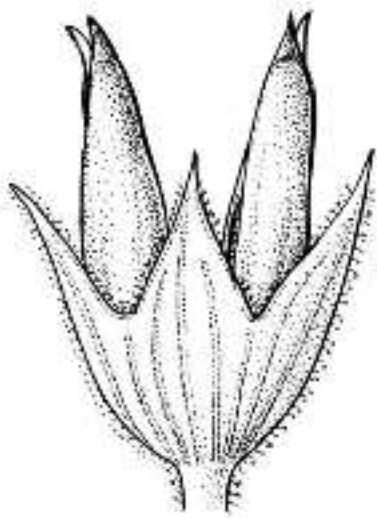


A. ludovicianum (R. Gilbert)

Generic differences

Aphyllon

- New World spp.
- calyx 5-lobed
- $x = 12$



A. epigallium

Illustration by Barbara Alongi

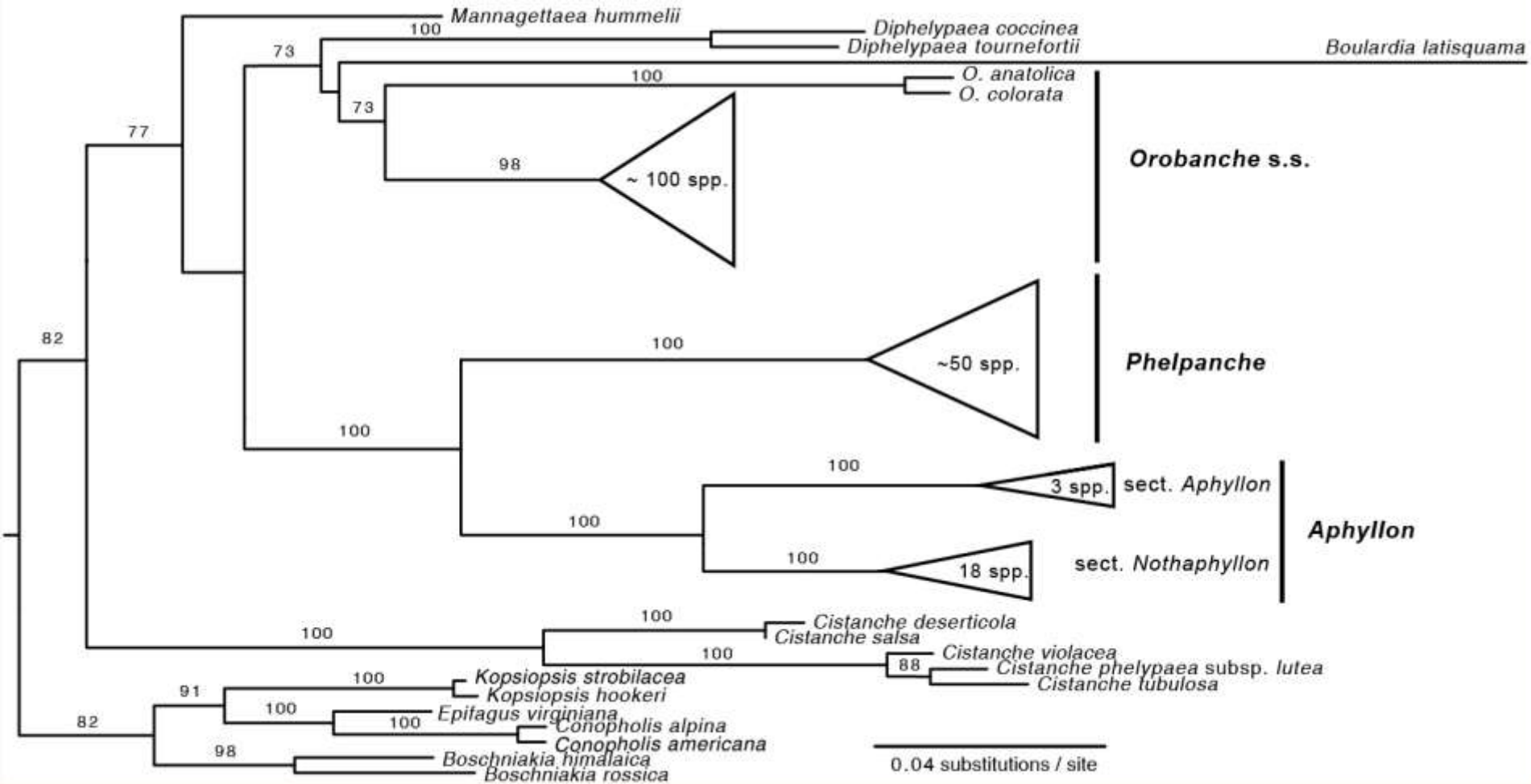
Orobanche

- Old World spp.
- calyx \pm divided to base
- $x = 19$



O. minor

Schneider. 2016. *Phytokeys* 75: 107-118.



The case for resurrecting *Mahonia* out of *Berberis*



Generic differences

Berberis

- Simple leaves
- Dimorphic stems w/ spines on primary stems
- Lax inflorescences to 30-flowered
- Susceptible to *Puccinellia* rust

Mahonia

- Pinnately compound leaves
- Stems spineless, rarely dimorphic
- Dense inflorescences 25-60-flowered
- Resistant to *Puccinellia* rust

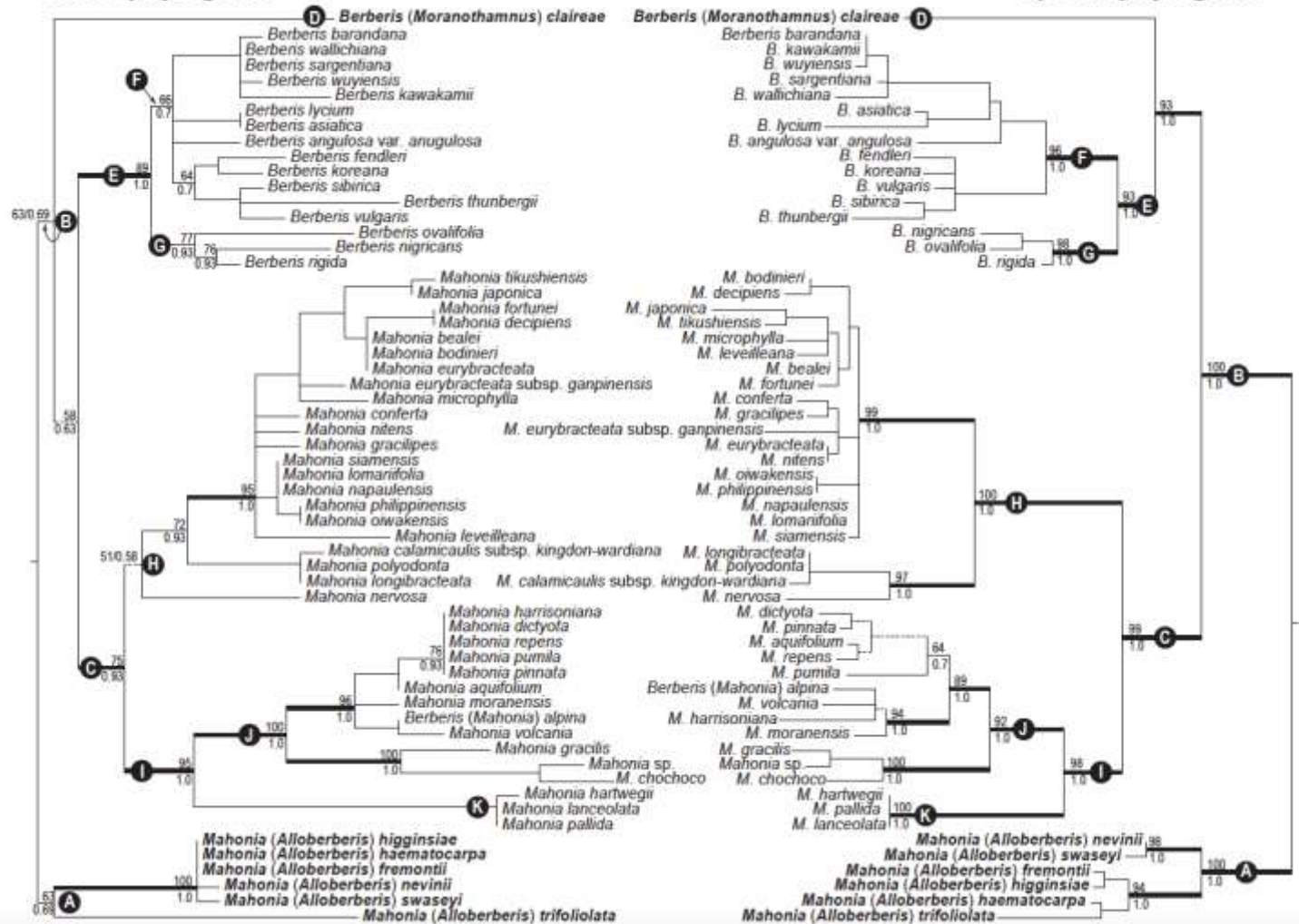
Yu & Chung. 2017. *Taxon*: 1371–1392

nrITS phylogram

cpDNA phylogram

Berberis

Mahonia



Taxonomy by flora

Berberis and Mahonia

Berberis only

- Intermountain Flora (2012)
- Flora of China (2011)
- Flora of BC (1998)
- Abrams and Ferris (1944)
- Jepson Manual (2012)
- Flora of North America (1997)
- Flora PNW (1973)

Notable Nomenclatural Changes

- *Rubus parviflorus* → *Rubus nutkanus*



Nomenclatural History

- *Rubus parviflorus* Weston – 1770
- *Rubus parviflorus* Nuttall – 1818 – illegitimate name
- *Rubus nutkanus* Mociño ex Seringe – 1825

Why Care About Taxonomy/Nomenclature; Next Steps

- Improve communication
- Inform conservation
- Create resource for harmonizing plant list names
- Update Washington Flora Checklist website

Acknowledgements

- U.S. Forest Service/BLM – Region 6
- Supporters of *Flora PNW* revision project
- Herbarium Endowment/Friends of Herbarium
- Washington Native Plant Society

Platanus occidentalis (American sycamore)



Photo courtesy of Missouri Botanical Garden



Photo by Arthur Haines



Draba taylorii

Al-Shehbaz and Mulligan. 2013. Harvard Papers in Botany 18(2):101-124.

