NORTHWEST LICHENOLOGISTS

2023 Newsletter

Visit our website! Check us out on Facebook!

Upcoming NWL Events

NWL Annual Meeting

Student support offered from [Northwest Lichenologists](). Also, poster awards to be offered from [AAAS-PD]().

Program at a glance:

Tuesday – March 21

- NWSA board meeting (Board members only)
- Evening social, at the Bellingham Cruise Terminal, 6:00 to 9:00 PM.

Wednesday – March 22

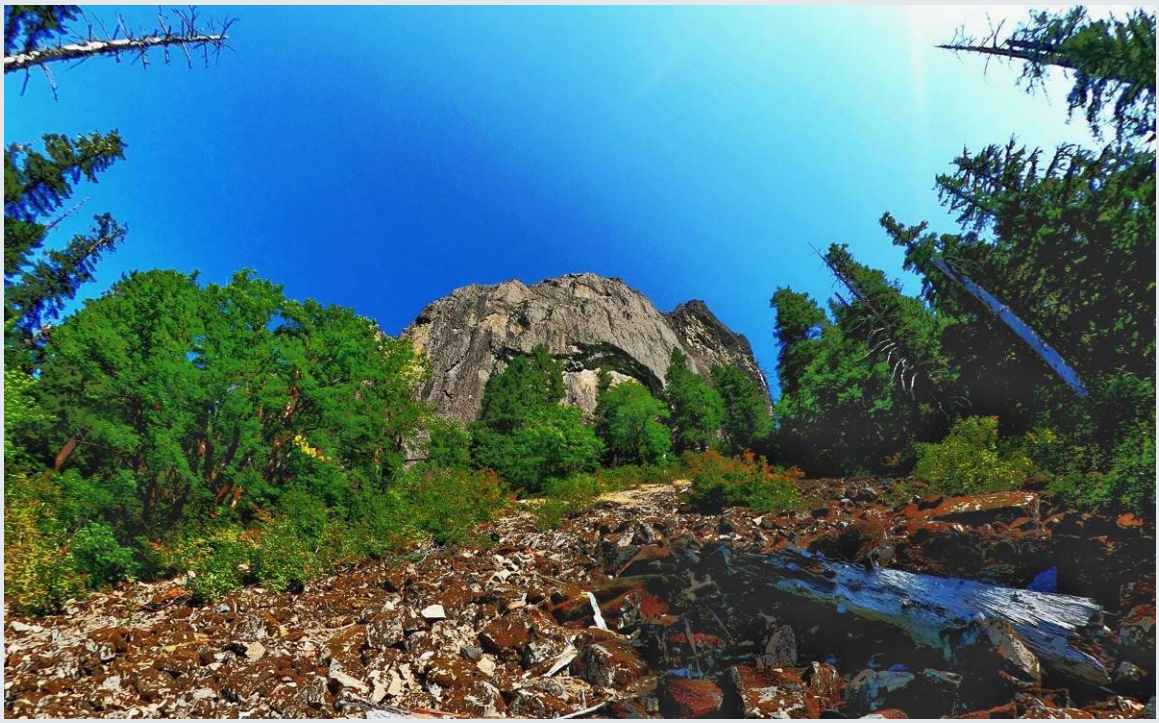
- Morning and afternoon plenary speakers and special sessions
- Workshops, concurrent contributed/invited oral sessions
- Social and poster session with poetry competition

Thursday – March 23

- Morning and afternoon plenary speakers and special sessions
- Workshops, concurrent contributed/Invited oral sessions
- NWSA business meeting and lunch – all invited and lunch included with registration
- Social and poster session with awards

Friday – March 24

- Field trips



Photos: NWSA website

NWL Certification Test

This is our every-other-year west-side certification, open to anyone.

Registration will open soon (TBA), until Aug. 1, about 1 month before the event. Payment is required for registration.

For more general information on the certification program and format, please see the Certification pages on the NWL website.

The exam is offered every two years, and the location is changed each year, so this will be a great opportunity to be certified in Oregon. After this year, the next exam will be held in 2023, and will probably be in Washington.

The NWL Certification Exam will take place 1-3 September at the H. J. Andrews Experimental Forest near Blue River, OR. The exam will be challenging but rewarding. The examiner is Amanda Hardman.

THIS YEAR: We are not offering a separate training at the same time, but we encourage you to participate even if you do not feel you are ready for the certification exam. Make it a learning experience!

HOUSING: Andrews Experimental Forest rents nice apartments with shared cooking facilities. Details to come later.

TIMING: Check in late Friday afternoon. Exam starts 8:30 a.m. on Saturday, finishes by 4 p.m. on Sunday.

COST: Cost (to be paid on this website) includes lodging and facility rental. For those taking ONLY the written exam, to be taken remotely by Zoom (for anyone needing to repeat just that), the cost is much reduced.

WHY DO IT? Lichen Certification is a valuable addition to your resume, agency botanists and private contracting companies view it as a plus when considering who gets federal contracts and internal jobs.

LODGING details: Andrews Experimental Forest. Each apartment cluster has a shared kitchen and multiple bedrooms. Attendees should bring and prepare their own meals.

BEDDING: TBA.

QUESTIONS: Please contact NWL if you have any concerns, questions, or doubts.

Base fee:

- **Regular (written and practical), with housing – $196.00**

Regular registration, which includes written and practical parts, shared facility fee, and housing. One guest with shared room can be included for the additional cost of the second bed in a shared room. Bedrooms have two single beds. If you require a private room, you can request this at registration, but there is an additional charge for the unused bed.

- **Regular registration without housing – $140.00**

Regular registration, with written and practical parts, but no housing provided. You would need to stay off site, but could use our shared meeting facility.

- **Written exam only, remote – $25.00**

Covers written exam only, no field practical, no lodging, remote access only. This assumes that you have previously passed the practical exam.

Recent NWL Events

Foray at Powers, OR

During October 2 – 5, 2023, The US Forest Service graciously hosted us at Powers, OR, where the Siskiyou Mountains meet the Coast Range of southern Oregon. The USFS traded use of facilities for lichen inventories and education. Accommodations included our own house, a second house shared with USFS personnel, and plenty of camping space. We had a dedicated conference room to use as a lab.

We visited the following locations:

Johnson Mountain
This mostly forested mountain has multiple large, rocky openings with serpentinite substrates, which provided excellent collection opportunities.

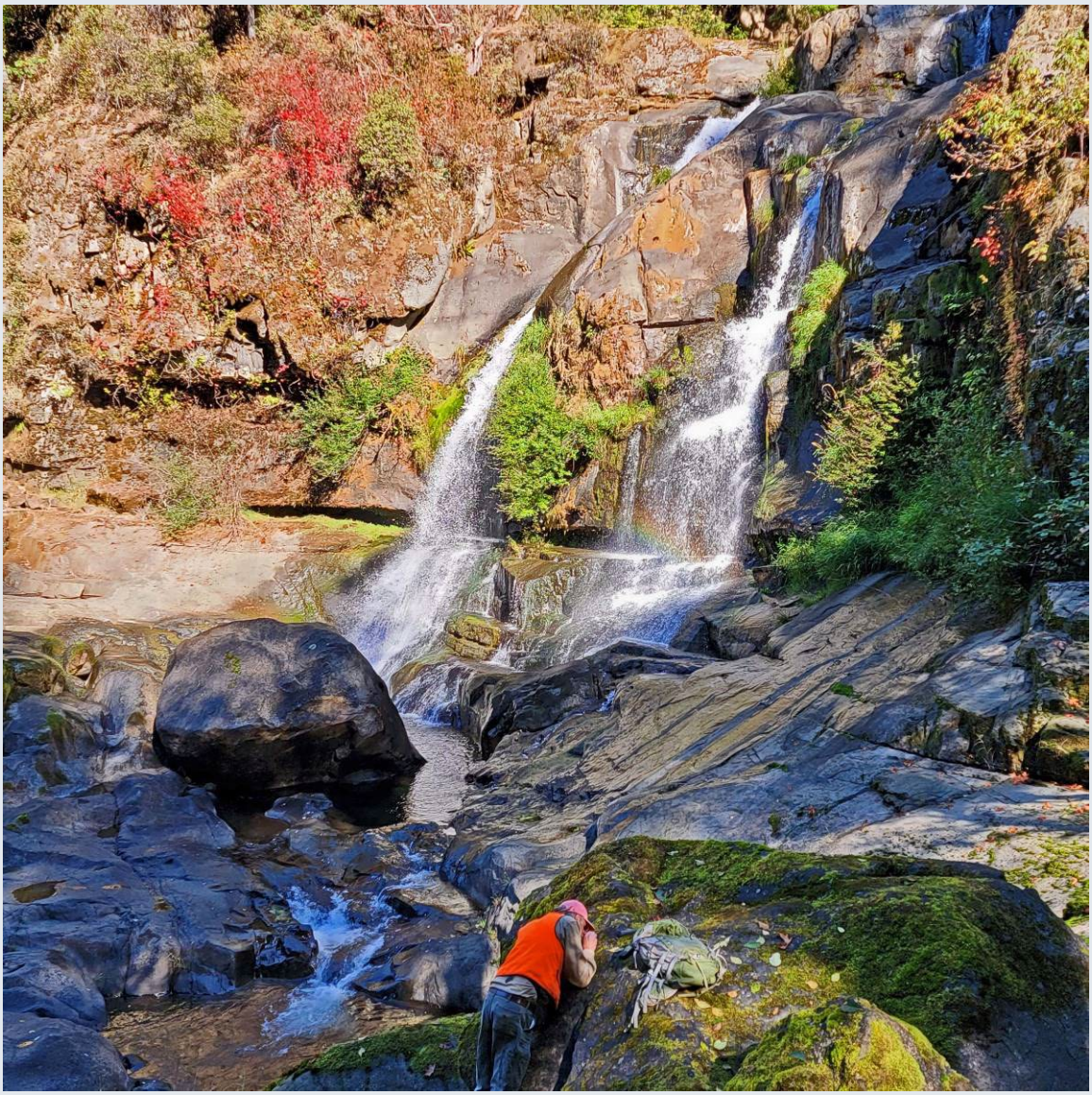
Serpentinite meadow at the summit


Species of *Stereocaulon*


Someone had hiked in the materials to build a bench as a memorial to one Michael Vos

Coquille River Falls

A short trail led us through old-growth forest downslope to a set of picturesque falls. Recent windstorms had provided us with litterfall, giving us a view of the canopy lichen flora. The rock along the river provided additional lichens.



Bruce McCune examining lichens near the base of the falls

Daphne Grove Campground

Located on the banks of the South Fork Coquille River, this location provided a great diversity of lichens, riparian and otherwise.

Photo: Xinhui Yu

Field trips were followed by lab time.

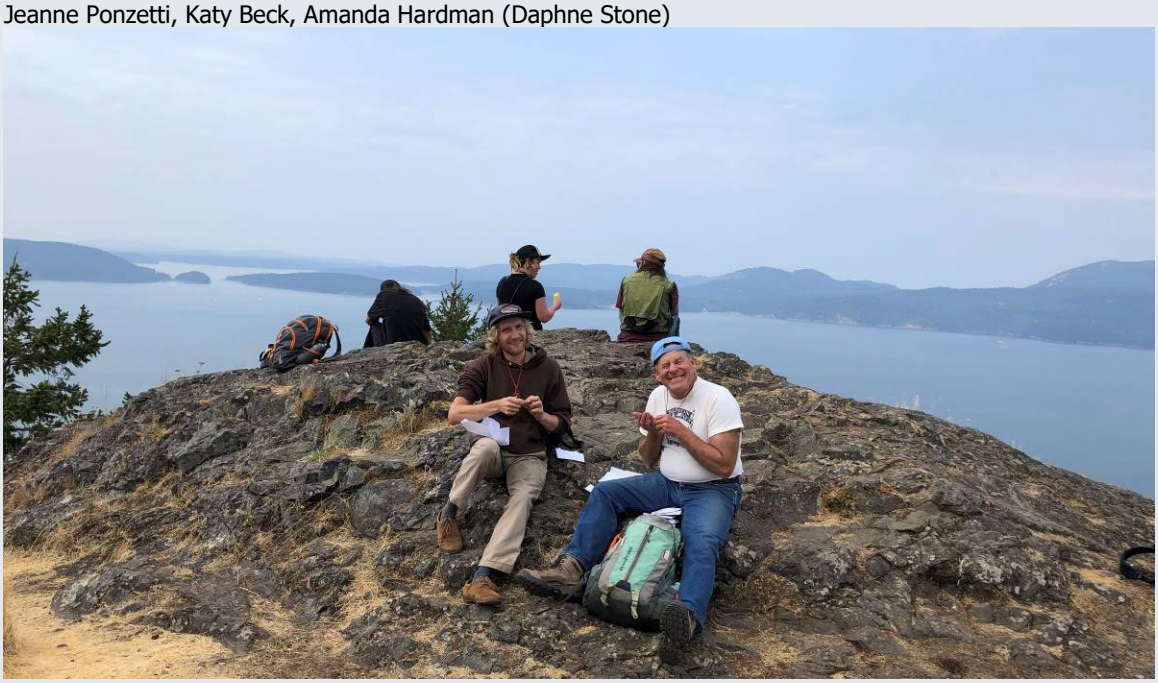
Photo: Xinhui Yu

Foray at Cypress Island

The purpose of this event was to explore one of the diverse San Juan Islands and contribute to the knowledge of lichen biodiversity on the island. Free transportation via boat from Anacortes, WA, was provided. Twelve people were dropped off at Secret Harbor on the southeast side of island. Look for a more complete write-up of this event later this year, hopefully in *Evansia*. General information for the island is at https://www.dnr.wa.gov/CypressIsland.

Left: departing from Anacortes; Right: *Caloplaca* sp on maritime rock near the research station (Nils Nelson)

Jeanne Ponzetti, Katy Beck, Amanda Hardman (Daphne Stone)



Looking at lichens on Eagle Cliff (Jeanne Ponzetti)

John Villella scanning diverse crustose lichens on a seaside juniper perched over Cypress Lake (Nils Nelson)

Left: a spectacular slickenside rock on Eagle Cliff Trail with perfect *Caloplaca demissa* thallus in center (Daphne Stone); Right: the lab space with Daphne Stone, Roger Rosentreter, and John Villella keying (Nils Nelson)

Hikin' for lichen – Roger Rosentreter, Tor Tonsberg, and Katherine Glew (Jeanne Ponzetti photo).

Left: Daphne Stone examining *Cladonia portentosa* and *C. rangiferina*; Right: *Ochrolechia arborea* - a drab whitish crust with a bright yellow UV+ reaction found coating seaside wooden benches, fences, docks, and hardwood. Other UV reactive *Xanthoria* can also be seen. (Nils Nelson photos)

Heading to the boat (Nils Nelson)

News and Projects from NW Lichenologists at Home and Abroad

(Generally presented in the order received)

Lichens: Toward a Minimal Resistance by Vincent Zonca (Book Review)

From Robert Roberts

A myriad of books has been written about plants and fungi and our relationships with them. Robin Wall Kimmerer's book, *Braiding Sweetgrass*, is a beautiful example. Paul Stamets has long been an advocate for fungi, promoting their wonders in works such as *Mycelium Running* and *Fantastic Fungi*. Now, Vincent Zonca has written an excellent book dedicated to lichens. In *Lichens: Toward a Minimal Resistance* he expounds on our relationship with them, and what we can learn from them as a culture.

The book is written in four parts and is further divided into sections with clever and amusing titles including "Lichen Erotics", "Music = Mushroom", "Lichens of Sunlight and Mucus of Azure", "Insurrection of the Humble", and "Chimeras, Vampires, and other Common Monsters".

Part One discusses how lichens have been viewed through nature writers such as Thoreau, by western philosophers such as Theophrastus, and by indigenous cultures such as the Salish discussing their use of *Bryoria fremontii* and from scientists in botanical studies and ecology. Zonca wraps up Part One with the topic "Lichen Erotics", which includes an introduction to the Greek word leikein which means "to lick" and likens the word to the habit of lichens "to lick" moisture from the environment.

Part Two discusses how lichens have been represented through time. He presents the challenges of describing and naming them by the scientific community. Zonca presents the influential, avant-garde composer, John Milton Cage, and his devotion to the study of fungi and lichens. He reminds us how lichens have been represented in the art and poetry of the Far East and linked to the Japanese principle "Wabi-sabi."

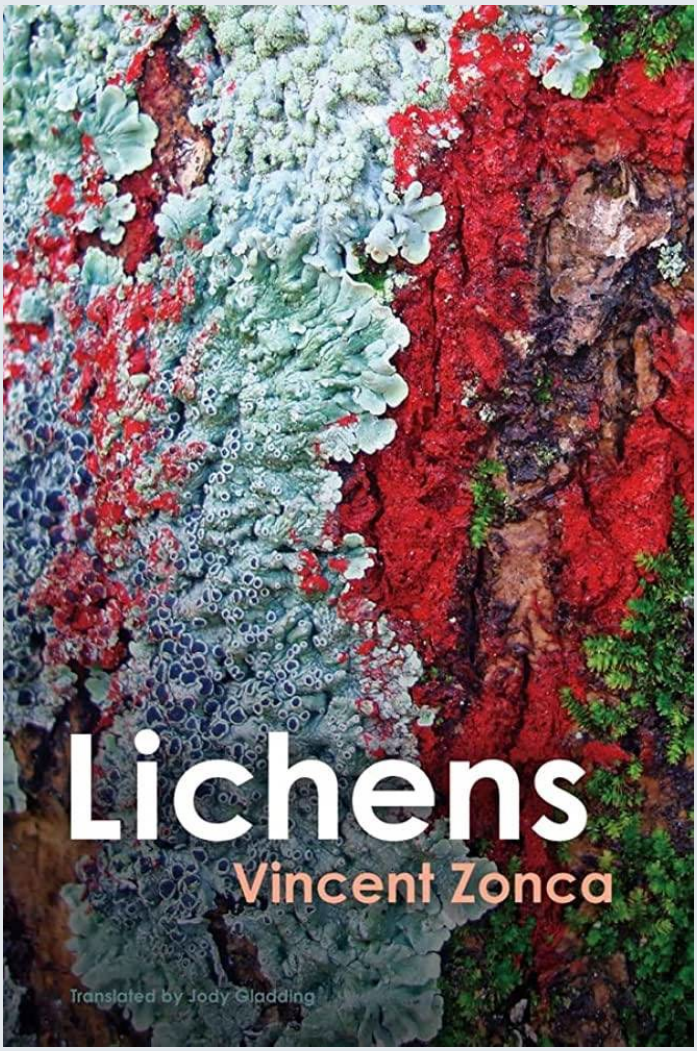
Part Three discusses how lichens have "much to teach us about our relationship to the environment and our place within the living world, and within nature" He discusses what philosopher Jean-Jacques Rousseau, botanist Wilhelm Nylander, "Poet-lichenologist, lichenologist-poet" Camillo Sbarbaro, writer Pierre Gascar, and contemporary poets have taught us through close, intimate observation of lichens. Zonca believes that lichens are at the "heart of the artistic and scientific discourse that is trying to conceive of a new global articulation within the living world and a new attention to the environment." Finally, Zonca suggests we look to the work of Oscar Furbacken to help us see lichens differently in urban settings.

In Part Four, Zonca attempts to guide us toward a symbiotic way of thought. He gives us his interpretation on the origins of symbiosis. Zonca states, "The mechanism of symbiosis invites us to redefine the boundaries of biological individuality, as well as the limits of anthropology." He argues that with the advent of microscopy, the definition of

the lichen changed from a singular "lichen being" to a plural one, made up of an "ensemble of parts" and how we can best represent them in our current time. Zonca invites us to make lichens model thinking about resistance and interaction and suggests that lichens offer us clues for reflecting on our world.

I don't have much to be critical of other than getting lost in the poetry that Zonca uses. That's mainly because I don't read a lot of poetry. However, that did not discourage me from enjoying the book.

To conclude my review, I loved reading this book! It was a pleasure to read a book devoted to a topic that is a passion of mine, and surely of yours as well. If you, as an amateur or professional lichenologist, want to think more about the wonderful world of lichens, you will be entertained by reading this book. Zonca does a superb job in giving a voice to lichens.



Sticta limbata* & *Peltigera collina
From Jeff Ward

Note from editor: based on the above photo and through observing his iNaturalist observations, Jeff IMO is a very talented photographer and is very passionate about lichens. For more of his photos, check out: https://www.inaturalist.org/observations?place_id=any&taxon_id=54743&user_id=lumenal

WSU Undergrads Explore Epiphytic Lichen Diversity on Campus

From Meaghan Petix
School of Biological Sciences, Washington State University (WSU)
meaghan.petix@wsu.edu

On a snowy afternoon in late February, WSU undergraduate students in **BIOL 372: General Ecology** bundled up and headed outside to survey epiphytic lichen communities on the WSU campus. They had learned about how lichen communities can be useful indicators of air quality due to their sensitivity to pollutants such as nitrogen. The objective of their lab activity was to quantify richness and diversity of epiphytic lichens on campus and determine whether lichen communities varied on trees near roads compared to further away from roads [i.e., varying distances from vehicle emission sources]. Each group of students was assigned a pair of trees where they surveyed the lichen community growing on several areas of each tree. They utilized a plastic grid sheet to tally the percent cover of different lichens using morphospecies; they also collected habitat data including tree species, bark texture, and light availability. To compare the near-road and away-from-road communities, the students calculated species richness (# of different morphospecies), species abundance (# of individuals per morphospecies), species diversity (Shannon's Diversity Index), and species evenness (Simpson's Evenness). Interestingly, the students found that lichen communities near the roads were more diverse than away from the road; however, these communities had a greater proportion of eutrophic (nitrogen-tolerant) species including *Candelaria* and *Xanthoria*. Students had to describe their results as well as discuss why they thought these patterns may have occurred. Despite the cold weather, students had a fun time getting to delve into the miniature world of lichens and explore lichen diversity on their campus!


Epiphytic lichen community growing on tree on WSU campus. Photo by Meaghan Petix

Grant Opportunity
From Friends of Cascade-Siskiyou National Monument

Interested in doing research within the Monument boundary? The Friends Research Fund annually awards individual grants ranging from $500 – $3000 to undergraduate and graduate students for faculty-supervised projects that enhance the understanding, appreciation, preservation, and/or protection of the Cascade-Siskiyou National Monument. Students have an opportunity to share their findings with the public at the annual Monument Research Symposium.

The 2023 grant cycle is now open! Applications are due April 21, 2023, 11:59pm PST.

ELIGIBILITY
This grant is available to students who:
-Are studying in areas of biology, environmental sciences / education, sociology, arts and humanities, or business.
-Are currently enrolled as a Junior or Senior Undergraduate or a Graduate student with good academic standing at a state or regional college or university.
-Have successfully completed (with a passing grade or better) coursework in at least one upper division course related to their area of study.

TIMELINE
FCSNM offers one grant cycle for the Friends Research Fund each year. Awardees will be announced the week of May 1, 2023, and commitments to accept the projects confirmed by May 10, 2023. Grant funds will be issued to awardees by May 31, 2023.

INSTRUCTIONS
Download the application and fill in the embedded form using Adobe Acrobat Reader or Adobe Acrobat Pro. Save your completed application and email it to us as an attachment along with your curriculum vitae and a letter of recommendation from your faculty advisor to: researchCSNM@cascadesiskiyou.org. Please read the detailed instructions contained in the application.

Application and more information available at:
https://www.cascadesiskiyou.org/programs

QUESTIONS?
Contact Collette Streight at collette@cascadesiskiyou.org

Among the 2022 grant recipients:

HEATHER STEWART-AHN: EASTERN WASHINGTON UNIVERSITY
Heather is a Master's student in biology at Eastern Washington University. Working with her advisors Dr. Jason Ashley at Eastern Washington University and Dr. Toby Spribille at the University of Alberta, she will study an extremely rare vividly red lichen, *Umbilicaria phaea* var. *coccinea*, that is found in the Monument.

Umbilicaria phaea var. *coccinea* and other lichens, Cascade-Siskiyou NM

Truffle research in the Monument - Hilary Rose Dawson and truffle dog Rye.

Updates from Roger Rosentreter and Ann DeBolt

How do lichens recolonize a forest after burning? Many ecologists praise the use of controlled burning but what about the loss in lichen biodiversity? We are working on a pre- and post-burn study of the lichens in a longleaf pine stand in Central Florida. With the help of Laurel Kaminsky and the Alachua County Land Trust, we collected data before a control burn. We tested protecting the ground *Cladonia* species by covering them with lightweight foil. This foil was consumed by the fire and so were the lichen beneath them. We would like to hear from anyone with ideas on how to protect ground lichens from fire and methods of marking lichens pre- and post-burning.

Recently published:

Rosentreter, R., and Ann DeBolt. 2023. Lichens as an Indicator of Sea-Level Rise. *Evansia* 39(4): 162-168.

Rosentreter, R. 2021. Biological Soil of Crusts of North American Drylands: Cryptic Diversity at Risk. *Reference Module in Earth Systems and Environmental Sciences*. https://doi.org/10.1016/B978-0-12-821139-7.00073-8.

Steven D. W., R. Rosentreter, and N. Pietrasiak. 2021. Biological Soil Crusts of the Great Plains: A Review. *Rangeland Ecology & Management* 78: 213-219. ISSN 1550-7424. https://doi.org/10.1016/j.rama.2020.08.010.

Rosentreter, R. and J. Brinda. 2021. Alkali Scrub Habitat in California Includes a Large Biodiversity of Biocrusts. *Bulletin of the California lichen Society* 28(1): 1-7.

Lichens on Substrates Found in Cemeteries

I was reading up on churchyards and came across this information on jargon related to cemeteries. Some of it was new to me and explains some of the different types of graves in Florida that I see.

Below is some cemetery jargon I recently learned that will help you understand stone monuments.

- Graveyard - connected to a church.
- Cemetery - graves of common people **not** attached to a church.
- Memorial Park - there are only flat identifying markers; these are easy to mow.
- Potters fields - poor folks buried here; they have small markers or no markers at all.
- Holding crypt - to hold the dead until spring; now used as larger memorials.
- False crypt - appear to be holding crypts but are merely ornamental.
- Wolf Stones - rocks piled on top of a body to keep the wolves from digging it up and eating the deceased.
- Mort safes and gates - protection from grave diggers.
- Obelisk - 4-sided and pointed monuments to honor the dead.
- Head and foot stones - marking the top and bottom of the grave.
- Porcelain photos or portraits – placed at/on the headstone; some are laser-etched.

Roger Rosentreter. Photo: Jeanne Ponzetti

Updates from Katherine Glew

2022 was a great year for offering lichen walks, talks & classes in and around Seattle. The walks are given rain, shine or snow.

I offered 11 lichen walks in 2022. Eight walks were in Seattle: 2 Cemetery walks offered through the UW Botanic Garden: one through the Puget Sound Mycological Society (PSMS), 5 in the Washington Arboretum/UW Botanic Garden: one with UWBG, two with PSMS, 1 for the Arboretum Foundation, and 1 for OLLI (OSHER Life-Long Institute). Two walks were offered at the Bellevue Botanic Gardens.

The OLLI course was offered in October over 3 days. It included two in-class sessions and one field session at the UW Botanic Garden for folks to see lichens in a natural environment. The in-class sessions included an introduction to lichens presentation, images of lichens in urban environments along with morphological characters needed for identification.

For the Washington Native Plant Society (WNPS) Study weekend, I gave a lichen walk through Cowiche Canyon (Yakima area). Andrew Restrepo and Stephen Sharrett, students from The Evergreen State College, assisted with the walks, after making collections there two weeks before the study weekend. Preliminary collections were made by Richard Droker, mainly crustose species, and myself from earlier visits in the last two years. I created a chart of common arid lichens with photos by Richard.

I gave a lichen presentation at Puget Sound Mycological Society (PSMS) in April. "What everyone Should Know About Lichens". In September, I offered an introductory lichen PowerPoint to the Endolyne Garden Club in Seattle. The audience was excited to learn more about lichens, discovering they do not harm the plants in their gardens.

I was a co-author on a manuscript to the Bryologist:

Allen, J. et al. 2022. *Umbilicaria phaea* var. *coccinea*: conservation status, variety rank, and secondary chemistry. *The Bryologist* 125(3): 387 – 405.

<u>NWL Lichen Certification Training,</u> September 12 – 14, with Elisa Di Meglio. I assisted Elisa with 12 participants, staying at the Longbow Group Camp in Oregon, east of Corvallis. The participants were enthusiastic students. Most were from the US Forest Service. We conducted a practice certification field exam for plots at an ash swale where we found an abundance of lichen species, including *Hypotrachyna riparia* along with lots of cyanolichens. One member of the trainees referred to the location as a known camas restoration site for the Sweet Home Ranger District. It was on Oregon State Hwy 20 on the north side, east of the Cascadia State park about 2 miles, off of Moose Mountain Road. We had lots of interest in identifying lichens in the field.

<u>Cypress Island Lichen Foray</u> coordinated with Jeanne Ponzetti, Daphne Stone and I, September 12 – 16. Additional participants: Bruce McCune, Roger Rosentreter, Tor Tønsberg, John Villella, Nils Nelson, Amanda Hardman, Tiffany Theden, Tasha Lavdovsky. A paper will be coming out with Bruce McCune as lead author. The list of lichens includes those found by lichenologists in 1980, 2003, 2010, 2011, 2018 in 2023. Dr. Fred Rhoades in Bellingham is part of the legacy for lichen forays on Cypress Island from 1998, 2003 and 2011. To date, 242 lichen species have been identified for Cypress Island.

<u>Washington Rare Lichen group</u>:

On December 12 and 13, Daphne Stone, Jeanne Ponzetti & I went to Olympic NP Herbarium to verify or correct lichen identifications from the Rare Washington List found

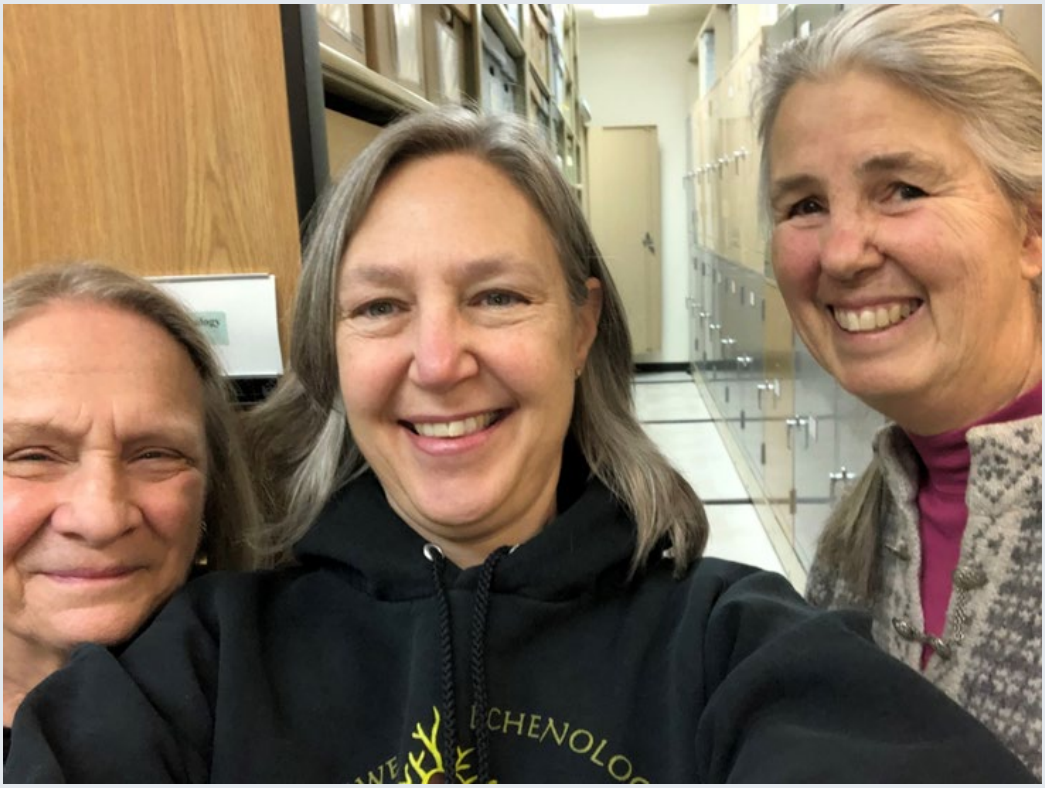
in the national park. Two full days with lots of lichens to go through. Several boxes were requested as a loan for further study by Bruce McCune. Most lichens collected by lichenologists were identified correctly. Older collections needed further study. *Pseudocyphellaria crocata* was annotated to *P. citrina*. *P. crocata* does not occur in North America, according to a recent study by Lucking et al. (*The Bryologist* 120:4). Collections of *Erioderma sorediatum* were examined to determine accuracy of earlier identifications.

Daphne discovered that the only *Buellia oidalea* record for Washington State was misidentified, finally clearing up that mystery!

Jeanne and Daphne joined me at the WTU herbarium (University of Washington) in Seattle, May 12 and 13, to conduct a similar review of collections from the rare list. We verified species or corrected if there were name changes.

Daphne Stone comment:

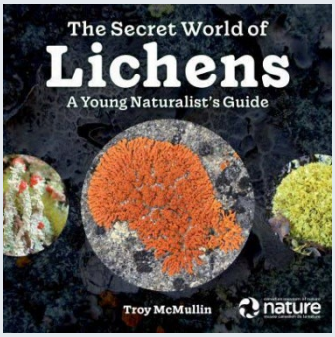
The WA rare committee is proceeding (perhaps slowly, but still making progress!) and we hope to have the list finalized this year. The great news is that our lichenologist colleague Jesse Miller is now the Washington Natural Heritage Botanist and is eager to work on an improved list but also to find grants to revisit some sites of rare species.



Katherine, Jeanne, and Daphne at WTU (Katherine Glew)

Katherine and Daphne at WTU (Katherine Glew)

The Secret World of Lichens, a Young Naturalist's Guide by Troy McMullin (Book Review)
From Amanda Hardman



This book popped up as recommended reading by my online book vendor. With a price tag of just $10 I clicked buy with little consideration. I have been thinking about lichen blindness since Christmas when my son's letter to Santa was read by our local radio station. He had written that he was thankful for lichens. This quite perplexed the radio host as he had no idea what lichen was. His cohost suggested it was an animal. Clearly my community could learn from a peek into this "Secret World". Upon opening the book, I was reminded of a very abridged version of the William Purvis book, *Lichens*, that came out in 2000. Like Purvis, McMullin covers reproduction and structure, lichen uses, and classification, but he does so in just eight pages. He also includes some interesting metrics on how fast lichens can grow. This introduction is probably enough to spark further interest in folks new to lichens (young or old) and lead them toward more in depth resources like Purvis, Brodo, and other authors. The remaining 40 pages

showcase what might be some of McMullin's favorite species. Thirty-eight species of the roughly 20,000 known worldwide are beautifully displayed and show a variety of both micro and macro lichens. He ends the book with a short glossary of terms which are linked throughout the text. As we naturalists know, understanding terms particular to a group of organisms is essential. Clearly not meant as a regional guide, this book introduces the great variety of colors and growth forms found in this part of the fungal kingdom along with other tidbits like geography and substrate. Even as a lichenologist with familiarity of the spotlighted species, I can appreciate this book. I enjoyed reading it with my six-year-old and discussing our favorite pictures (*Usnea longissima* and *Calicium trabinellum*), the meaning of words like concentric, and imagining fairies drinking out of goblets (*Cladonia chlorophaea*) before getting sick (*Icmadophila ericetorum*) from having too much fun in the forest. I will be passing this book on to my niece and nephew (knowing their mum will like it too) and buying more copies to donate to our public and school libraries. McMullin has provided a doorway to appreciation and awareness for lichens which will surely instill greater concern for our natural world.

Kindergarten Gratitude – *Rueben 2022*

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

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

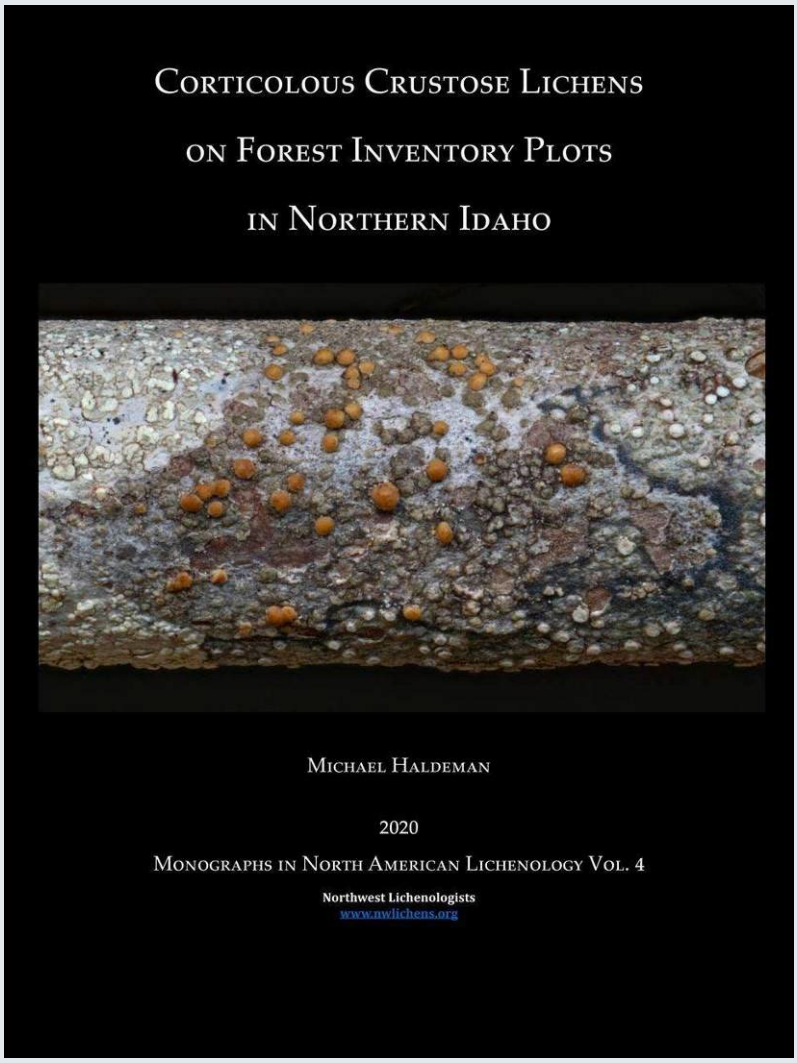
Monographs in North American Lichenology, Vol. 4

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!

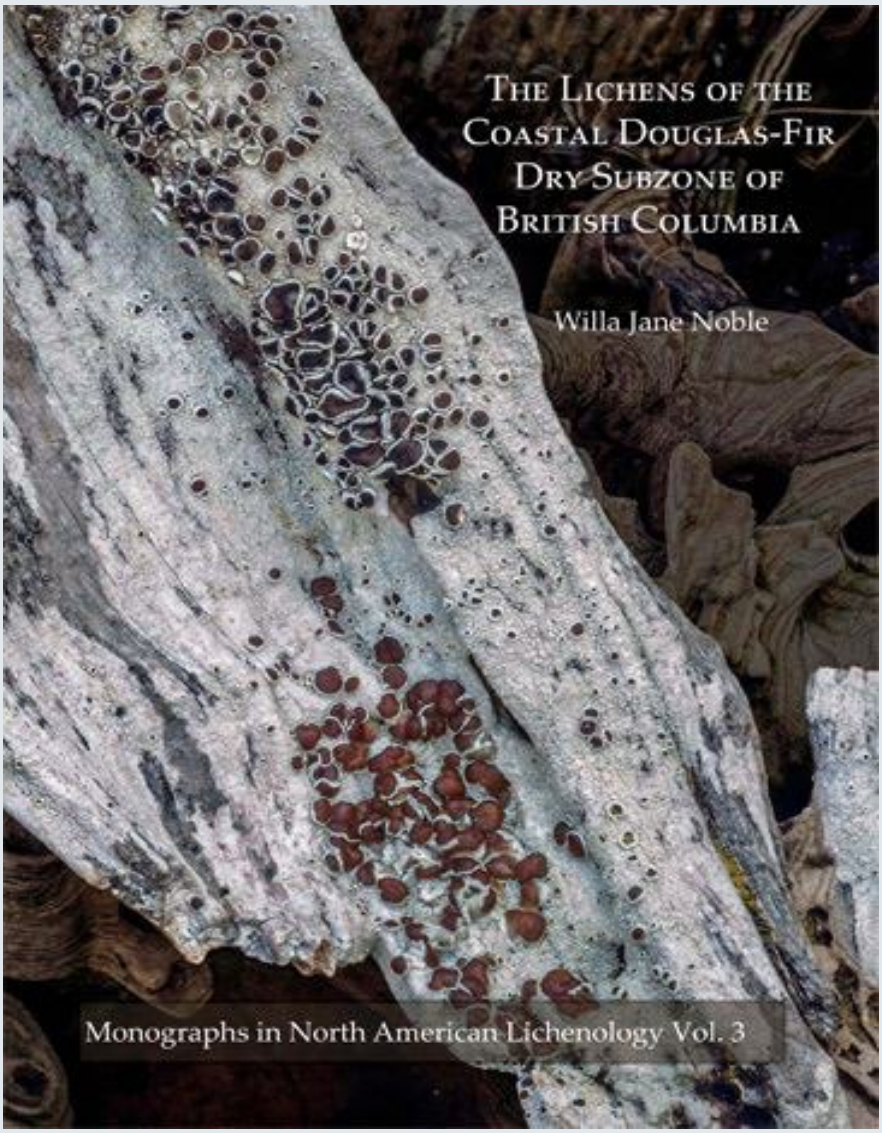


Monographs in North American Lichenology, Vol. 3

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

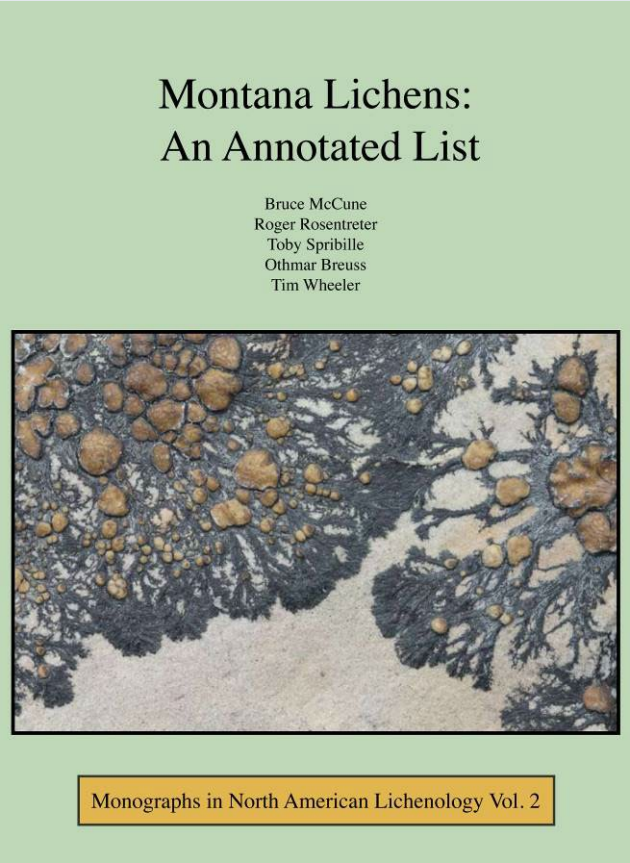
Montana Lichens: An Annotated List

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

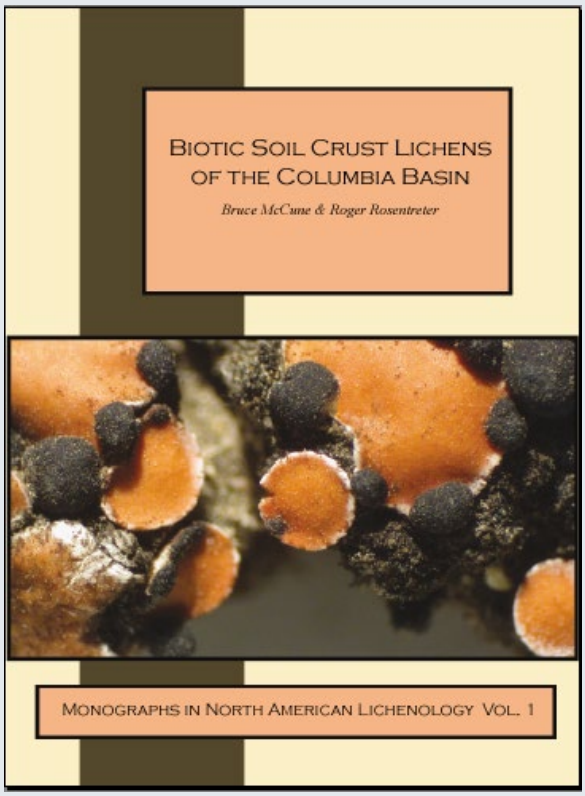
Why write a book for identifying soil crust lichens? We have three reasons: (1) they are ecologically important, (2) they can be difficult to identify with existing sources, or they are omitted altogether, and (3) they should be more widely recognized for what they are.

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.

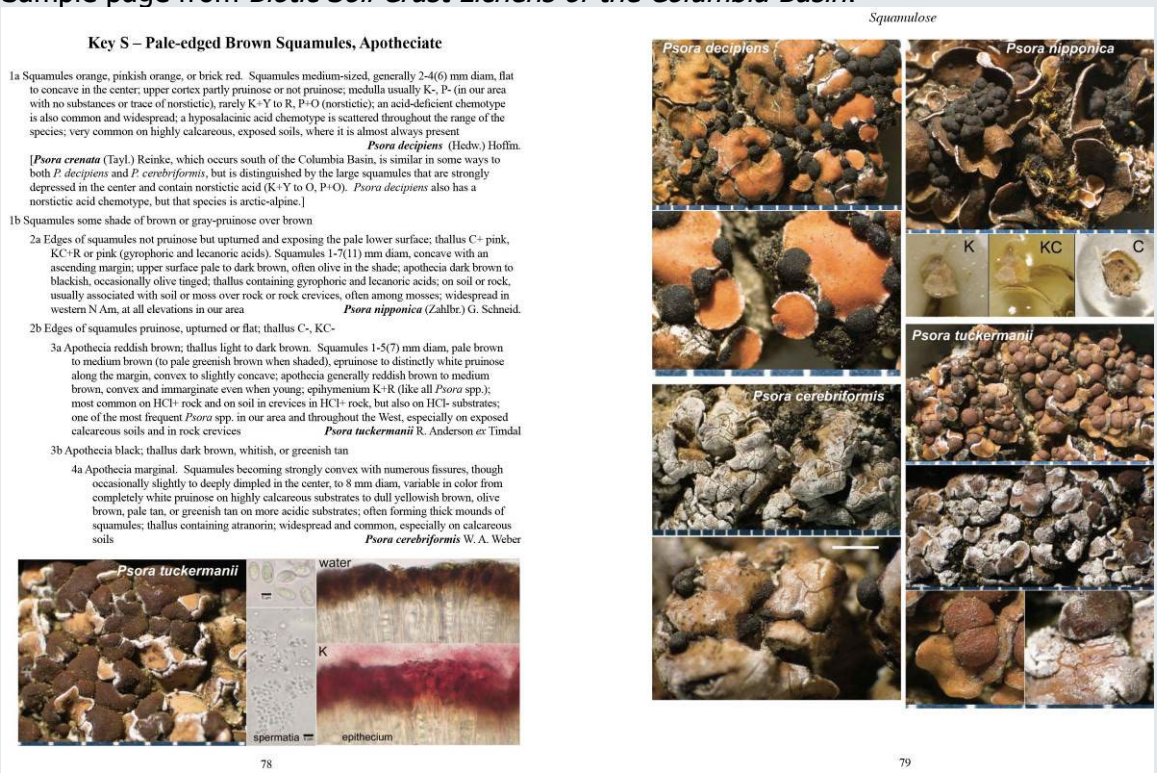
Lichens in soil crusts are often difficult to identify. Currently available books for identifying lichens do not illustrate the critical features needed for identification. We try to fill this need by providing photographs of all of the species at the necessary scale – ranging from what you can see with 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

Booklets

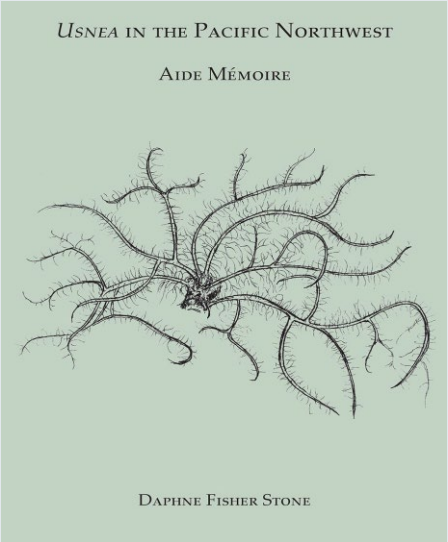
Usnea in the Pacific Northwest, Aide Mémoire

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