



# NORTHWEST LICHENOLOGISTS



## 2020 Newsletter

### Upcoming NWL Events:

(None currently planned due to COVID-19 concerns)

### Recent NWL Events:

2019 Certification Exam.....1

### Upcoming Workshops / Courses:

Jepson Herbarium Virtual Workshops.....4

### News and Projects from NW Lichenologists at Home and Abroad:

*Evernia prunastri* photo (Emily Hintzman).....5

Lichen Foray at Dishman Hills (Jack Massie).....6

Lessons Learned from Lichens in the North Cascades (Meaghan  
Petix).....8

Report on 5-18-19 survey for *Texosporium sancti-jacobi* at the  
Cleveland NAP (Daphne Stone).....11

### Store:

Lichen Apparel.....18

Monographs in North American Lichenology.....19

Booklets.....25

Visit the [NWL store](#) for additional items.

### Miscellaneous:

Lichen Blitz.....26

Visit our new and improved [website](#)!

Check us out on [Facebook](#)!

## [Recent NWL Events](#)

### **2019 NWL Certification Exam and Training**

By Daphne Stone

The exam was held in southern Oregon, at Oregon Institute of Marine Biology, owned by UO. We had apartments and dorm rooms, all of which were nicely kept and inexpensive. Adrienne Kovasi was the examiner; Daphne Stone helped with identification of the collections and ran the training. The exam-takers had a large lab room with plenty of room to spread out and a sink for cleaning.

The certification plot was located at Bastendorff Beach Park, south of Charleston on BLM land. The plot lies just behind a long beach and the road. It is flat and sandy, and inundated with water part of the year, but not during the exam. There was very little canopy cover, and we set the plot in an open area ringed with *Salix*, *Cytisus* and a few small *Picea sitchensis* and *Pinus contorta* trees. The dead *Picea sitchensis* had some *Sulcaria spiralifera* and the *Pinus contorta* housed a robust population of *Hypogymnia heterophylla*. The swath of *Salix* on the west side of the plot had a diversity of cyanolichens such as *Collema nigrescens*, *C. furfuraceum*, *Lobaria (Pseudocyphellaria) anthraxis* and *Lobaria scrobiculata*. The *Cytisus scoparius* had a surprising number of lichens including *Melanelixia fuliginosa* and *Physcia* species. The only *Ramalina dilacerata* was found on a *Vaccinium ovatum*! What a unique plot in which to explore some of the coastal lichen species!

Exam-takers performed well on the plot. There were 45 macrolichens found on the plot. Five of these were not in anyone's final collection. Individual totals ranged from 20 to 31 species. *Ramalina* was the genus with the highest number of species on the plot. In the "additional species" list was one exciting find, *Ramalina labiosorediata* (previously referred to as *R. pollinaria*) that was trying to look like *R. farinacea*. This is a rare coastal species and is a great find! Of the four people taking the exam, one person passed. Two others passed the collection portion of the exam.

The 10 trainees met in the living room of an apartment, so space was tight, but we made it work by bringing a table over from the lab, so that everyone had room for their scopes. We walked around the campus to look at what was nearby the first day, with lots of time to look at and discuss our finds between walks. Katherine Glew, who was a trainee but a knowledgeable lichenologist, helped a lot with the many trainees. Some people knew a lot, others were beginners, so we went over terms and looked at a lot of examples. Since we were in such good *Usnea* territory, we used the [new Usnea booklet](#) by Daphne Stone quite a lot. The second day, we went to a site at the South Slough National Estuarine Research Reserve and found some good spots. In the afternoon we went to the lichen plot to experience collecting using the exam protocol.

The second day also coincided with Oktoberfest celebration in Charleston. Runners ran past the plot and a festival of cider-making, grilling fish, and beer garden were held on

the lawn outside our door. Luckily, the exam-takers were in another building and were not disturbed by the noise, while the trainees got to eat amazing food and plenty of beer (note the glass in photo).



Test plot (photo by Meaghan Petix)



Training session (photo by Jolene Johnson)





*Heterodermia leucomela* (photo by Sarah Uebel)

---

## [Upcoming Workshops / Courses](#)

From Maureen Hoatlin:

I am about to go to California to take a weekend workshop on lichens with the Jepson Herbarium Education Program.

[http://ucjeps.berkeley.edu/workshops/  
Jepson Herbarium: Workshops](http://ucjeps.berkeley.edu/workshops/Jepson%20Herbarium:Workshops)

In 1994, the Friends of the Jepson Herbarium began a program to provide educational opportunities for a broad audience of professional and amateur botanists. Today, the program continues to serve as a liaison between the scientific community and the public, a role we are dedicated to as we enter our 27th year of public programs.

I thought the NWL readership would like to know about it. The Jepson Herbarium has a wonderful series of workshops that typically combine field work with lab identification and education. This will be my first lichen workshop – they don't offer a lichen focus every year. We will use the following field guides:

*The Field Guide to California Lichens* by Sharnoff

*Macrolichens of the Pacific Northwest* by McCune and Geiser





*News and Projects from NW Lichenologists at Home and Abroad*  
(Generally in the order received)

**From Emily Hintzman:**



*Evernia prunastri*, Kootenai County, Idaho, USA, January 2020

---

**From Jack Massie:**

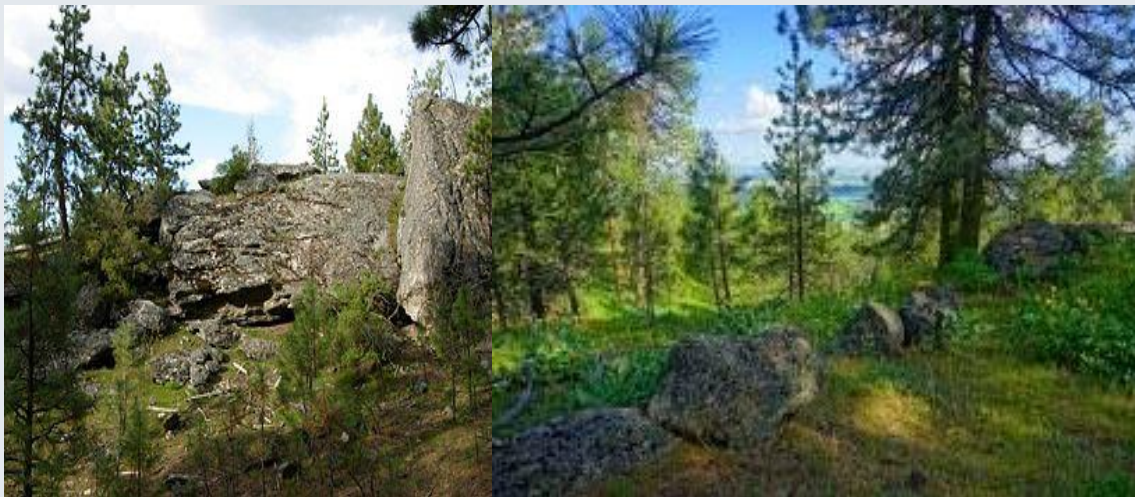
**Lichen Foray – Dishman Hills Natural Area – Spokane County, WA**

Ten lichen enthusiasts, including trip leader Jessica Allen of Eastern Washington University, had a great day identifying and collecting in the Dishman Hills area December 7, 2019.

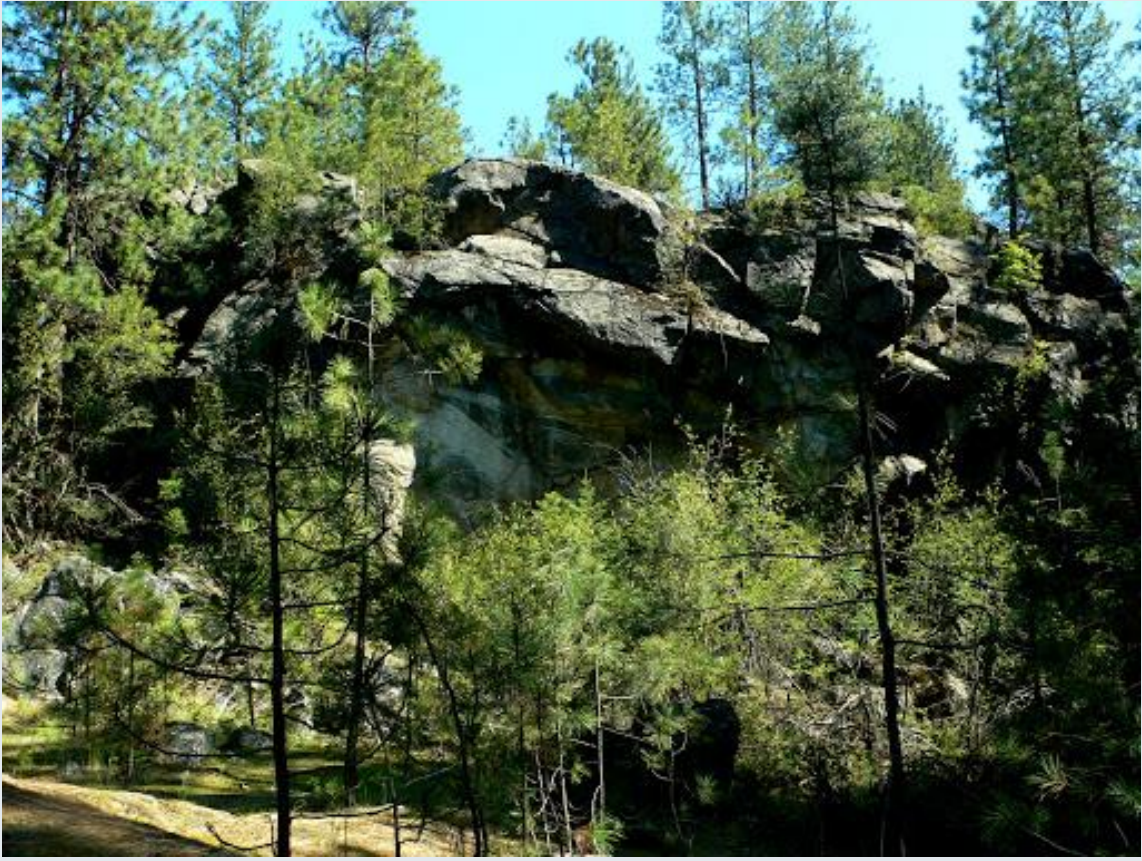
The lichens were colorful, fully moist, and stunningly beautiful on a bright day following an overnight rain. The overall list of species is still being compiled but the number and variety observed was excellent.

Attendees and affiliation: Jessica Allen (foray leader) EWU; Rob Smith of WSU; Jack Massie retired USFS; Elizabeth Martin of Lewis & Clark State; Meaghan Petix of WSU; Alex Wright of WSU; Giovanna Bishop of EWU; Chandler Clymbery of EWU; Brandon Booth of EWU; and Emma McGinty of WSU.

Dishman Hills area has Ponderosa Pine, Douglas Fir, Lodgepole Pine, Quaking Aspen -- many shrubs like *Amelanchier*, *Holodiscus*, *Philadelphus*, *Salix* and *Prunus*, plus a wide variety of rocky outcrops with many bryophytes and fungi; the area similar in some ways to shrub steppe. There are pockets of habitat that are like the channeled scablands and some more like typical Eastern Washington forested areas. The granite outcrops here were partially shaped by glacial floods and Lake Missoula ice dam. Beautiful locale!







-----



**From Meaghan Petix:**

*Lessons Learned from Lichens in the North Cascades*

Meaghan Petix  
School of Biological Sciences, Washington State University (WSU)  
[meaghan.petix@wsu.edu](mailto:meaghan.petix@wsu.edu)

We begin in an ancient forest with old-growth western red cedar towering above, following the cloudy-blue, glacier fed Thunder Creek for miles and miles, through the valley to a spot none of us could have ever dreamed of – a “cyanolichen heaven”. We are weary from our hike in, but we can’t contain our excitement about all the lichens dripping from the trees surrounding us – *Lobaria*, *Pseudocyphellaria*, *Nephroma* – oh my! We go to sleep dreaming of lichens and the places we’ll venture to tomorrow and the next day (and the next day), going deeper into the heart of the park.



Figure 1. The “cyanolichen heaven” at Tricouni Camp along Thunder Creek. Photos by Heather Stewart-Ahn

During the summer of 2019, I was collecting data for my graduate research investigating patterns of atmospheric nitrogen (N) deposition in the North Cascades National Park Service Complex (NOCA). This research is in cooperation with the National Park Service (NPS) Air Resources Division and aims to determine which ecosystems in NOCA are affected by N deposition and identify predominant sources of N emissions. We

established 30 “lichen air quality” plots across NOCA to determine lichen community composition and N content and stable isotope composition. We collected two lichen species for elemental analysis at each plot; our target species were *Platismatia glauca* and *Alectoria sarmentosa*, which were abundant on the west side of the park, and *Letharia vulpina* and *Letharia columbiana*, which were abundant on the east side of the park. Since lichens lack roots and a cuticle, they accumulate N and other water-soluble nutrients roughly in proportion to their abundance in the atmosphere. The N concentration of epiphytic lichens can be utilized to monitor N deposition because their relationship can be modeled for a given region, and their N stable isotope composition can assess contributions of different N pollution sources.

The trip I described above through the glacial carved valley of Thunder Creek was one of several backpacking trips we conducted over the summer to collect lichens, travelling over 100 miles of the park’s extensive trail system. I feel incredibly fortunate to have spent my days hiking through this rugged wilderness with its unmatched beauty and diversity of lichens. I am also incredibly grateful for the fellow lichen-enthusiasts I was able to share this adventure with – Heather Stewart-Ahn and Alida Melse – who provided invaluable field support. Stay tuned for results of this project in the future!

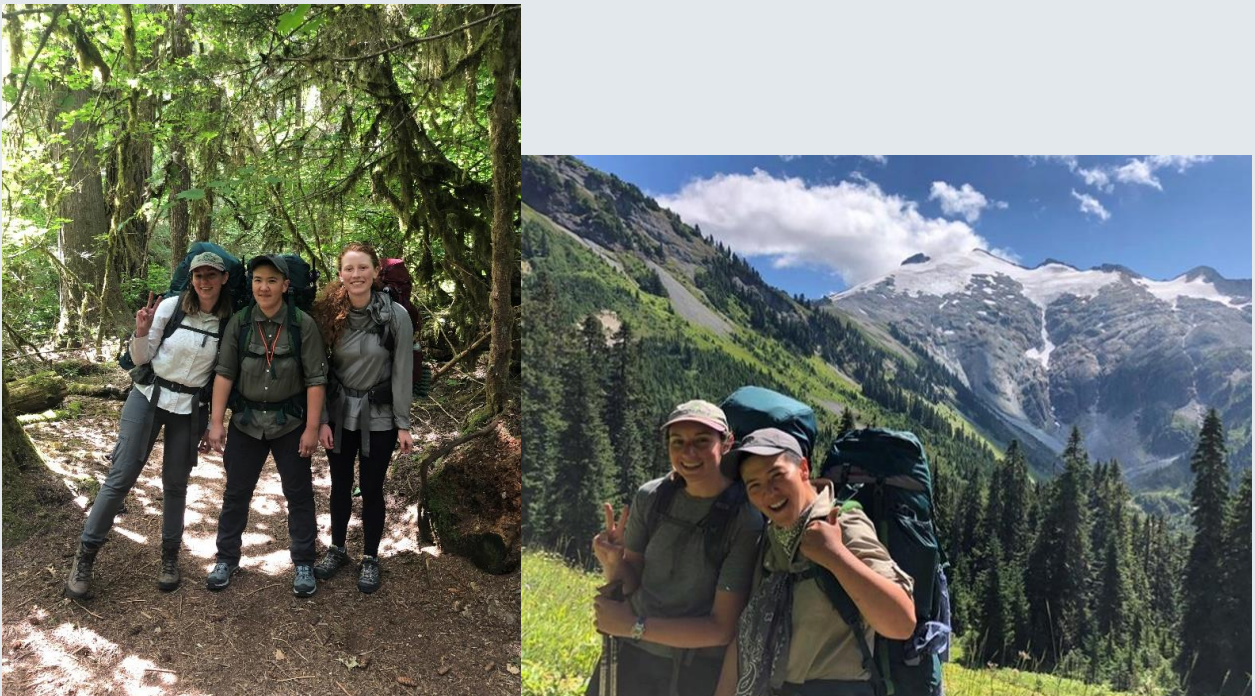


Figure 2. The lichen crew -- Meaghan Petix (left), Heather Stewart-Ahn (middle), and Alida Melse (right) – hitting the trail on one of their first trips [left] and then still in good spirits on day 6 of their final backpacking trip of the season, posing in front of Ruth Mountain [right]. Photos by Heather Stewart-Ahn





Figure 3. The inimitable North Cascades, viewed from the Diablo Lake Overlook. Photo by Meaghan Petix

---

## **From Daphne Stone:**

### **Report on 5-18-19 survey for *Texosporium sancti-jacobi* at the Cleveland NAP**

Five members of Northwest Lichenologists (Dr. Bruce McCune, Dr. Daphne Stone, Jack Massie, Dan Nelson, and Mickie Chamness; organized by Mickie) met at the Cleveland Natural Area Preserve in Klickitat County, WA, on May 18, 2019 to search for *Texosporium sancti-jacobi* (TESA). The first record of TESA at this site was by Jeanne Ponzetti on July 28, 1997. The species was found on dead bunchgrass crowns. She recalls that it was on the edges of mounds near the road. Much of the NAP burned in 1998, but a survey a year or two later found at least one occurrence of TESA in the unburned corner of the NAP ('1999/2000 site' in Figure 1). The goal of our survey was primarily to clarify, at least for our own purposes, the habitats and aspects where TESA occurs at the Cleveland NAP and whether any occurrences could be found within the portion of the NAP that burned in 1998. TESA is not known to tolerate fire.

On October 12, 2018, Dr. Jenny von Reis and Mickie Chamness searched the area where TESA was found in 1999/2000. They could not find that occurrence but did find several occurrences within a small area further to the east ('2018 find' in Figure 1). This was the starting point for the survey performed on May 18, 2019.

After starting out as a group at the '2018 find' site, we spread out toward the south along the eastern half of the NAP, each person searching in likely habitat for TESA but not trying to do a thorough or exhaustive search in any one area. We ate lunch near the southern NAP fence and in the afternoon moved to the west and north, primarily staying east of the large north-south drainage.

#### *Habitat*

Based on our observations around the mound where TESA was found in 2018, this species grows on pedestals of old bunchgrasses that occur along the boundary between relatively dense vegetation on the mound and the flat swales of lithosol with silty clayey soil. These pedestals of old bunchgrass seem to occur mostly where there is little vegetation in the swales or near flat areas between mounds. In some places the swales near TESA occurrences had a high percentage of cover by mosses and stones bearing lichens, in other places the soil was bare.

We found TESA most often on the north side of mounds, but also found places where it grows on the east and west sides of mounds. We searched all the way around the mound where TESA was found in 2018, and found it only on the west and north sides where there are pedestals of old bunchgrass. We found TESA on the east side of other mounds, but observed no mounds with TESA growing on the south side. The old bunchgrass pedestals don't appear to occur on the south sides of the mounds, possibly limiting potential habitat for TESA.

#### *Occurrences*

We found TESA at 16 locations (Figure 2). Many were in the unburned area in the northeast corner of the NAP, but there were also several sites in the previously burned area, including the 2 largest patches we found. Site 5 is about 4 inches in diameter and Site 15 is about 6 inches long. Jack Massie placed a wooden pole near Site 5.

Locations are shown on the map below. Bruce McCune and Daphne Stone created the attached preliminary lichen species list for the site.



Additional notes from Daphne Stone:

It didn't strike me at the time, but I later realized that the TESA patches here are the largest I have seen in extensive searches for this species. Typically, on BLM land there are 3-10 mazaedia in a patch, and the crustose thallus is rarely obvious. In contrast, the thalli at Cleveland are extensive and obvious, and there are 20-30 mazaedia per thallus, and often thalli are in groups of 4-5.

Although ORBIC just reported to me that TESA is being removed from Oregon's species of concern list, it is obvious that this crustose species needs protection to survive in these large natural clumps. To maintain these amazing thalli, the area should be protected from burning with hot, evenly spread fires and protected from trampling. Visits by people should be fine as long as they walk in the intermound or swale parts of the prairie (mostly rock cobble) avoiding the TESA habitat on the edge of mounds.

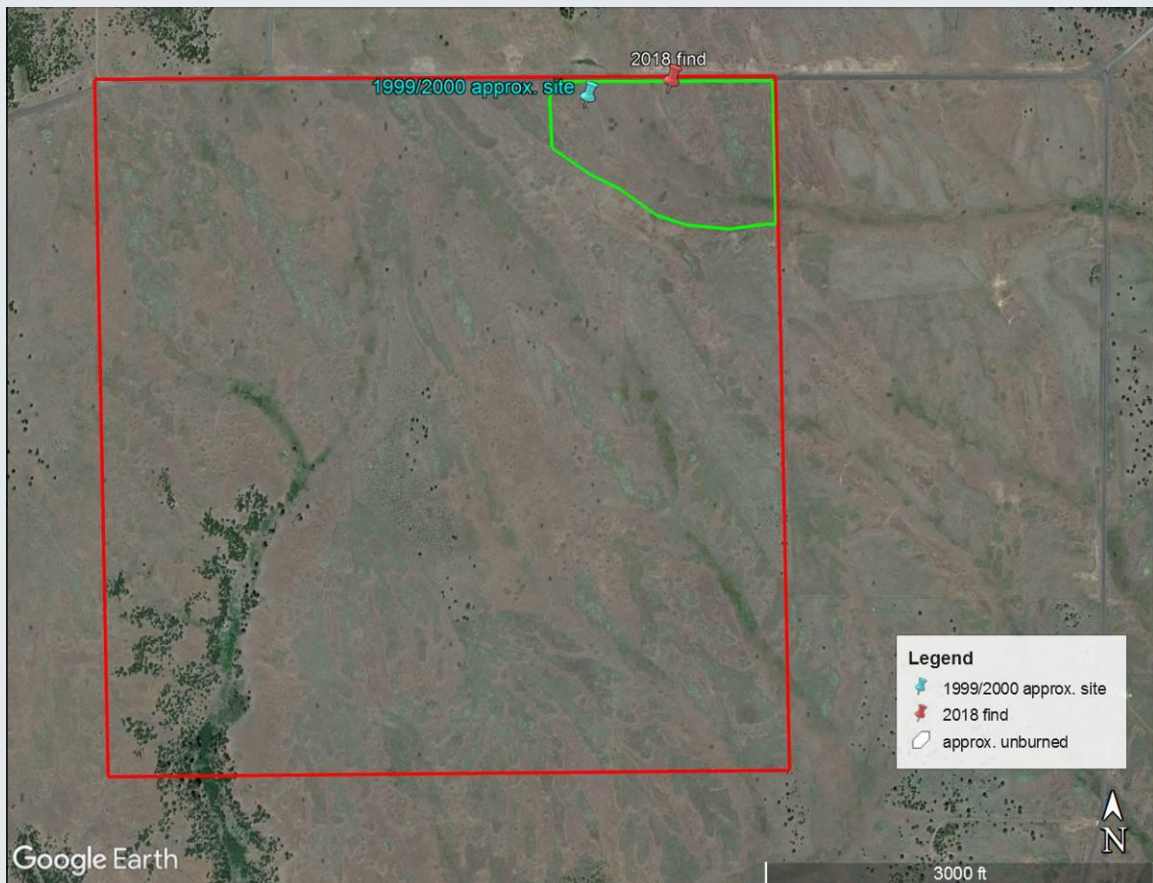


Figure 1. Location of TESA discovered during 1999/2000 survey of unburned area.

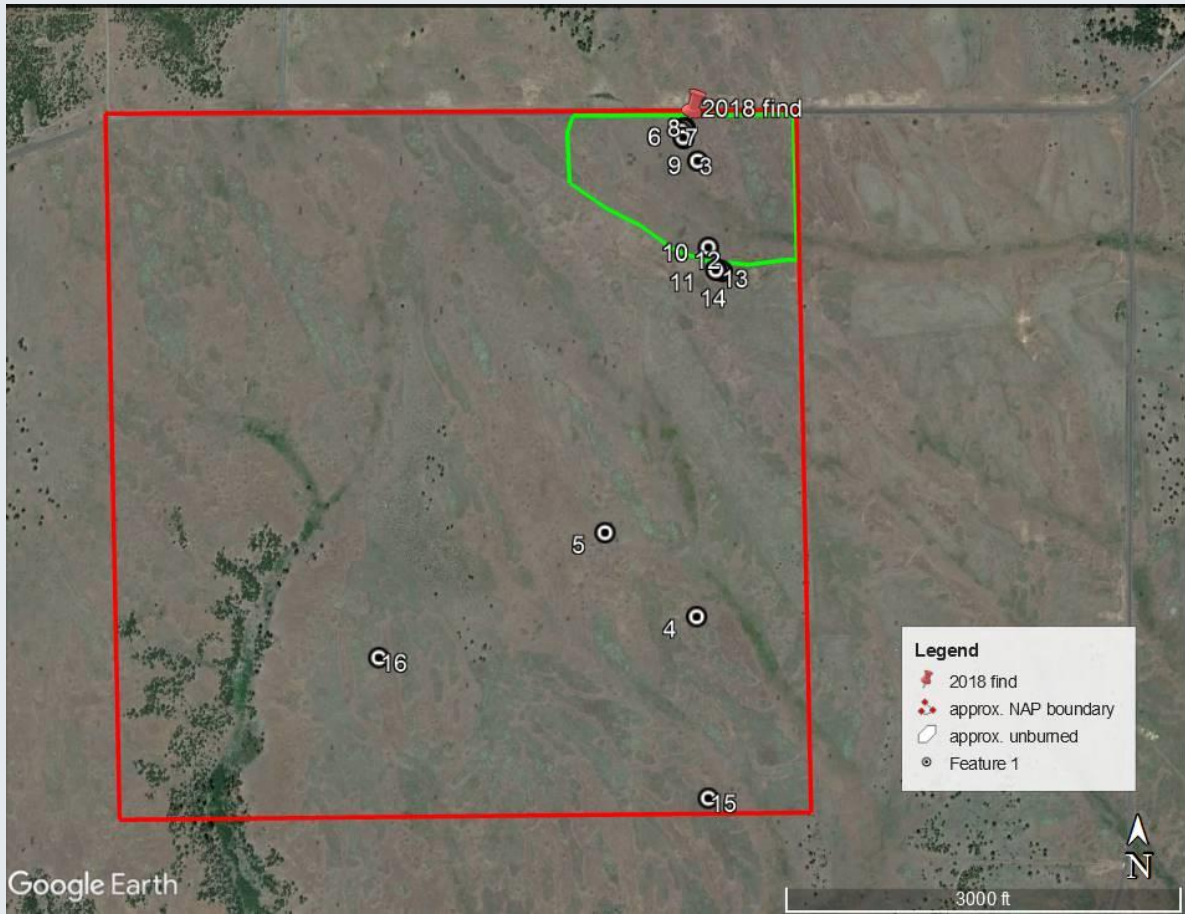


Figure 2. Locations of TESA discovered during 5-18-2019 survey Cleveland NAP.





Cleveland NAP



Large TESA thallus

Cleveland Natural Area Preserve  
Klickitat County, Washington  
Lichens (preliminary list)  
24 May 2019

Acarospora spp. – frequent but not keyed to species; on rock  
Arthonia glebosa – On soil  
Aspicilia americana – on rock  
Aspicilia filiformis – on soil and plant detritus  
Aspicilia mastrucata – On moss (Grimmia) on rock  
Aspicilia "papilliformis" clade D (undescribed species) – Locally abundant but seldom fertile, on soil, moss, and plant detritus  
Aspicilia spp – additional species on rock

Buellia dispersa – On rock  
B. punctata – on soil and detritus

Caloplaca arenaria – On lichens on rock  
Caloplaca atroalba – On stones in low spot  
Caloplaca epithallina – On lichens on rock  
Caloplaca jungermanniae – On plant detritus and soil  
Calvitimela aglaea – Rare or infrequent, on rock  
Candelaria pacifica – On bird-manured rocks  
Candelariella rosulans – On rock  
Candelariella vitellina – On rock and organic matter  
Cetraria merrillii – On pine  
Cladonia fimbriata – On soil and moss  
Cladonia sp., squamules – Abundant, unknown species  
Cyphelium inquinans – On Pinus wood

Dermatocarpon sp. – Vagrant on soil and attached to rock in dry creeks, maybe the same species or maybe not, but very different in appearance.  
Diploschistes muscorum – Infrequent on soil and moss.  
D. scruposus – On rock

Evernia prunastri – On shrubs

Fuscopannaria cyanolepra – On soil and plant detritus

Lambiella insularis – On Lecanora bicincta on rock  
Lecanora bicincta – on rock  
L. garovaglii – On rock  
L. mughicola – On Pinus wood  
L. muralis – On rock  
L. spp, muralis group – On rock  
Lecidea atrobrunnea group – On rock



*L. fuscoatra* – Unusual form with very thick squamulose thallus needs confirmation with TLC; on rock

*L. cascadensis* – On rock

*L. tessellata* – On rock

*Lepraria neglecta* s.l. on soil and moss over rock

*Leptochidium albociliatum*

*Letharia columbiana* – infrequent on Pine

*L. vulpina* – On Pinus, rocks, and shrubs

*Massalongia carnosa*

*Megaspora verrucosa* – Occasional on soil

*Melanohalea elegantula*– On shrubs and Pinus

*Miriquidica* sp. – On Lecidea on rock

*Neofuscelia loxodes* – On rock

*Nodobryoria abbreviata* – On pine

*Parmelia barrenoae*– On shrubs and rock

*P. saxatilis* – On rock

*Peltigera ponojensis* – On soil, moss, and rock crevices, common

*Physcia adscendens*– On shrubs

*Physcia dubia* – On rock

*Physcia phaea* – On rock

*Physconia biziana*– On shrubs

*P. perisidiosa* – Rock crevice

*Placynthiella icmalea* – on soil

*P. uliginosa* – On soil

*Polychidium muscicola*—on moss over rock

*Pseudephebe pubescens* – Infrequent on rock

*Psora montana* – On soil

*P. nipponica* – on soil in rock crevices

*Rhizocarpon diploschistidina* – on *Diploschistes muscorum*, infrequent

*Rhizocarpon* (gray) – on rock

*Rhizocarpon* (yellow) – on rock, rare, most yellow spp being *R. sulphurosum*.

*Rhizoplaca melanophthalma* – On rock

*Rinodina terrestris* – On soil and detritus

*Rinodina* sp. – On shrubs

*Scytinium lichenoides* group – on soil and moss

*S. subaridum* – on soil

*Staurothele areolata* – On rock

*Tetramelas terricolus* – On plant detritus on soil

*Texosporium sancti-jacobi* – On soil and plant detritus

*Thelomma ocellatum* – On fencepost

Trapeliopsis bisorediata – on soil, infrequent  
T. glaucopholis – on soil and soil and moss over rock, infrequent  
T. steppica – on soil and soil over rock

Umbilicaria hyperborea – On rock  
U. phaea – On rock  
U. torrefacta – On rock  
Usnea sp. – On shrub and fencepost (minute)

Xanthomendoza fulva– On shrubs  
X. hasseana/montana (need to check spores) – On shrubs  
Xanthoria candelaria – On rock, bird perch

---



## Lichen Apparel and Publications

### Letharia columbiana apparel



NWL Shirts and Caps

Email this form to Daphne Stone at [daphstone@gmail.com](mailto:daphstone@gmail.com)  
Once I confirm we have your items, then mail a check made out to Northwest Lichenologists to:

Daphne Stone  
30567 Le Bleu Rd  
Eugene, OR 97405

Shirts: LETHARIA		adult S	adult M	adult L	adult XL	Adult XXL	PRICE
regular T all cotton	black						\$20.00
regular T all cotton	medium blue					n/a	\$20.00
long sleeve all cotton	black				n/a		\$20.00
Ladies T, all cotton	black				n/a	n/a	\$20.00
tissue T, poly mix V-	blue		n/a		n/a	n/a	\$20.00
tissue T, poly mix,	blue	n/a			n/a		
tissue burnout T, round	blue		n/a	n/a	n/a	n/a	\$20.00
ladies tissue, deep V,	black				n/a	n/a	\$20.00
youth T	black	youth S	youth M				\$15.00
Men's zip hoodie	black						\$35.00
Women's zip hoodie	black	n/a			n/a	n/a	\$35.00
shirts: LYCAN							
ladies T	black						\$20.00
men's T	black	n/a					\$20.00
cap w/ embroidered	black						\$18.00
cap w/ embroidered	blue						\$18.00
Shipping	\$28 or less	\$5					
	\$28-\$50	\$9					
	over \$50	ask for quote:				shipping cost:	
		<a href="mailto:daphstone@gmail.com">daphstone@gmail.com</a>					
						TOTAL	

## **Monographs in North American Lichenology**

### **A series sponsored by Northwest Lichenologists**

Northwest Lichenologists aim to produce a series of reasonably-priced, peer-reviewed, paperback academic books on lichens, with a focus on topics of regional interest, such as generic monographs, annotated state lists, ecological works, local floras, and symposium proceedings. Our purpose is to provide an outlet for very long papers and books of wide interest but that are too long for regular scientific journals. Volumes will be produced sporadically. We expect 0-2 volumes per year. Works on any aspect of lichenology will be considered.

For ordering information, please use the "Store" tab at the new NW Lichenologists website. Sample pages are posted.

[Order by credit card using PayPal](#) from [www.nwlichens.org](http://www.nwlichens.org)

---

### **Monograph in North American Lichenology, Vol. 4**

#### ***Corticolous Crustose Lichens on Forest Inventory Plots in Northern Idaho***

This richly illustrated monograph provides excellent habitat and substrate preferences for bark-dwelling crustose lichens and lichenicolous fungi in the northern Rocky Mountains of Idaho. Four main sections describe habitats, lichen species, occurrences for each phorophyte species, and lichenicolous fungi. It should prove useful throughout the Pacific Northwest region.

Haldeman, M. 2020. **Corticolous Crustose Lichens on Forest Inventory Plots in Northern Idaho**. Monographs in North American Lichenology 4: 1-71. ISBN: 978-0-9790737-4-8

[Free pdf download available.](#)

Let us know if you are interested in buying a print copy. We are checking on the cost and will print some if demand is there.



CORTICOLOUS CRUSTOSE LICHENS  
ON FOREST INVENTORY PLOTS  
IN NORTHERN IDAHO



MICHAEL HALDEMAN

2020

MONOGRAPHS IN NORTH AMERICAN LICHENOLOGY VOL. 4

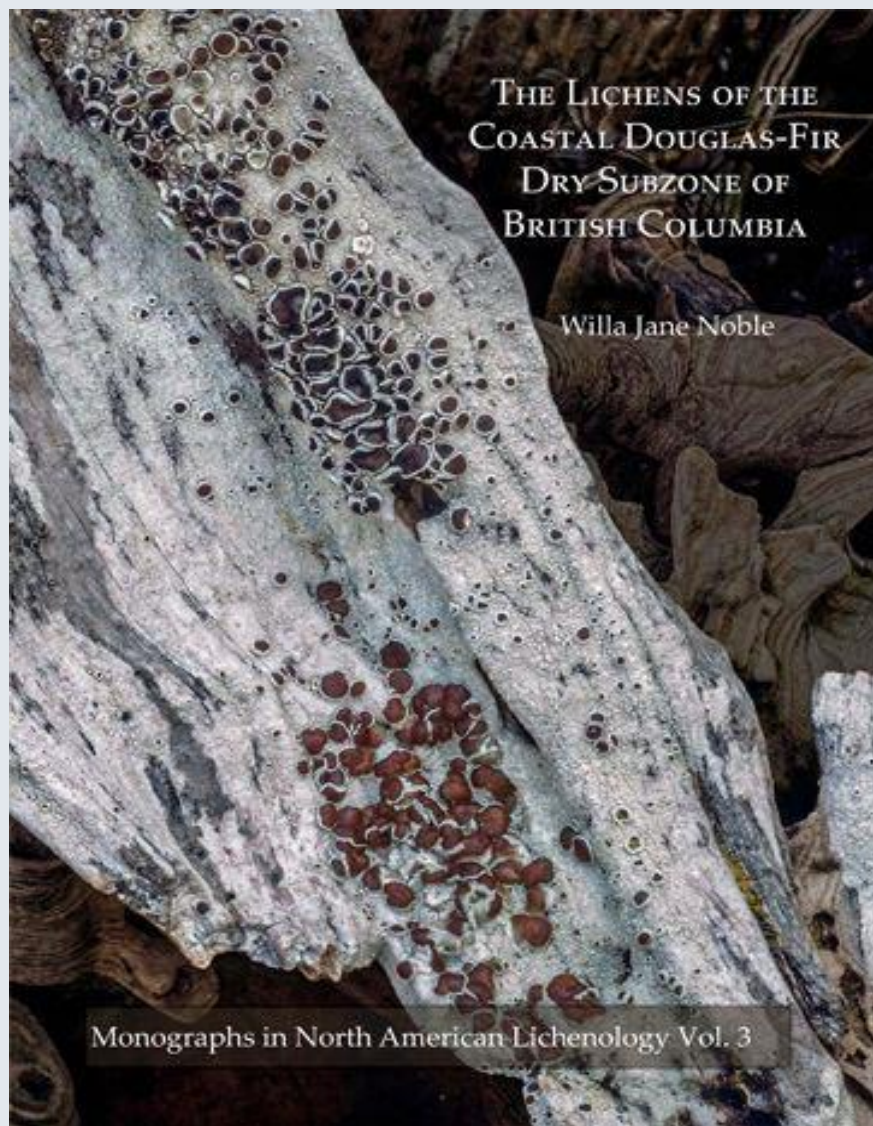
Northwest Lichenologists  
[www.nwlichens.org](http://www.nwlichens.org)

### **Monograph in North American Lichenology, Vol. 3**

#### ***The Lichens of the Coastal Douglas-Fir Dry Subzone of British Columbia***

The single most valuable book for people interested in learning the crustose lichen flora west of the Cascade Range has been Willa Noble's unpublished Ph.D. dissertation. This massive work contains an excellent lichen flora for a portion of British Columbia. But its importance extends well beyond that. It is an indispensable reference work for lichen studies from Alaska to northern California.

Noble, W. J. 1982, Reprinted in 2017 with nomenclatural updates by Michael Haldeman. **The Lichens of the Coastal Douglas-Fir Dry Subzone of British Columbia**. Monographs in North American Lichenology 3: 1-260. Pbk. \$30. Keys and full descriptions, B/W line drawings of spores. ISBN-13: 978-0-9790737-2-4



## Monograph in North American Lichenology, Vol. 2

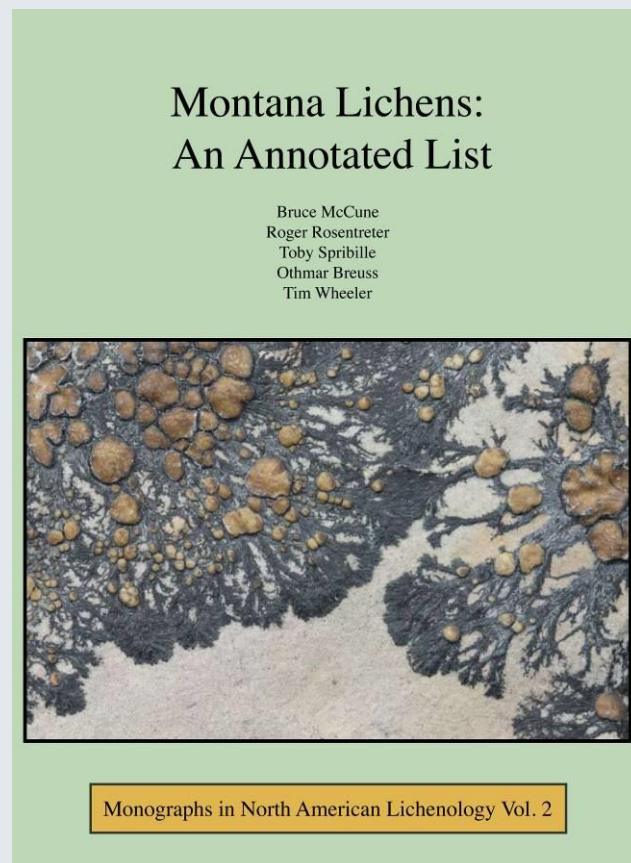
### ***Montana Lichens: An Annotated List***

Why would a non-Montanian lichenologist want one? This is the first comprehensive summary of the occurrence, literature references, and ecological context for lichens in any state or province in the Pacific Northwest or northern Rocky Mountains. Because we also include reports from adjoining states and provinces, the book should be useful in a broad area. The monograph will be an invaluable reference for people delving into either crustose lichens or macrolichens.

So far, a total of 1074 species are documented from Montana. Of these, 283 species are new for the state and 19 are new to North America. We discuss the rare, threatened, and endangered lichens of Montana. Priorities for surveys and monitoring are evaluated by placing species in one of eight categories, based on all combinations of global rarity, ease of detection, and habitat vulnerability.

You will also find new names for a number of old friends. Do you recognize *Lobaria anomala*? *Scytinium palmatum*? *Circinaria rogeri*? Dig in and find out.

McCune, B., R. Rosentreter, T. Spribille, O. Breuss and T. Wheeler. 2014. **Montana Lichens: An Annotated List**. Monographs in North American Lichenology 2: 1-183. Pbk. \$30. ISBN-13: 978-0-9790737-1-7





## Monograph in North American Lichenology, Vol. 1

### *Biotic Soil Crust Lichens of the Columbia Basin*

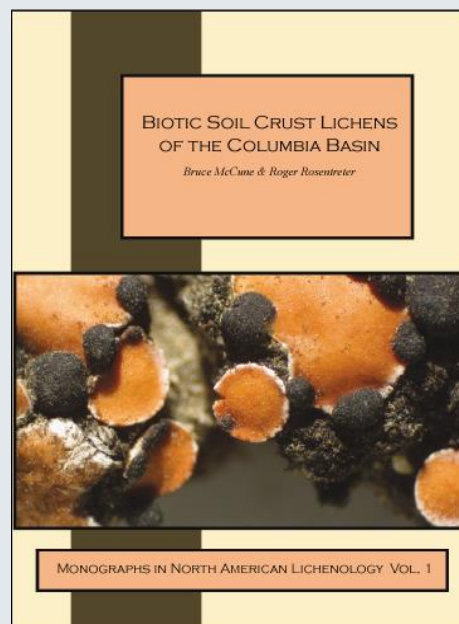
Why write a book for identifying soil crust lichens? We have three reasons: (1) they are ecologically important, (2) they can be difficult to identify with existing sources, or they are omitted altogether, and (3) they should be more widely recognized for what they are.

Macrolichens are much better known in North America than crustose lichens, but most of the lichens found in biotic crusts are crustose lichens. Keys and line drawings for macrolichens from the Pacific Northwest and northern Rocky Mountains are provided by Goward et al (1994), McCune and Goward (1995), and Goward (1999). Brodo et al. (2001) and McCune and Geiser (1997) provided color photos for selected species. Despite these resources, almost none of the lichen species growing in biotic crusts in the Pacific Northwest have been illustrated with color photos in sufficient magnification and detail for confident identification. We hope that this book will help to relieve that problem.

Lichens in soil crusts are often difficult to identify. Currently available books for identifying lichens do not illustrate the critical features needed for identification. We try to fill this need by providing photographs of all of the species at the necessary scale – ranging from what you can see with a hand lens to what you can see through a compound microscope. Wherever possible, we emphasize macroscopic features, but in many cases microscopic characters make the task much easier and help to confirm the identification.

This book is aimed at both technical and naturalist audiences. We hope that the use of color photographs will help someone without much experience, while we strive to provide the technical details needed for more certain identification.

McCune, B. and R. Rosentreter. 2007. **Biotic Soil Crust Lichens of the Columbia Basin.** Monographs in North American Lichenology 1: 1-105. Pbk. \$30. Fully illustrated in color. ISBN-10: 0-9790737-0-7.



Sample page from *Biotic Soil Crust Lichens of the Columbia Basin*.

**Key S – Pale-edged Brown Squamules, Apotheciate**

1a Squamules orange, pinkish orange, or brick red. Squamules medium-sized, generally 2-4(6) mm diam, flat to concave in the center; upper cortex partly pruinose or not pruinose; medulla usually K-, P- (in our area with no substances or trace of norstictic), rarely K+Y to R, P+O (norstictic); an acid-deficient chemotype is also common and widespread; a hyposalacinic acid chemotype is scattered throughout the range of the species; very common on highly calcareous, exposed soils, where it is almost always present

*Psora decipiens* (Hedw.) Hoffm.

[*Psora crenata* (Tayl.) Reinke, which occurs south of the Columbia Basin, is similar in some ways to both *P. decipiens* and *P. cerebriformis*, but is distinguished by the large squamules that are strongly depressed in the center and contain norstictic acid (K+Y to O, P+O). *Psora decipiens* also has a norstictic acid chemotype, but that species is arctic-alpine.]

1b Squamules some shade of brown or gray-pruinose over brown

2a Edges of squamules not pruinose but upturned and exposing the pale lower surface; thallus C+ pink, KC+K or pink (gyrophoric and lecanoric acids). Squamules 1-7(11) mm diam, concave with an ascending margin; upper surface pale to dark brown, often olive in the shade; apothecia dark brown to blackish, occasionally olive tinged; thallus containing gyrophoric and lecanoric acids; on soil or rock, usually associated with soil or moss over rock or rock crevices, often among mosses; widespread in western N Am, at all elevations in our area

*Psora nipponica* (Zahlbr.) G. Schneid.

2b Edges of squamules pruinose, upturned or flat; thallus C-, KC-

3a Apothecia reddish brown; thallus light to dark brown. Squamules 1-5(7) mm diam, pale brown to medium brown (to pale greenish brown when shaded), epruinose to distinctly white pruinose along the margin, convex to slightly concave; apothecia generally reddish brown to medium brown, convex and immarginate even when young; epithemium K+R (like all *Psora* spp.); most common on HCl+ rock and on soil in crevices in HCl- rock, but also on HCl- substrates; one of the most frequent *Psora* spp. in our area and throughout the West, especially on exposed calcareous soils and in rock crevices

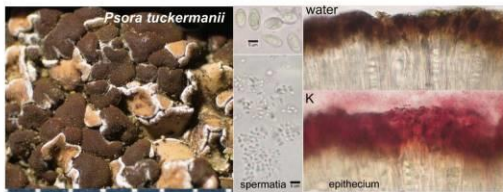
*Psora tuckermanii* R. Anderson et Tindal

3b Apothecia black; thallus dark brown, whitish, or greenish tan

4a Apothecia marginal. Squamules becoming strongly convex with numerous fissures, though occasionally slightly to deeply dimpled in the center, to 8 mm diam, variable in color from completely white pruinose on highly calcareous substrates to dull yellowish brown, olive brown, pale tan, or greenish tan on more acidic substrates; often forming thick mounds of squamules; thallus containing atranorin; widespread and common, especially on calcareous soils

*Psora cerebriformis* W. A. Weber

Squamulose



78

79

## Booklets

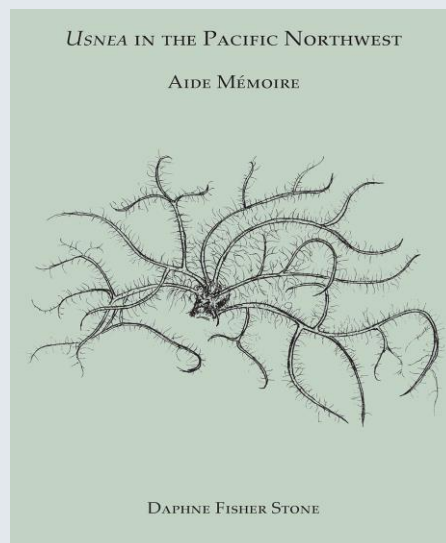
### ***Usnea* in the Pacific Northwest, Aide Mémoire**

by Daphne Fisher Stone, illustrated by Hannah Wilson and Rachel Werling

Inspired by an "Aide Mémoire" booklet produced by the British Lichen Society, this booklet provides a compact reference to *Usnea* in the Pacific Northwest with black and white line drawings, identification tips, and more. It should be useful to professionals and beginners alike. At the top of each page is a general statement about where the species is found in the Pacific Northwest. Each page shows several sketches. At the top left is an "icon" intended to show the general growth form. The icons used are tufted and bushy; pendulous without fibrils; pendulous with fibrils; and several with a special form or coloration, including *Usnea lambii*, *U. longissima*, and *U. silesiaca*. On the top right is an illustration of a large branch, cut in half lengthwise and also cut across the branch. This shows the relative thickness of the cortex (C), medulla (M), and axis (A), a useful tool for identification. Below the first two sketches are one or two sketches showing characters on main and secondary branches. A few words indicate characters that are typical of the species, such as soralia shape, isidia, papillae, and dents in the main branches. You may notice that on most species I do not describe branching patterns. This is because most *Usnea* thalli that are collected are not perfect, mature thalli, so branching patterns are not usually obvious. The bottom of each page lists similar species and some differences between them and the highlighted species. At the end of the booklet is an illustrated glossary.

Stone, D. F. 2018. *Usnea* in the Pacific Northwest, Aide Mémoire. Northwest Lichenologists, Corvallis, Oregon, U.S.A. ISBN: 978-0-9790737-3-1 (pbk.)

Cost: \$12 per copy + \$3 for domestic shipping and handling for 1-10 copies. (For example, 3 copies would be  $3 * \$12 + \$3 = \$39$ . One copy is \$15 including shipping. Follow [this link](#) to order.





## Miscellaneous

### Lichen Blitz



#### *Are you interested in hosting a NW Lichenologists lichen-blitz?*

Once or twice a year NWL members come together for a multi-day fieldtrip to a lichen-rich area in the Pacific Northwest of North America. The purpose is to get to know each other, and learn from each other while doing what we love to do: “lichenize.” These gatherings bring together much expertise. Our collaborative efforts typically result in an inventory list of species encountered, often uncover noteworthy finds (rare species, disjunct populations, others of conservation concern), and thus far one undescribed species.

If you manage a natural area, and are interested in hosting a lichen-blitz, please contact us. We are a low-maintenance group that usually camps or bunkhouses in remote locations. Formal permission to collect lichens is naturally required. NWL will periodically review its blitz requests and optional associated donations; a foray to the best candidate area will then be scheduled.

Donations will be used to support the educational, nonprofit purposes of NW Lichenologists.

[Contact the secretary of NW Lichenologists](#)