

POTOWMACK NEWS

Potowmack Chapter of the Virginia Native Plant Society

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Winter Greens

By Margaret Chatham



EVERGREEN PARTRIDGEBERRY, *MITCHELLA REPENS*. ALL PHOTOS IN THIS ARTICLE BY MARGARET CHATHAM.

Winter can be a special time for looking at what’s growing out there, both for treasured natives and for some of the worst invasive exotic plants. With so many leaves out of the way, it’s easy to spot the “murmuring pines and the hemlocks,” and when we look down, we find a variety of true evergreens, winter annuals, and the out-of-step plants that take advantage of winter’s open canopy but will die back for what we think of as the growing season.

Among the true evergreens are our pines: Virginia (*Pinus virginiana*), Short-leaf (*P. echinata*), Pitch (*P. rigida*), and mostly where planted White (*P. strobus*), Longleaf (*P. palustris*) and Loblolly (*P. taeda*); Eastern Redcedar (*Juniperus virginiana*), Eastern Hemlock (*Tsuga canadensis*), and Mountain Laurel (*Kalmia latifolia*). On the ground we see Christmas Fern (*Polystichum acrostichoides*), evergreen woodferns (*Dryopteris intermedia* and *D. marginalis*), Partridgeberry (*Mitchella repens*), and Wintergreens: Spotted (*Chimaphila maculata*) and Teaberry (*Gaultheria repens*).

Then there are semi-evergreens, plants that lose their highly exposed leaves but keep some sheltered ones, or lose all leaves in severe weather but retain some in a milder season. Hearts-a-burstin’ (*Euonymus americana*) and Waxmyrtle (*Morella cerifera*) are native examples of these.

Winter annuals include Pennsylvania Bittercress (*Cardamine*

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Upcoming Events

Charles Smith: Native Plant Interactions Above and Below the Ground: Relationships between Plants, Fungi, Bacteria and Insects

Thursday, Jan 11, 7:30-9:00 pm
Green Spring Gardens Horticulture Center
4603 Green Spring Rd, Alexandria

Plant communities form the visible framework of our living world. We often don’t see the many other organisms that are vital parts of the communities: insect larvae, lesser known pollinators, bacteria, and fungi. We’re still learning about who’s there and what they do.

Hold the date for February Talk

Thursday, Feb 8, 7:30-9:00 pm

Winter Greens at Fred Crabtree Park

Sat, Feb 10, 10 am-1 pm

Jan Meyer leads a walk around her favorite park, looking at what’s green in winter, from evergreen trees to basal rosettes of larger forbs. Walking sticks recommended. Snowdate Feb 17.

All events are free and open to the public. Walks require preregistration. Join our listserve at <http://groups.yahoo.com/group/vnps-pot> to receive notices with walk registration links.

STUFF TO DO THIS WINTER

Wednesdays 11 am-2 pm Jan 3, 10, 17, 31, Feb 7, 14, 21 & 28 and **Saturdays noon-3 pm Jan 6, 20, Feb 10 & 24** – do any of those dates look good to you? Come to Fraser Preserve to help remove invasive exotic plants. In the past we've focused exclusively on Japanese barberry (*Berberis thunbergii*), and there's still plenty of it to work on, but this year we may branch out a bit to tackle some multiflora rose, Japanese honeysuckle, autumn olive, lesser celandine... what's your favorite plant to hate? Fraser Preserve is at the north end of Springvale Road in Great Falls. We can work with snow on the ground, but not when the ground is frozen or the weather is actively horrible. Be sure to contact leader Margaret Chatham at Margaret.chatham@verizon.net if you wish to come on any of those dates, to be sure we're actually able to work & for word on exactly where we'll meet that day. Bring heavy leather gloves to guard against barberry prickles, and hand clippers and garden forks if you have them, along with water, any snacks you need, and anything else needed to make yourself comfortable working in the woods.

Saturdays, 1/13, 1/27, 2/3, 2/17, 3/3, 3/17, 3/31 Join Alan Ford in working on removing invasive plants from Salona Meadows in McLean. Contact Alan at amford@acm.org for more information or to sign up.

Wed., Jan 17, 6:30 pm Virginia Department of Environmental Quality Public Meeting at Arlington Central Library, 1015 Quincy St. on the development of a Salt Management Strategy for Northern Virginia, and especially Accotink Creek watershed. See <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=27090> for more information.

Thur, Jan 25, 7:15-8:15 pm or **Sat, Jan 27, 9-10:30 am** at Fairlington Community Center, 3308 S. Stafford St, Arlington, or
Sat, Feb 3 10:30 am-12:30 pm at NOVA Bisdorf Building Rm AA 158, 5000 Dawes Ave, Alexandria Attend a Chesapeake Bay Foundation "Grasses for the Masses" Workshop so you can grow native aquatic "celery" grasses (*Vallisneria americana*) in your home during the winter, and plant them at Mason Neck Park in the spring. \$40 for the kit to get you started. Space limited, registration required, at <http://www.cbf.org/events/virginia/grasses-for-the-masses/workshop-schedule.html>

Thur, Feb 15 Piedmont Landscape Association 35th Annual Seminar in Charlottesville, VA. Four speakers, the first of whom focuses on native plants. Their website is not giving details yet, but a postcard says earlybird discount on registration ends Jan 19. Maybe by the time this reaches you www.piedmontlandscape.org will have useful info.

Sat, Mar 10 VNPS Winter Workshop, this year on the theme of Trees, at Richmond University. Speakers: John Seller on Tree Biology; Desiree Narango: Trees/Insects/Birds; Lytton Musselman: Longleaf Pine Restoration; and Ryan Klopff: Old Growth Forests. Registration will open in the new year. <http://vnps.org/events/vnps-winter-workshop-2018/>

Sat, Mar 24, 9 am-4 pm 32nd Annual Lahr Symposium on Native Plants and native plant sale at the US National Arboretum. Registration will open in Feb. <https://www.fona.org/lahr-symposium/>

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Virginia Native Plant Society**

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Liverworts: an Identification Primer

By Gaylan Meyer



MOSS *THUIDIUM DELICATULUM*, DELICATE FERN MOSS ON LEFT; LIVERWORT, *TRICHOCOLA TOMENTELLA*, WOOLLY LIVERWORT ON RIGHT. ALL PHOTOS BY GAYLAN MEYER

Liverworts are part of an informal group called Bryophytes, which includes mosses, liverworts and hornworts. Thus it would be a good idea in a “primer” to distinguish liverworts from mosses and hornworts. The pictures above show a moss, *Thuidium delicatulum*, which likes to grow with hornworts and a similar-looking liverwort, *Trichocola tomentella*. They both have a stem with branches and leaves off the branches. However, using a lens, one can see that the liverwort has much smaller lobed leaves whereas the moss leaf has a midrib and ends in a point (some mosses don't have a midrib so the other characters are distinctive). Below is a picture of Hornwort *Anthoceros punctatus* showing its “horn,” which neither liverworts nor mosses possess, next to a detailed photo of Woolly Liverwort, showing its “wool.”



HORNWORT *ANTHOCEROS PUNCTATUS* ON LEFT; DETAIL OF WOOLLY LIVERWORT SHOWING ITS WOOLLY SURFACE ON RIGHT.

Now that we can tell a liverwort from the other bryophytes, we can concentrate on identifying the tiny plants. Some of the liverworts are not so small, ranging into the 10s of centimeters, but their parts are miniscule, less than a millimeter. To collect a sample for studying under a microscope, it is best to use a small pocketknife to cut into the substrate beneath the liverwort and take a sample of the liverwort in its natural habitat. The book *Outstanding Mosses & Liverworts of Pennsylvania & Nearby States* by Susan Munch has excellent color pictures and diagrams explaining the terminology used in describing liverworts and mosses, but it has no key for identifying them. On the other hand, *Guide to the Liverworts of North Carolina* by Marie L. Hicks has an excellent key but has only black and white line drawings to illustrate the plants. Using the key in Hicks's book and the pictures in Munch's book works well for me.

In my short experience with liverworts, I've only come across three species, one of which was mentioned above. In addition to being a "leafy" liverwort that looks a little like a moss, *Trichocola tomentella*, Woolly Liverwort, indeed has a woolly appearance. The stem divides and subdivides into leaves that further divide into hair-like structures as seen in the last photo on page 3. In winter, the liverwort turns whitish in color and the hairs covering the plant look like sheep wool. In fact, the genus and species names both derive from ancient words meaning hair: Greek "tricho" and Latin "toment". A possible Field ID is a large leafy Liverwort whose branches subdivide into leaves that divide into hair-like segments, distinguished from a moss by lobed leaves with no midrib.



In contrast to the leafy Woolly Liverwort, our next liverwort is a thalloid liverwort, not differentiated into stems and leaves. It also has an appropriate common name: *Conocephalum salebrosum*, Snake-skin Liverwort. Its thallus surface is covered with miniscule pores and one large air pore in the center. The venation and air pore give it a distinct snake-skin appearance as shown on the left. It is also called Great Scented Liverwort because it emits a strong aroma when crushed. A possible Field ID is a relatively large thalloid liverwort growing in mats near water with snake-skin-like thalli surfaces and a white pore in the center.



The last of my known liverworts is *Bazzania triloba*, Three-lobed Bazzania, appropriately named because each leaf ends in three lobes or teeth as shown to the right. No liverwort genus other than Bazzania has its large size and three-toothed leaves. This native liverwort is widespread and common in the mountains, often growing in moist habitats with Hemlock, White Pine, and Yellow Birch. A possible Field ID is a large, green, leafy liverwort with leaves hanging down from the stem half covering the next in line and having three teeth at their tips.

This primer is intended to encourage you to look again at the little plants in the forest. Their small features can be fascinating, either for casual enjoyment or in taking the deep dive into the two books referenced above.

WINTER GREENS CONTINUED FROM PAGE 1

pensylvanica) and its non-native look-alike, Hairy Bittercress (**C. hirsutis*), native Yellow Corydalis (*Corydalis flavula*) along with exotics like Whitloe Grass (**Draba verna*) and Ivy-leaved Veronica (**Veronica hederifolia*) are all fairly small plants, but are often numerous enough to cover a lot of ground. Some forbs and grasses keep a basal rosette going



POVERTY OAT GRASS (*DANTHONIA SPICATA*)

through the winter, then present a very different appearance during the growing season. Deertongue Grass (*Dichanthelium clandestinum*) is fairly easy to spot in the wintertime, with large, dead stalks arising from a still-green basal rosette. Poverty Oat Grass (*Danthonia spicata*) shows small green leaves above white, curled dead ones. Many asters (*Symphyotrichum spp.*), goldenrods (*Solidago spp.*), and buttercups (*Ranunculus spp.*) follow this growth pattern. Golden Ragwort (*Packera aurea*) and Green-headed Coneflower (*Rudbeckia laciniata*) push the boundaries with their large basal rosettes.

Of course, biennials like Garlic Mustard (**Alliaria petiolata*) and Poison Hemlock (**Conium maculatum*) also show a basal rosette through the winter. The small size of many Garlic Mustard plants at this time of year entices me to go out pulling it on

warm winter days when I can fit 1,000 plants into a plastic grocery bag: so much easier to carry out of the woods! One always misses some plants this way, but when you come back to clean up after they've bolted, it's a much more manageable load.

Some spring ephemerals show up in December or January. One can often find leaves of Spring Beauty (*Claytonia virginica*), Two-leaved Toothwort (*Cardamine diphylla*), or Purple Cress (*C. douglassii*) throughout the winter.

I think my favorite winter greens are the ones that march to a different drummer, the plants that come up in the fall and die back in the spring when everything else is growing like crazy. Cutleaf Grape Fern (*Sceptridium dissectum*, formerly *Botrichium dissectum*) does this. Each plant has just one sterile frond each year. If it has the energy to produce a fertile frond, that will come up in the fall, spread its spores before the first snow, then die back, leaving the sterile frond to soldier on alone. We have two orchids that grow winter leaves. Crane-fly (*Tipularia discolor*)



THE TWO COLORS OF CRANEFLY (*TIPULARIA DISCOLOR*) has green leaves with purple undersides. If it blooms, its flowers show up in mid-summer, when no leaves are visible. Puttyroot (*Aplectrum hyemale*) blooms earlier in the spring, so its striped & pleated leaves may still be visible while it is blooming.

Of course, there are lots more winter greens out there. Take a look and see what you find.

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Word of the Month: **Thallus**



Thallus (plural thalli): a vegetative body not differentiated into stem and leaf, and often lacking roots or rhizoids. The word comes from the Greek meaning to sprout. It may apply to either the main growth form of thalloid liverworts, or to the small, flat, sexual bodies that grow from fern spores and grow into the spore-bearing fern fronds we recognize.

Shown here, thalli of Snakeskin Liverwort, *Conocephalum salebrosum*, growing with moss and small grasses.

Photo by Margaret Chatham

If you would like to receive this newsletter (in full color!) electronically, contact Alan Ford at: amford@acm.org