

Northwest Lichenologists Newsletter
March 2004

Compiled by Katherine Glew, Ph.D.
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The following contributions were provided on February 12, 2004.

In April a "Special Edition" will be sent out in memory of Bruce Ryan, who passed away in January. If you have any thoughts or fond memories of Bruce, please submit those to Katherine Glew: kglew@u.washington.edu.

The following entries may include updated contact information for the contributor.

Terry McIntosh <ginkgo@shaw.ca>

Terry recently completed a study of lichen (and bryophyte) biodiversity at the Hanford Reach National Monument in south-central Washington.

Two reports are available, a general one, which includes a synopsis of the main report:

* Biodiversity Studies of the Hanford Site, Final Report: 2002 - 2003. Prepared by The Nature Conservancy of Washington for the U.S. Department of Energy and the U.S. Fish and Wildlife Service, Hanford Reach National Monument.

The main report:

* McIntosh, Terry T. 2003. An Assessment of Lichen and Bryophyte Biodiversity and Biological Soil Crust Community Relationships in the Hanford Reach National Monument. Report to The Nature Conservancy, Seattle, WA.

Information can be found at the following web site: <http://www.pnl.gov/ecomon/Docs/Doc.html>
A synopsis of this report can be found in <?xml:namespace prefix = o ns = "urn:schemas-microsoft-com:office:office" /> Biodiversity Studies of the Hanford Site, Final Report: 2002 - 2003, also on this webpage.

Abstract: This report presents the results of a study of the lichens and bryophytes of The Hanford Reach National Monument near Richland, Washington. The main objectives to this study were to enhance biodiversity research of the lichens and bryophytes of the microbiotic crusts and other habitats, including rocks and stones, shrubs, and wetlands, to initiate a study of the community relationships of soil crust assemblages, and to investigate environmental relationships of the soil crusts.

The vegetation of the Monument is a diverse complex of arid-land communities, ranging from sagebrush-steppe to communities on talus slopes. There has been a great deal of disturbance across the area through time, in particular by fires and grazing of animals. Introduced plants, in particular cheatgrass, are common and widespread in some areas.

The report lists over 90 lichen species and at least 35 bryophyte species from the Monument, although more taxonomic work is required in order to identify unknown specimens. The number of species is expected to increase as collections are identified and more sites are investigated. Fifty-four lichen taxa are found on soil crusts, twenty-six taxa are saxicolous, and eleven lichens are epiphytic. The majority of bryophytes were found on soil. It is possible that some of the unidentified lichens and mosses collected during this survey will have notable biogeographic distributions, or be new to science.

Based on field sampling and data analysis, three late-seral soil crust communities have been identified on the Monument: the *Trapeliopsis steppica* - *Bryoerythrophyllum columbianum* Community, characteristic of finer soils, the *Syntrichia* spp. - *Caloplaca tominii* Community, characteristic of coarser, principally sandy soils, and the *Phaeorrhiza sareptana* - *Lecanora* spp. - *Encalypta raptocarpa* Community, characteristic of stony soils at higher elevations.

Research regarding environmental factors that influence distribution of taxa and the development of microbiotic communities on the Monument is in its early stages. Soil factors, including structure, pH, electro-conductivity, and CaCO₃ availability, appear most critical in the development and composition of biological crusts.

Stephen_Talbot@fws.gov

Announcement for an upcoming workshop "Introduction to the Bryophytes of Southeastern Alaska". The workshop will be held in beautiful Sitka, Alaska and will be led by Dr. Wilf Schofield, University of British Columbia.

WORKSHOP: INTRODUCTION TO BRYOPHYTES OF SOUTHEASTERN ALASKA
From: Stephen Talbot [stephen_talbot@fws.gov]

Special Three-Day Workshop
20- 22 May 2004
SHELDON JACKSON COLLEGE
801 Lincoln St., Sitka, Alaska 99835

Principal leader: Dr. W. B. Schofield
Department of Botany University of British Columbia
Vancouver, B.C. Canada V6T1Z4

The U. S. Fish and Wildlife Service and the U. S. Forest Service are Sponsoring a workshop, 20 - 22 May 2004 at SHELDON JACKSON COLLEGE in Sitka, Alaska.

Purpose of the Workshop: To gain familiarity with bryophyte genera in southeastern Alaska based on field and microscopic characters, with strong emphasis on habitats, morphological variation and the living plant. This workshop gives an entry into bryophyte taxonomy and provides the characters used to discriminate among bryophyte genera, and to an extent, to the

species. It will include an introduction to the literature, information on collecting, storing and annotating collected material for reference, field experience with collecting, laboratory experience with microscopic examination and use of the literature, and use of artificial keys to aid in identification.

Requirements: Participants should have a hand lens 15 or 20X. Other useful items include good typewriter paper for preparing moss packets, a collecting bag, and a pocket knife, putty or paint scraper, or wood chisel. Students may bring a limited number of specimens that they have collected for determination.

Description: The workshop will be held at Sheldon Jackson College (with field trips in the local area) <www.sheldonjackson.edu> and be limited to 20 participants. Class times are from 9:00-12:00 and 1:00-5:00 PM. General questions concerning the workshop should be addressed to: Stephen Talbot, Div. of Natural Resources, U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, AK 99503; phone (907) 786-3381, e-mail <stephen_talbot@fws.gov>. Cost of the workshop is \$200 and by check only. To register send your name, mailing and email address and a check not later than 5 April 2004 made payable to "Sheldon Jackson College" with "Moss Workshop" on the "Memo" line to: Attn: Lem Lambert, Sheldon Jackson College, 801 Lincoln St., Sitka, AK 99835, and notify Stephen Talbot by email that you are registering. Note: You cannot be enrolled until payment is received. Questions regarding travel, lodging, and the Sitka area should be sent to: Mary Stensvold, U.S. Forest Service, Sitka; phone (907) 747-4210, e-mail <[_HYPERLINK "mailto:mstensvold@fs.fed.us" __mstensvold@fs.fed.us_>](mailto:mstensvold@fs.fed.us)>. A general map of Sitka showing the location of Sheldon Jackson is at <www.travelsitka.com/townmap.html>. Lodging is available at hotels or in dormitory-style housing on the Sheldon Jackson campus. Campus housing costs \$35/night single occupancy or \$40/night double occupancy. To make reservations call (907) 747-5252 before May 15, and mention the bryophyte workshop to get this special rate.

College Credit: 1 semester credit is available from Sheldon Jackson College.

Information on the presenter: Dr. Wilf Schofield is an internationally known expert on the bryophytes of the Pacific Rim. He published over 100 papers, is co-author of 4 textbooks in plant structure and evolution. His textbook "Introduction to Bryology" (1985) is the standard. His new "Field Guide to the Liverwort Genera of Pacific North America" was published in 2002. Wilf's field experience in mosses goes from 1947 to present, seven summer periods in Alaska, two in Arctic and subarctic Canada. also periods in Australia, New Zealand, Japan, Taiwan, Europe, conterminous USA. He is a contributor to bryophyte flora of North America and of Australia.

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Andrea Ruchty <aruchty@fs.fed.us>

Recently, while confirming ID's from purposive surveys, Andrea received 2 *Niebla cephalotas* from the California coast that are **apotheciate** [WOW!]. On further enquiry, she found out that Karen Dillman's specimen from coastal Alaska also had *apothecia*. Apparently, apothecia are occasionally seen on this species, which she wasn't aware of!!!
Andrea wanted everyone to know this and keep a look-out for additional records of the rare apothecia.

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Menegazzia in the Pacific Northwest

Have you seen *Menegazzia terebrata* in Oregon or Washington? Maybe not, if my collections are typical. Based on Bjerke (2003; Lichenologist 35:393-396), we should recognize *M. subsimilis* (H. Magn.) R. Sant. as distinct from *M. terebrata*. In *M. terebrata* the sorediate protrusions from the thallus are entire or collar-like, while in *M. subsimilis*, the protrusions split, so that the collar or soredia separates into several to many segments. When well developed, the segments will divide again and again, producing a cluster of soredia-tipped divisions. Also, the soredia appear to be slightly more coarse in *M. subsimilis* than in *M. terebrata*.

Bjerke reported *M. subsimilis* from BC and Washington, among many other places. I checked my collections and found that all my collections from Oregon and Washington were *M. subsimilis*. I also have it from North Carolina and far east Russia. On the other hand, my single collection from Wisconsin (where *Menegazzia* is rare) is *M. terebrata*, as are several European specimens obtained by exchange.

Please let me know if you find true *M. terebrata* in the Pacific Northwest.
Bruce McCune

Clint Emerson <cemerson@fs.fed.us>

Clint will be moving to Helena, MT to take a job as the Program Botanist for the Montana Natural Heritage Program. He will be in charge of the rare vascular and non-vascular plant list

for the state. He hopes to spend more time on the rare lichens and bryophytes. To contact him or check out the rare lichen flora of Montana go to: <http://nhp.nris.state.mt.us/>

His crew (4 people including John Berry, former University of Puget Sound student of Katherine Glew) worked for him this last summer doing strategic habitat based Survey and Manage surveys.

They found new sites of rare species such as *Pseudocyphellaria rainierensis*, *Nephroma occultum*, *Dermatocarpon luridum*, *Peltigera pacifica*, *Cladonia norvegica*, *Lecanora pringlei* and the bryophytes *Schistostega pennata*, *Tritomaria exsectiformis* and *Calypogeia sphagnicola* all on the Umpqua National Forest.

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Roger_Rosentreter@blm.gov and **Ann Debolt <adebolt@fs.fed.us>**

Ann DeBolt and Roger Rosentreter collected lichens in Florida this last Christmas vacation for the fourth year in a row. They hope to develop lists for the Ocala National Forest and do an ecological publication in the near future.

Dr. David Eldridge from Sydney, Australia visited Boise Idaho in Feb. 2004 to work on some Biological soil crust projects and to continue his work on the role of fossorial mammals in the sagebrush steppe ecosystem.

Roger Rosentreter and Jayne Belnap will be teaching a biological soil crust class for federal employees in Bakersfield, CA March 16-18, 2004.

Roger has two new Boise State graduate students who are both working on different aspects of seed germination and biological soil crusts.

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Recently published papers:

Applied Soil Ecology (in press, 2004)

Wildfire-resistant biological soil crusts and fire-induced loss of soil stability in Palouse prairies, USA. Matthew A. Bowker, Jayne Belnap, Roger Rosentreter, Bernadette Graham.

Journal of Range Management

57:89-96 January 2004

Recovery of biological soil crusts following wildfire in Idaho

Julie H. Hilty, David J. Eldridge, Roger Rosentreter, Marcia C. Wicklow-Howard, and Mike Pellant.

From: Linda Geiser <lgeiser2003@yahoo.com>

Her main interest, lately, is the study of rare lichens, and how to describe their distribution, habitats, and association with old-growth and protected land allocations. Doug Glavich, Alexander Mikulin, Annie Ingersoll and Linda are studying the coastal lichens and aquatic lichens of the Pacific Northwest that are part of the Survey and Manage Program of the Northwest Forest Plan. Peter Neitlich and Linda are wrapping up a 10 year survey of lichens for air quality and climate change indication. They created a model to score and map air quality and lichens, based on lichen community response in western Oregon and Washington. Their next task is the eastern portions of these states.

Toby Spribille <tspribi@gwdg.de>

Toby Spribille is in Germany again for the winter, working busily away on epiphytic crustose lichens of inland British Columbia, Idaho and Montana. But he will be back in the Northwest soon to resume collecting in real lichen country (northern Germany is not real lichen country).

He's also finished work on two new species that have either just come out or will any day, *Pyrrhospora gowardiana* and *Micarea subalpina*. The *Pyrrhospora* is a common crustose lichen with brilliant red apothecia on Douglas-fir and larch in inland regions, although it also occurs on dry sites in western Oregon and northern California. The *Micarea* is a terricolous species ("black dot on soil") in subalpine beargrass meadows and is so far known only from collections from western Montana.

Toby is also working out the lichen flora of one of the wettest cedar-hemlock valleys in the interior, the Incomappleux River south of Revelstoke, BC, Canada. So far, this valley has yielded spectacular assemblages of oceanic macro- and microlichens, including the southernmost inland record for *Nephroma occultum*. However, as it is slated for imminent logging there is a lot of work to be done to make the case for its conservation. He intends to get back in there this summer to continue the hunt for the elusive.

WORKSHOP ANNOUNCEMENT: Identifying the real tree huggers: epiphytic crustose lichens / July 23, 24 and 25, 2004

Toby will be offering a workshop on Identifying the real tree huggers: epiphytic crustose lichens, at the Priest River Experimental Forest near Priest Lake, Idaho. The emphasis of the course will

be the recognition of important crust genera and common species on trees, but we will also have a look at crusts on rock and soil. Workshop participants will obtain a script that will contain **keys** to inland epiphytic crustose lichens. The program includes short field trips Friday and Saturday and one all-day field excursion Sunday to the edge of the Salmo-Priest Wilderness.

Participation will be limited to 20 people. Registration will be between \$80-\$100. This will include 3 nights lodging at the station. A reduced rate will be possible for people who arrange other accommodations. More information will be posted soon on Botanical Electronic News (BEN) or to pre-register you can write directly to Toby at tspribi@gwdg.de.

Recently published papers:

Coppins, B.J. & T. Spribille 2004. *Micarea subalpina* Coppins & Spribille, a new subalpine species from the Rocky Mountains. *Lichenologist* 36: (in press)

Spribille, T. & M. Hauck 2003. *Pyrrhospora gowardiana*, a new montane lichen from western North America (Lecanoraceae, lichenized ascomycetes). *Bryologist* 106: 560-564.

Toby Spribille
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Trevor Goward <tgoward@interchange.ubc.ca>

The map work is all but done for *Ways of Enlichenment*. Shortly he will be sending out selected maps to various local lichen experts who have kindly agreed to examine them for potential corrections. In addition, his main lichenological activity this winter has been to finish eight manuscripts [WOW!]-- inland rain forests, hair lichens, calicioids, snow forest lichen floristics, etc. -- that have been lying about in various stages of preparation. Once the last of them are out the door by the end of March, he will once again turn to the book for a grueling three-month final dash to the finish.

Dave Shaw <dshaw@u.washington.edu>

Dave Shaw writes:

"Have folks seen this book chapter from 1997, but since it is a canopy arthropod book I was wondering if anybody has seen it?"

Prinzing, A., and H.-P. Wirtz. 1997. The epiphytic lichen, *Evernia prunastri* L., as a habitat for arthropods: shelter from desiccation, food-limitation and indirect mutualism. Chapter 23

(pages 477-494) In: N.E. Stork, J. Adis, and R.K. Didham (editors) Canopy Arthropods. Chapman and Hall, London.

"A really cool and groovy study I'd say." (as Dave Shaw says it best!)

Suzanne Joneson <slj2@duke.edu>

Suzanne is pursuing graduate work for a Ph.D. at Duke university in Durham North Carolina. She is working with Dr. François Lutzoni.

We fondly remember her for *Ramalina* and *Acroscyphus* fame.

Katherine Glew <kglew@u.washington.edu>

This summer (2003) Katherine was back on Sakhalin Island, spending 6.5 weeks in the field collecting lichens. The members of the International Sakhalin Island Project (ISIP) were able to travel by road to the Shmidt Peninsula, the northern most part of the island. Habitat was quite diverse and many saxicolous lichens were collected. Katherine was able to bring a student from the University of Puget Sound, Erin Berry-Bibee, to help with the collection of lichens.

For 9 of the days, Svetlana Tchabanenko (Sakhalin lichen expert) joined the group. Members of the field party were made up of Russians from the Russian Far East Institute, and a Japanese mosquito expert. There was lots of rain and cold weather, but the group survived the 28 days straight of camping in the wilderness, without any designated campgrounds. Always a challenge to keeping collections dry. But the *banyas* (Russian steam baths) were a delight!

Dr. Judy Harpel, bryologist, from the Gifford Pinchot National Forest, was also part of the group, collecting a variety of enticing mosses and liverworts.

Recently published papers:

Fryday, A.M., K.A. Glew. 2003. *Stereocaulon nivale* comb. nov., yet another crustose species in the genus. *The Bryologist*. 106(4): 565-68.

Joneson, S., K. Glew. 2003. Range Extension of the Lichen *Acroscyphus sphaerophoroides* (Ascomycotina, Caliciaceae) into western Washington State, U.S.A. *The Bryologist*. 106(3): 443-446.

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