NORTHWEST LICHENOLOGISTS

2022 Newsletter

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Upcoming NWL Events

NWL Training Event

This year, the NWL is hosting a two-night training event, where we will simulate conducting an FIA-style plot following the lichen certification guidelines. The focus of this training event is on lichen identification skills of the PNW. Trainees can be at any level, but you will get the most out of this if you already have basic lichen training. Previously certified lichenologists are encouraged to attend to brush up for re-certification. As a group, we will collect lichens on the plot and then spend the remaining time discussing and keying out the specimens. Several dissecting microscopes will be provided for shared use along with chemicals for spot tests.

Training Facilitators: Elisa Di Meglio, Joe Di Meglio, Katherine Glew.

Cost: The training costs $135 including a $35 facility fee. Payment of $135 dollars is due at registration. Registration and full refunds are available up to two weeks prior to the event.

Check in time – 2 pm 7 September 2022.
Check out time – 12 pm 9 September 2022.

Directions: From Sweet Home, Oregon travel east on Hwy. 20 for 17 miles to Road 2032. Follow Road 2032 to Longbow Organization Camp. Latitude 44° 23' 30.0001" N, Longitude 122° 22' 0.0001" W.

Facilities: https://www.recreation.gov/camping/campgrounds/232314?tab=info
Longbow Organization Camp was built by the Civilian Conservation Corps in the 1930s. The historic campground provides a covered cooking area with a fireplace and six sleep shelters that face the beautiful South Santiam River.

Parking at the campground is very limited, so please carpool with other participants if you can.

Overnight accommodations: 6 alpine shelters are available which have 3 walls, a fireplace and bunkbeds that sleep 8 people. Bring everything you will need to sleep on a bunkbed in summer outdoor/camping conditions (sleeping pad, sleeping bag, warm clothes…etc). **No tents or trailers are allowed; you must stay in one of the shelters.

Food: Bring 2 nights worth of food for yourself and any camping cooking supplies you will need. **No power is available.

Bring:

1. Your copy of McCune and Geiser, 2009. Macrolichens of the Pacific Northwest, if you have one.
2. A hand lens.
3. A dissecting microscope if you have one, and a headlamp to use as a light source.
4. 2 nights worth of food for yourself and any camping cooking supplies you will need. **No power is available.
5. Camping gear to stay 2 nights in a bunkbed (sleeping pad, sleeping bag, warm clothes, toiletries…etc.). No tents allowed.

One of the bunkhouses at Longbow

Anacortes - Cypress Island, WA

The purpose of the event is to explore one of the diverse San Juan Islands and contribute to the knowledge of lichen biodiversity on the island. Leaving from Anacortes, WA. Free long-term car parking on Q Avenue. Very limited accommodations: 12 lichen people and gear will be transported to a remote semi-primitive house/field station operated by the state. Transportation from Anacortes and stay at the house is free of charge. We will be dropped off at Secret Harbor, southeast side of island. Bring your own reference materials, microscope, and supplies. We provide our own food, cooking, and cleaning. Bring your own bedding. Very limited bed space (single bed in shared double room, available for 8 total), so tents in the yard are encouraged. We will need at least 4 volunteers to sleep in tents in the yard.

Info on the area is at https://www.dnr.wa.gov/CypressIsland

$50 nonrefundable deposit will go towards shared group expenses, primarily food.

Registration is first-come first-served, members only.

Foray near Powers, OR

The Forest Service is graciously hosting us at Powers, in the Coast Range of southern Oregon. Here is a general map of the area. (Highway 42 at the top of the map is the road between Coos Bay and Roseburg). They are trading use of facilities for lichen inventories and FS learning. General plan: we will visit field sites in the mornings and work on specimens in the afternoons and evenings. Leaders: Teresa Bird (USFS) and Bruce McCune (OSU).

The Forest Service (Rogue River-Siskiyou National Forest - Powers Ranger District) is offering bunkhouses and a conference room available for scope work. Likely spots to visit include:

Coquille River Falls RNA
Daphne Grove Campground
Port Orford Cedar RNA
serpentinite areas

Facilities:

- conference room
- 4 beds. The other 8 should either pair up with roommate for floor space in a bedroom, request the living room, or camp in the yard. Additional housing to be determined at end of fire fighter season (another house will be available if fire staff are gone. But fires will likely still be active at that time.)
- ability for campers to shower, cook, flush toilets, charge electronics, etc.

Bring your own food or arrange to cooperate with others. Bring your own scopes, reference books, collecting materials, and tools, or cooperate with others on these.

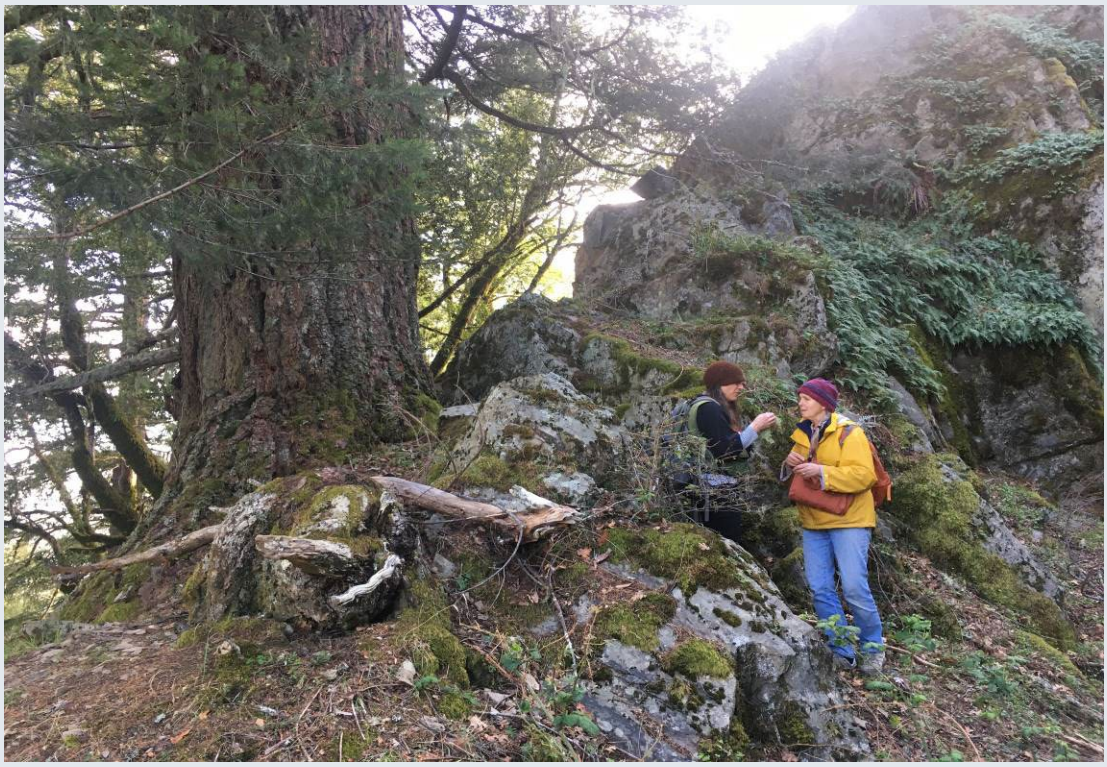
Fees: $10 registration fee to be refunded to registrants who follow through and attend.

More specifics on location will be distributed as the time approaches.

Recent NWL Events

2022 NWL Annual Meeting
By Adrienne Kovasi

The meeting of Northwest Lichenologists and the California Lichen Society was held at Cal Poly Humboldt on March 17th - 19th. On the first day, presentations were given by 11 different presenters on a range of lichen-related topics. $100 awards were given from NWL to the first three student or amateur presenters to register. In the afternoon, there was a field trip to mixed white oak and Douglas fir forest on private timber land that was visited by attendees of Northwest Science 20 years ago! On the 18th, the lichen enthusiasts visited the hyper-coastal Samoa Dunes and Wetlands and then went back to the lab to identify specimens that were collected and work on *Psora* specimens with Dr. Einar Timdal and Annie Evankow. Local lichenologist Marie Antoine generously hosted the whole group for a delicious dinner at her house that evening. The final day started with a field trip to Redwood National Park to check out the lichens of old-growth redwood forest and then ended with a potluck dinner and open board meeting of the California Lichen Society.



Upper: Amanda Hardman and Daphne Stone. Lower: Meeting of the presidents Daphne Stone (NWL) and Jesse Miller (CALS) in Arcata.

Lichen conference at Samoa Dunes: L to R, Michael Russell, Rueben, Amanda Hardman, Daphne Stone, and Bruce McCune

News and Projects from NW Lichenologists at Home and Abroad

(Generally in the order received)

New Lichen Friends
From Rebecca Durham

These two lichen species I encountered this fall in Montana, and they were new to me, so it was exciting. It is fun to find new lichen friends!

Solorina crocea, alpine, northwest Montana, Glacier National Park

Solorina crocea, alpine, northwest Montana, Glacier National Park

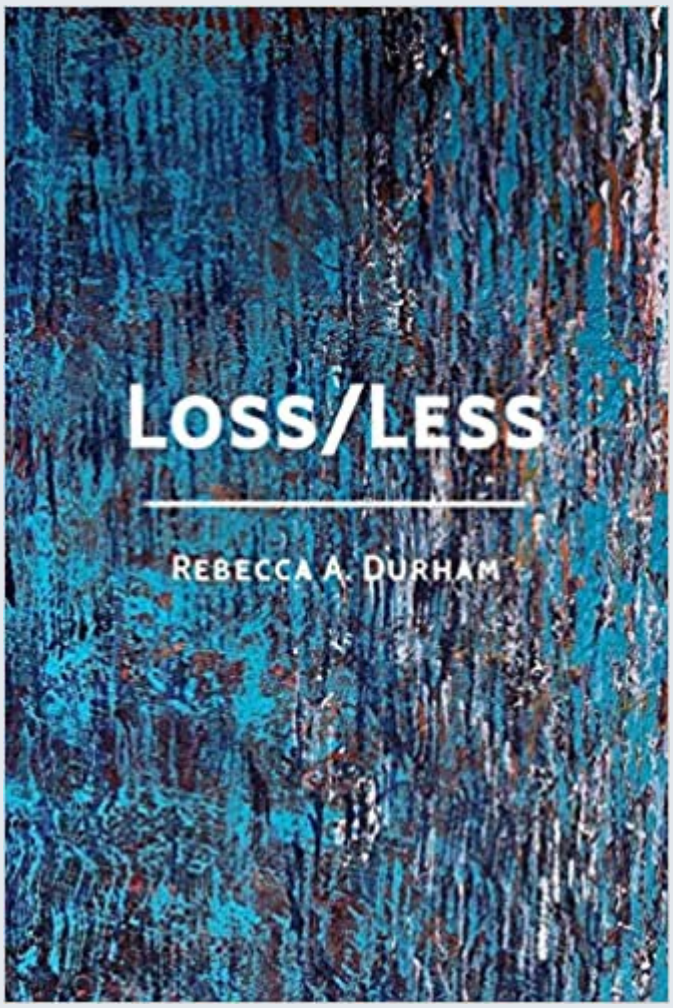
Psoroma hypnorum, subalpine forest, northwest Montana, Flathead National Forest

In other news, my second book of ecopoetry, *Loss/Less,* is now available from Shanti Arts, Bookshop, Amazon, and your local bookstore. While the poems are not lichen specific (*Bryoria* appears once), one poem geeks out on looking at plants microscopically and the book has environmental themes. My first book of ecopoetry, *Half-life of Empathy,* is available at Small Press Distribution and through your local bookstore.

Rebecca A. Durham, M.S., M.F.A.

Loss/Less (Shanti Arts, 2022)
Shanti Arts
http://www.shantiarts.co/uploads/files/def/DURHAM_LOSS.html
Bookshop
https://bookshop.org/books/loss-less/9781956056167
Amazon
https://www.amazon.com/Loss-Less-Rebecca-Durham/dp/1956056165/ref=sr_1_3?qid=1642367695&refinements=p_27%3ARebecca+A+Durham&s=books&sr=1-3&text=Rebecca+A+Durham

Half-life of Empathy (New Rivers Press, 2020)
Small Press Distribution
https://www.spdbooks.org/Products/9780898233940/halflife-of-empathy.aspx



The Daphne Stone Report

It has been a busy year for me, with covid restricting our social lives. I have instead focused on LICHENS! Here are a few things I have been working on in the past year:

Platismatia glauca* vs. *P. wheeleri: Heather Root and I co-authored a paper where we teased apart the overlapping ranges of these two species. The paper, "A niche for *Platismatia wheeleri"* was published in *Evansia* 38(4) – the first issue of 2022. Check it out!

***Chaenotheca phaeocephala* vs. *C. subroscida*:** This work began because of the difficulty in telling the rare *C. subroscida* (photo on next page) from the common *C. phaeocephala.* Claire Whittaker and I TLC'd a bunch of specimens from OSC and found very few true *C. subroscida.* We plan to write our findings up in another short article in *Evansia*, so watch for that one. I hope it helps non-vascular surveyors in their efforts!

Nephroma orvoi: This new species, very similar to *N. parile*, was described by Timdal et al. (2020) as having a distribution that includes Washington. Claire Whittaker and I wanted to find out more about the distribution including whether the range extends to the Rocky Mountains and south into Oregon. We looked at all of the approximately 180 collections of presumed *N. parile* in OSC and compared them to a voucher sent to us by Timdal. We published a short paper about this in *Evansia* this year.

FIA collections: After working on the FIA (Forest Inventory and Analysis) and ARM (Air Resource Management) collections from the west for 3 years, most of the problems have been cleared up. This is an incredibly valuable collection for studies that look at ranges of our species, since on these plots every species present is collected. This gives us statistically accurate presence/absence data, for doing studies such as the *P. wheeleri* paper mentioned above. All of the specimens are entered into the Consortium of North American Lichen Herbaria (CNALH), and although there is not an easy way to find just the FIA/ARM specimens, right now these are easily identified by numbers that begin with "OSC-M-". However as cataloging work continues in OSC, all new OSC specimens will be accessioned with the same preface.

***Leptogium/Scytinium*:** Many of you have shared specimens of these genera with me and Bruce, and they are all being used and appreciated! We now have sequences for several hundred specimens and are starting sort the sequences into identifiable groups.

We found two new, large *Leptogium* which ANY lichenologist will be able to identify, since they both have fairly obvious, very unusual characters. *Leptogium umpquaense,* found by Jennie Sperling, a botanist at BLM, is from the lower Umpqua River. It has long, felted hairs on the upper and lower surfaces. Cheers, Jenny! *Leptogium bacatum* has tomentum on the lower surface but the hairs are made of spherical cells instead of cylindrical cells. Thus, if you look at it with a hand lens or scope, the tomentum looks like tiny clear beads! I found this one first in Calistoga, CA, and then Joe DiMeglio found one near Santa Fe, NM. Check out our recent paper in The Bryologist.

I am looking forward to some outings this year, and hope to see more people and of course see more lichens!

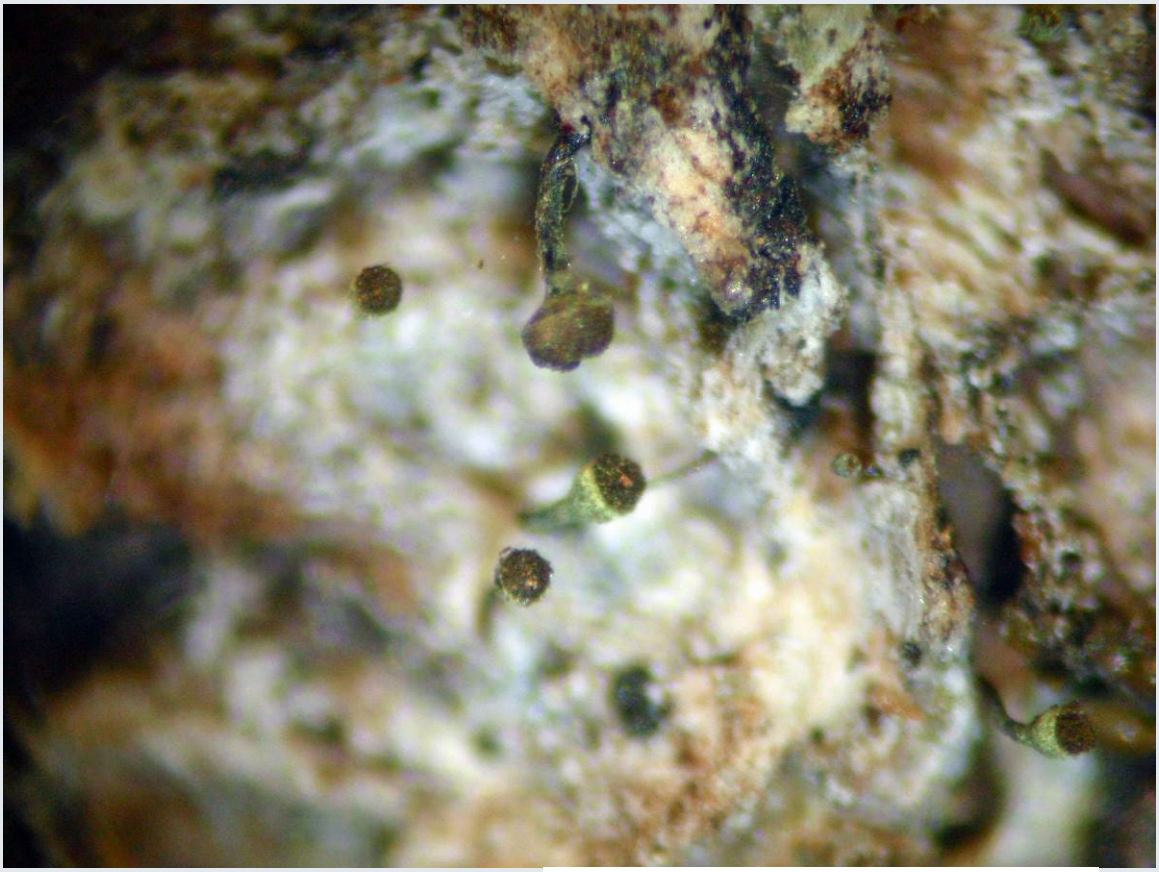
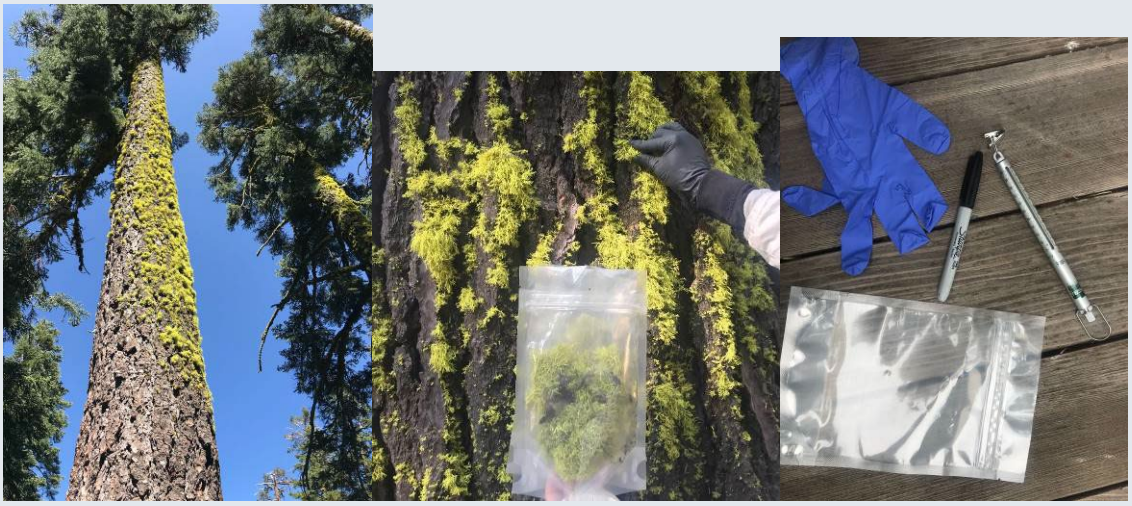


Photo: Putative *Chaenotheca subroscida*. On old growth *Pseudotsuga*, approx 11 miles north of Trout Lake, Washington. Scot Loring photo.

Lichens CitiSci

Community Science Experience

Did you know lichens can tell us a lot about the quality of our air? Do you enjoy spending time on National Forest lands? Join Lichens CitiSci and become a certified volunteer, trained in official air quality biomonitoring protocols using lichens and some basic (and provided) tools. You can meet some neat folks, work independently or with a friend, and contribute to ongoing scientific research which influences resource management. Additionally, all data collected are added to a national database that helps the US Forest Service track and manage air quality across National Forest lands.



Would you like to join us in collecting lichens to help us learn about our air? If yes, go to our website and let us know you are interested by completing your volunteer registration form! We will reach out to you and get you set-up for the self-led online training and certification program.

https://lichenscitisci.org/

lichenscitisci@gmail.com

Instagram @lichenscitisci

Lichen Apparel and Publications

Letharia columbiana apparel

Northwest Lichenologists offers hats, tote bags, patches, and a variety of t-shirts featuring the NWL *Letharia columbiana* icon. Please visit our online store for current prices, sizes, and ordering information. If the item you want does not show up at our store, email Daphne Stone for placing an order. Also, for questions about sizes, feel free to email Daphne.


Women's t-shirt, black


Men's t-shirt, black


Women's v-neck, black

Baseball cap, black

Baseball cap, blue

Patch

Women’s t-shirt, blue

Men’s t-shirt, blue

Tote bag, blue Tote bag, black

Women's long sleeve, blue

Men's long sleeve, black

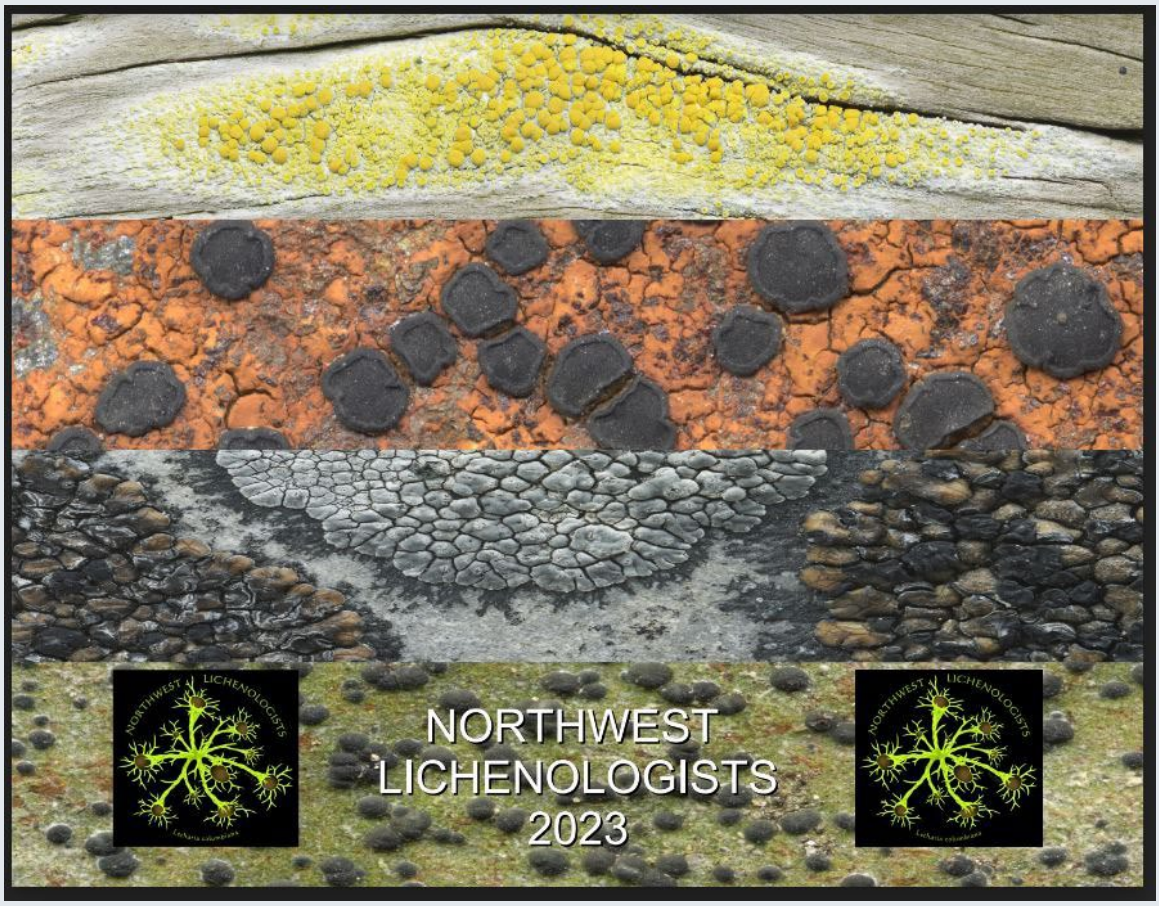
Women's thin hoodie, charcoal gray

"Lycanologist" t-shirt, black (glows in the dark)

Women’s deep v-neck, burnout blue

Zip hoodie, black

NWL 2023 Calendar



The coming year's calendar highlights the excellent photography of Tim Wheeler

This 11 x 8.5 inch wall calendar, opening to 11 x 17 inches, has one month per page and a photo of a charismatic lichen on the facing page. This is a limited edition, first come first serve. Available at our on-line store.

Featured lichens: *Acarospora glaucocarpa group, Anamylopsora pulcherrima, Aspicilia nashii, Bellemerea cinereorufescens, Bellemerea sp, Brianaria bauschiana, Calvitimela talayana, Caloplaca californica, Carbonea vitellinaria, Circinaria arida, Enchylium bachmanianum, Ionaspis lacustris, Lecidea lapicida, Lecidea sp, Pleopsidium chlorophanum, Rhizoplaca melanophthalma, Rusavskia elegans*.

Cost: $12 per calendar (USD)

Shipping & handling: within U.S. 1 to 10 calendars ship for $3, flat rate (USD).

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 Monographs under the "Store" tab at the new NW Lichenologists website.

Order by credit card using PayPal from www.nwlichens.org

Monographs in North American Lichenology, Vol. 5

Revision of the **Aspicilia reptans** *Group in Western North America, an Important Component of Soil Biocrusts*

Aspicilia in the broad sense is one of the most common and speciose genera of saxicolous lichens in the world. It is also a common genus in the biological soil crusts of arid and semi-arid parts of North America, as well as on other continents. Analysis of DNA sequences and morphology from *Aspicilia* in soil crusts revealed previously unrecognized species that are ecologically, geographically, morphologically, and genetically distinct. Six previously unrecognized species are described. The new species are mostly infertile, primarily terricolous, and are separable in most cases by a key to subtle differences in morphology, anatomy, and secondary chemistry.

Although we have released a free pdf, we have made a small, limited print run. These are available for $30, first come, first serve. Only a few copies remain. Because we do not plan to reprint these, they are guaranteed to become a collectible -- be sure to have a full set!

McCune, B. & J. Di Meglio. 2021. **Revision of the *Aspicilia reptans* Group in Western North America, an Important Component of Soil Biocrusts**. Monographs in North American Lichenology 5: 1-92. ISBN: 978-0-9790737-5-5

Revision of the *Aspicilia reptans* group in western North America, an important component of soil biocrusts

Bruce McCune and Joseph Di Meglio

2021

Monographs in North American Lichenology Vol. 5

Northwest Lichenologists

www.nwlichens.org

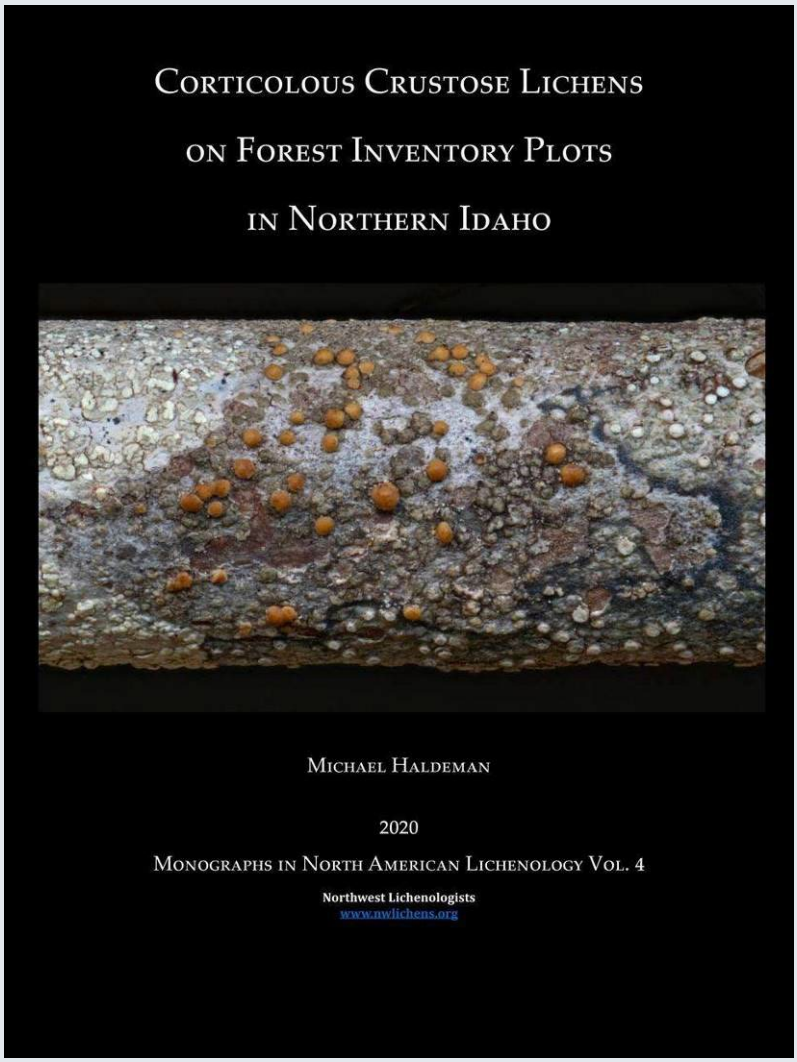
Monographs in North American Lichenology, Vol. 4

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. Print copies were available, but are now sold out. Order now!

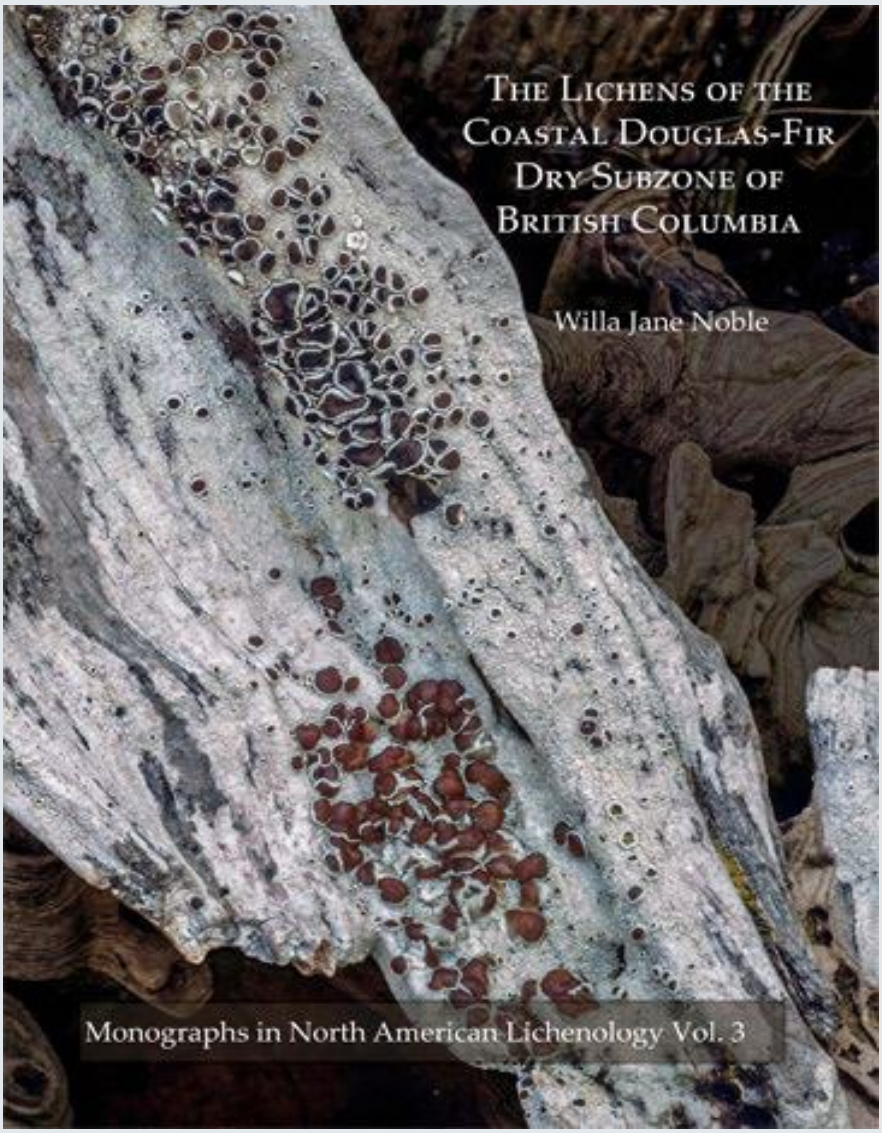


Monographs in North American Lichenology, Vol. 3

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



Monographs in North American Lichenology, Vol. 2

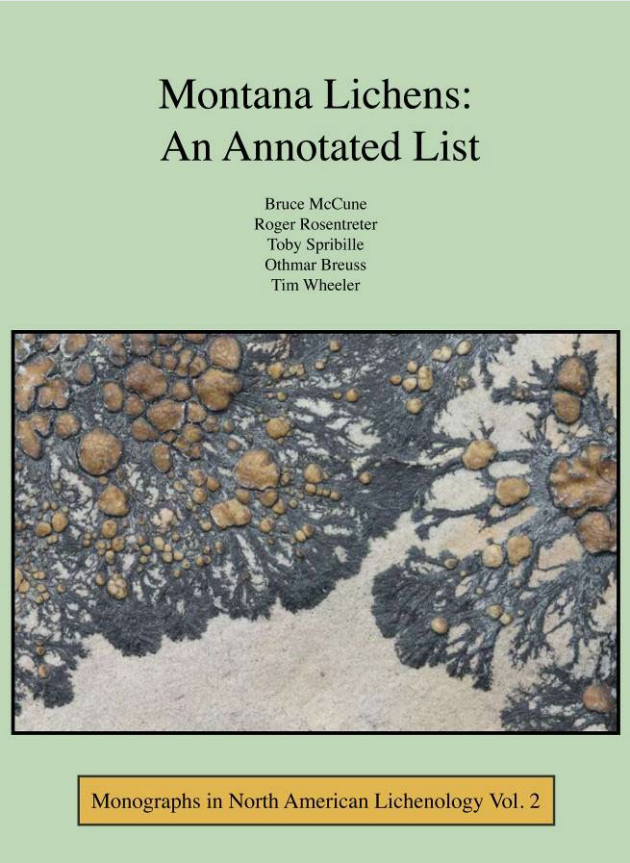
Montana Lichens: An Annotated List

Why would a non-Montanan 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



Monographs in North American Lichenology, Vol. 1

Biotic Soil Crust Lichens of the Columbia Basin

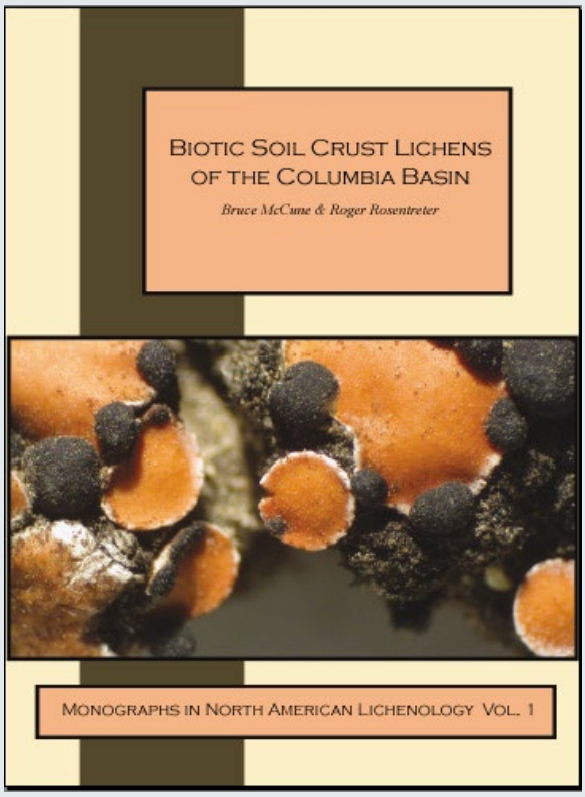
Why write a book for identifying soil crust lichens? We have three reasons: (1) they are ecologically important, (2) they can be difficult to identify with existing sources, or they are omitted altogether, and (3) they should be more widely recognized for what they are.

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.

***** Reprinted in 2018 with updates to nomenclature and much improved color rendition! If you are already a regular user you will love the reprint, easily worth the $30 for a new copy. *****



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

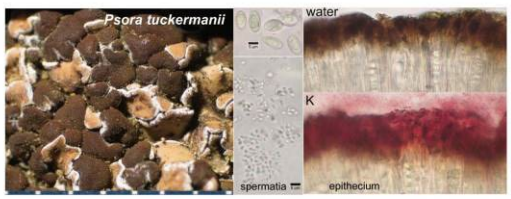
2a Edges of squamules not pruinose but upturned and exposing the pale lower surface; thallus C+ pink, KC+R or pink (gyrophoric and lecanoric acids). Squamules 1-7(11) mm diam, concave with an ascending margin; upper surface pale to dark brown, often olive in the shade; apothecia dark brown to blackish, 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; epihymenium 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 *ex* Timdal

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



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Squamulose

79

Booklets

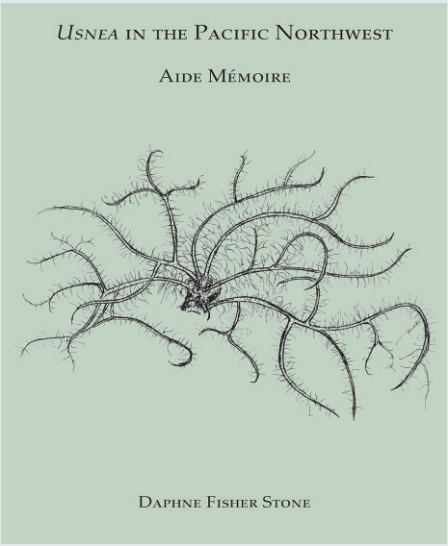
Usnea in the Pacific Northwest, Aide Mémoire

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