



Founded in 1997.
Logo art of Tall Goldenrod,
Solidago altissima,
by Nat Cleavitt, 2006.

Solidago

Newsletter of the
Finger Lakes Native Plant Society

Volume 24, No. 1



March 2023

Harbingers of Spring!

A Photo Essay by Robert Wesley

Skunk Cabbage (*Symplocarpus foetidus*) and Silver Maples (*Acer saccharinum*) are usually the first native plants to flower, in that order.



Harbingers of Spring! — A Photo Essay by Robert Wesley (continued)

Winter Aconite (*Eranthis hyemalis*) and Snow Drops (*Galanthus nivalis*) are European species that are widely planted and naturalized. They are also the very earliest to start blooming, and are flowering now (February 20th). Look for them in the warmest, sunniest places.



Northern European Daphne (*Daphne mezereum*) also flowers very early — so early in England that it is often called “February Daphne.” It is widely naturalized here, but does not bloom that early.



Harbingers of Spring! — A Photo Essay by Robert Wesley (continued)

These are soon followed by Hepaticas and Spring Beauties. Here are Sharp-lobed Hepatica (*Hepatica acutiloba*) and Round-lobed Hepatica (*Hepatica americana*), and Carolina Spring Beauty (*Claytonia caroliniana*).



Harbingers of Spring! — A Photo Essay by Robert Wesley (concluded)

Also quite early, often starting in April, are Trailing Arbutus (*Epigaea repens*) and American Globeflower (*Trollius laxus*). Trailing Arbutus grows in dry uplands, including open woods, fields, and roadsides. Globeflower is in calcareous wetlands fed by cool upwelling groundwater.



Also very early, and an abundant pollen and nectar treat for early-emerging wild bees, are a number of shrub willows. Here are the male and female flowers (borne on separate shrubs) of Pussy Willow (*Salix discolor*).



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David Werier: Newsletter Editor Emeritus



Please Contribute to *Solidago*

WE WELCOME CONTRIBUTIONS THAT FEATURE WILD PLANTS OF THE FINGER LAKES REGION OF NEW YORK AND NEARBY. We include cryptogams (bryophytes, lichens, fungi, and algae) as "flora," and recognize that green plants provide habitats and substrates for these and many animals, especially insects. We are interested in zoological associations as long as plants are an integral part of the story.

We can use a wide spectrum of material in a variety of writing styles. Our regular columns include **LOCAL FLORA** (plant lists or details of species from specific sites), **OUTINGS** (reports of FLNPS-sponsored excursions), and **PLANT PROFILES** (on specific local plants). We also occasionally publish **APPRECIATIONS** (memorials to local botanists and naturalists), **REVIEWS** (of books, talks, meetings, workshops, and nurseries), **LETTERS** (commentaries and letters to the editor), **ESSAYS** (on botanical themes), **VERSE** (haiku, limericks, sonnets, and poems of less formal structure), **ART** (botanical illustrations, plant designs, pencil sketches, decorations), and **PHOTOGRAPHS** (stand-alone images, photo essays, and full-page composite plates, or originals that can be scanned and returned). We also can always use **FILLERS** (very short notes, small images, cartoons) for the last few inches of a column.

[*Solidago* is composed in Microsoft PowerPoint.]

Solidago

Newsletter of the
Finger Lakes Native Plant Society

Volume 24, No.1

March 2023

Published quarterly at Ithaca, New York, USA.

FLNPS (founded in 1997) is dedicated to the promotion of our native flora. We sponsor talks, walks, and other activities related to conservation of native plants and their habitats. *Solidago* is published as a colorful online version, and a B&W paper version that is mailed. The online format is posted 3 months after publication. Please see www.flnps.org for details of membership, past *Solidago* issues, and updates about our programs.



The Yellow-green Ribbon Lichen (*Usnocetraria oakesiana*) inhabits cool swamps and bogs. See p. 12.

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*Please send *Solidago*
contributions & correspondence
to Robert Dirig, Editor, at
editorofsolidago@gmail.com

**Deadline for the June 2023
issue is May 15th !**

NAME THAT PLANT CONTEST

The photo from last issue's [*Solidago* 23(4), p. 4] NAME THAT PLANT CONTEST was of **Pasture Thistle** (*Cirsium pumilum*), which is a thistle that is native to central New York. Yes, a central New York native thistle. It is a bit more gentle of a thistle than some of the intensely bristly non-native species, with which it can grow. And indeed it thrives in pastures, which is where some of my images came from. It also grows in other non-forested or thinly forested habitats. Thanks to all who entered the contest, and congratulations to contest winners: **Bob Dirig**, **Lois Levitan**, **Susanne Lorbeer**, **Rosemarie Parker**, **Arieh Tal**, and **Robert Wesley**.

THIS ISSUE'S MYSTERY PLANT IS SHOWN BELOW.



Additional hints and suggestions are often provided to contest participants who try. Common and/or scientific names are acceptable, and more than one guess is allowed. Please submit your answer to **David Werier** at

The photographs were taken in New York by David Werier on June 30, 2022 in Tompkins Co. (immature fruit), May 19, 2021 in Cattaraugus Co. (background whole plant), and May 26, 2007 in Tompkins Co. (leaves, lower right inset).



LETTER

Hi Bob,

Thanks so much for *Solidago* 23(4), December 2022. An excellent issue. I thoroughly enjoyed it. I'm sorry to hear about Ken Hull. I remember him and some of his contributions. He will be missed. I love the "Autumn Glories" by Bob Wesley at the end of the issue.

I also liked the hints of "winter greens and reds" that dotted the issue, e.g., *Mitchella repens* and *Cladonia cristatella*.

Best wishes,

Scott LaGreca

N.C., 6 December 2022



APPRECIATIONS

Our **Ken Hull** "Appreciation" in *Solidago* 23(4), p. 7, by Rosemarie Parker & Robert Dirig, and a photo of Ken therein, will be reprinted in *Mitchelliana*, the NYFA Quarterly, in 2023.



Venerable botanist **Nancy Slack** passed away on 20 Dec. 2022. She was a plant ecologist, bryologist, and historian of science. Nancy studied at Cornell University (B.S. 1952, M.S. 1954) and SUNY Albany (Ph.D. 1971). Her Master's thesis described the ecology of eastern North American wild cranberries (*Vaccinium oxycoccos* and *V. macrocarpon*), and her Ph.D. thesis was on *Species Diversity and Community Structure in Bryophytes*. She was a professor of biology at Russell Sage College in Troy, N.Y., until retiring in 2002. In the meantime she had remained heavily involved in writing, teaching, and field work. Her energy was amazing, into her 90s. She will be missed.



Plant Trivia

See answers
on page 8.

by Norm Trigoboff

1-A. How would a cultivated grocer say that peas and beans differ?

1-B. Are pulses peas or beans?

1-C. Which are more romantic: peas or beans?

2. Where are mossy fibers found? **A**, the first page of *Finnegans Wake*; **B**, wet rock face above Ithaca Falls; **C**, brains; **D**, on old liverworts; **E**, all of these.

3. Where are the oldest tree fossils in the world? **A**, wet rock face above Ithaca Falls; **B**, the Petrified National Forest in Arizona; **C**, the Gilboa Fossil Forest in Cairo; **D**, the Chengjiang Fossil Site in China.

4. Flint, dent, sweet and pop are your four basic types of: **A**, sounds made by germinating rice; **B**, marine ecosystems; **C**, bioluminescence; **D**, corn.

5. Is ketchup a vegetable? Are peanuts nuts? Are tomatoes fruit? Are these questions worth their salt?

6. Name a common weapon that shoots a common food (or rather food substance).

7. La Tomatina is:

A. a red pepper bred to look like a tomato.

B. a holiday first celebrated in Bunol, Spain, based on throwing tomatoes at people.

C. a tomato-heavy diet that turns your skin reddish, but is said to cure arthritis.

8. Name the odd man out: *Andromeda polifolia* (Bog Rosemary); *Anemonella thalictroides* (Rue Anemone); *Blasia pusilla* (a liverwort); *Callicladium haldanianum* (a moss); *Chamaedaphne calyculata* (Leatherleaf); *Nemopanthis mucronatus* (Mountain Holly); *Onoclea sensibilis* (Sensitive Fern); *Phragmites australis* (Common Reed).

9. What will be the first genetically engineered tree planted in the wilds of the Northeast?

A. An American Chestnut that has genetic material from wheat, *E. coli*, *Arabidopsis thaliana* and maybe other living things.

B. A cold-tolerant Eucalyptus grown for pulp and biomass, even though *Eucalyptus* species may be invasive.

C. A Giant Sequoia with German shepherd genes that comes when you call it.

D. None of these.

10. The green fuse may mean which two of these?

A. a 30 amp automotive fuse.

B. a phrase from a Dylan Thomas poem.

C. the flower stalk of the sandbox tree (AKA dynamite tree).

FLNPS CALENDAR, SPRING 2023

We welcome members and guests to our new season of presentations and other programs! The following events have been scheduled:

March 21st: David Dubois, Land Steward, will speak on *Plants and Ecological Communities of Baltimore Woods*.

April 18th: Arie Tal will talk about *Violets of the Finger Lakes*.

May 16th: Brigitte Wierzbicki, N.Y. Parks Dept., will update their *Native Plant Propagation Program*.

FLNPS evening Talks begin on **Tuesdays at 7:00 p.m.** at the **Cornell Botanic Gardens' Nevin Welcome Center**, 124 Comstock Knoll Drive, at Cornell University in Ithaca, N.Y. Please check our website (flnps.org) for a map, updates, other details, and any additional programs that may be scheduled. Evening presentations are also available as a simultaneous Zoom program, which is often recorded and posted on our website.



Thank You!

FOR THIS ISSUE, we thank **writers** Scott LaGreca, Rosemarie Parker, Robert Wesley, Norm Trigoboff, Dr. Usnea, & David Werier; and **photographers** Robert Wesley (pp. 1-4), Robert Dirig (pp. 5, 7, 9-16), & David Werier (p. 6). **Layout & design** by the Editor; **proofreading** by Rosemarie Parker, Scott LaGreca, & David Werier; and **printing** by Gnomon Copy. Anna Stalter emailed copies, Pat Curran mailed paper copies, & Rosemarie posted to the web; Audrey Bowe, Anna, & Rosemarie organized calendar items.

Facts about Nancy Slack were summarized from https://en.wikipedia.org/w/index.php?title=Nancy_Gutmann_Slack&oldid=1128962687.

Please check our website (flnps.org) regularly for announcements and details of our events. Thanks to our Steering Committee (p. 5) and all of our members for supporting FLNPS and its doings. We are very happy to have resumed in-person programs!

Best Wishes to everyone in our reading audience for joyous outdoor revels with the vernal flora!

— Robert Dirig

REVIEW

Solstice 2022

by Rosemarie Parker

On a cold December night, over 30 members and friends of FLNPS gathered to celebrate our first *in-person* Solstice meeting since December 2019. The self-serve seed table was busy as a beehive. Robert Wesley outdid himself with seventeen numbered plants for the quiz, then identified all the un-numbered plants he had brought as well. (We *all* learned a bit more about local plants, as no one claimed to have answered all correctly.) A range of door prizes and snacks was provided by attendees.

It was wonderful to chat about what plants grow where, how to deal with the new seeds to ensure happy plants, where in the wild to see this or that species, and catch up with friends not seen in so long. Thanks to all who showed up to make the night a success. Thanks especially to those who provided door prizes or snacks: Robert Wesley, Norm Trigoboff, Anna Stalter, Mary Squyres, Rosemarie Parker, Adrianna Hirtler, Di Florini, Pat Curran, Freyda Black; and to everyone who helped with set-up and cleanup. A special thanks to Audrey Bowe, Leo Louis, and Marcie Finlay for helping to get the 136 different seeds packed up and arranged on the tables. I know I have missed some names, and I apologize for my forgetfulness. You were all appreciated!

The new meeting room worked well for this meeting, having high ceilings, good lighting, and good ventilation. Next year we hope to celebrate with the full traditions.



Answers to Plant Trivia

by Norm Trigoboff

1-A In general, *peas* are round and green, have hollow stems, prefer cooler weather, spoil faster, need to be cooked less and the climbing species have tendrils. *Beans* have many shapes and colors, solid stems, prefer hotter weather, keep longer, need to be cooked longer and the climbing kinds wind for support.

1-B *Pulses* are annual legumes (peas or beans) harvested for the dry seeds.

1-C *Pea*, in one form or another, shows up on lists of pet names more than bean. Sorry, old bean.

2. C. Yes, my little Fava Bean, *brains*. The great neuroscientist Santiago Ramon y Cajal chose this term because certain axons looked moss covered. Trivia: Cajal served time — 3 days in the local hoosegow — when he was 11 for blasting a hole in a neighbor's garden gate with his homemade cannon. His dad wanted him to serve the time without food, but a neighbor woman and his mom made sure he had something to eat.

3. C. The *Gilboa Fossil Forest in Cairo, N.Y.*, a 3-hour drive from Ithaca, was found in the 1920's, when NYC dug up the place to supply itself with water. How about a club field trip there?

4. Corn. *Flint* is the high-on-Mohs-Scale Halloween decoration corn. *Dent* is field corn for cows, but tasty when under-ripe (quick, outta here, the farmer saw us). *Sweet* is in your supermarket. *Pop* you can guess.

5. A better topic than these *fruitless queries* might be:

How do botanists and lawyers differ? Botanists (and other boffins) seek widely accepted, narrowly defined terms. Botanists worldwide mean pretty much the same thing when they speak of fruits, berries, nuts, tubers and so on. Lawyers are often in a jam because they deal with the thornier problems of how people interact with plants. An 1893 U. S. Supreme court decision ruled that tomatoes are vegetables (for the purposes of an 1883 tariff act). A 2001 European Communities Council directive ruled that carrots, rhubarbs and sweet potatoes were fruit (for the purposes of their directive about jams, jellies and such).

6. Pepper spray. If you said pea shooter or potato gun, review your taxonomy. Those are in the toy family.

7. B. This fun free-for-all food fight festival was forbidden briefly in the 1950's by Franco. The people rebelled against his attempt to squash their mirth. Today's celebrations now go through tons of tomatoes and, I suspect, a good bit of booze.

8. *Phragmites australis* is in a genus that has four species. The others are monotypic.

9. A & B are in the works. **C & D** might be. See: <https://www.aphis.usda.gov/brs/aphisdocs/19-30901p-dpra.pdf> Many thanks to Carole Stone (who prefers to remain anonymous) for suggesting this question.

10. A & B. Thomas was 19 when he wrote the well known poem that starts: The force that through the green fuse drives the flower... (History fails to note how much he knew about automotive wiring. And I am dumb to tell what his poem is about.)

CRYPTOGAMS

Lichen Lessons with Dr. Usnea



Dear Reader,

After a long seclusion at my sandstone cottage and surrounding wild gardens, a friend (your Editor) has persuaded me to offer a few Lessons about the Lichens of the Finger Lakes Region. These will appear occasionally, and each will describe and illustrate a discrete subset of our local lichen flora. The first installment features

Yellowish-green Foliose Lichens of the Finger Lakes Region

FOLIOSE lichens are *leaf-like*, usually have a distinct upper and lower surface (page 10), and grow flat on tree trunks or rocks. Other growth forms of lichens include **FRUTICOSE** (*shrub-like*), **CRUSTOSE** (*crust-like*), **UMBILICATE** (*attached at one point to their substrate*), and **SQUAMULOSE** (*flaky or shingle-like*). We shall explore these other forms in later Lessons.

This first group has eleven lichens, which are labeled as to size (*Huge, Large, Medium, Small, and Tiny*), with scales noted. At the end are two locally rare species that are yellow-green *when wet*, but much less colorful when dry.

Common Greenshield (*Flavoparmelia caperata*)

Large

This very common species conspicuously decorates tree trunks, often in sunny situations where they edge a damp forest, stream, or roadside. It is one of our largest foliose lichens, sometimes reaching the diameter of a dinner plate. The top surface is a beautiful yellow-green, with rounded lobes along the edges. The lower surface is black, with a brown rim under the growing tips (see next page).

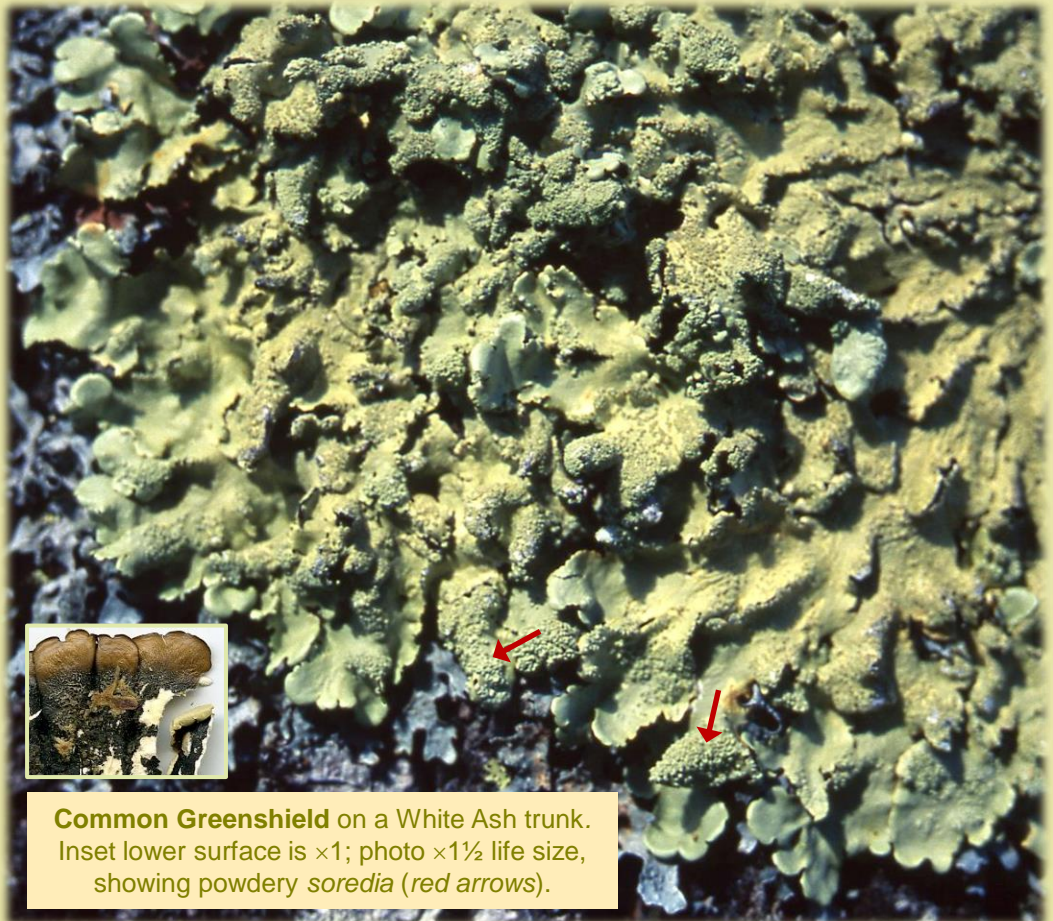


Common Greenshield on trunks of White Ash. ($\times \frac{1}{2}$ life size on the right).

Large

Common Greenshield, continued:

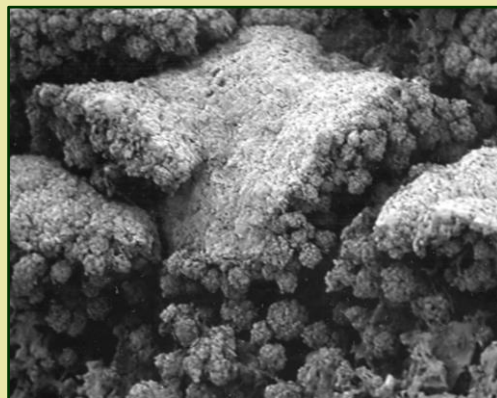
Although primarily living on trees, **Common Greenshield** may sometimes grow on rocks, as on a stone wall. **Rock Greenshield** (*Flavoparmelia baltimorensis*) is very similar, but is **isidiate**, and grows on rocks (see p.7). It is not presently known from the Finger Lakes Region, although it may be here. [Isidia are another vegetative propagule of lichens that will be discussed below.] Dried specimens of Common Greenshield (and other lichens) may retain a sweet fragrance for many years.



Common Greenshield on a White Ash trunk. Inset lower surface is $\times 1$; photo $\times 1\frac{1}{2}$ life size, showing powdery **soredia** (red arrows).

LICHEN ECOLOGY

Female **Ruby-throated Hummingbirds** hover over Common Greenshield, removing growing tips to use in creating a lichen mosaic on the outside of their tiny nests—which are made of plant down held together with spider webs and insect silk. These birds mix Common Greenshield with bluish-gray tips of **Hammered Shield Lichen** (*Parmelia sulcata*) [to be treated in a later Lesson]. This elegant ornithological artwork camouflages the nest, which is usually saddled on a downward-slanting tree branch. In combination with an exquisite, emerald-green brooding bird, it is one of the loveliest objects in nature.



SOREDIA are tiny vegetative propagules that contain both partners of the symbiosis — a photosynthesizing **green alga** or **cyanobacterium**, and a **fungus** that provides structure, holds water, and anchors the thallus to its substrate. **Soralia** (clusters of soredia) often erupt through holes in the upper cortex, and are dispersed by wind, rain, and animal agents (arboreal birds, mammals, and insects). They often appear powdery, as in the top photo. The SEM image above shows soralia spilling from the lower surface of a squamulose lichen. Each sphere is about 1/20 mm in diameter.

See J. L. Allen & J. C. Lendemer's *Urban Lichens*, 2021, p. 1, for a thorough description of the lichen symbiosis.

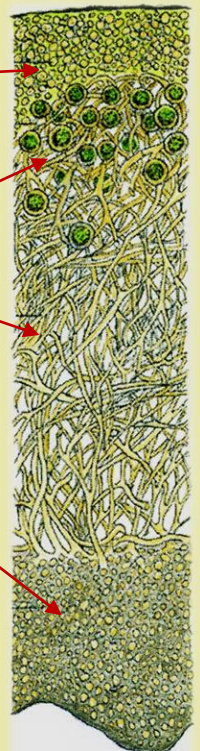
CROSS-SECTION OF A FOLIOSE LICHEN

upper cortex, formed of thickly intertwined fungal threads (**hyphae**)

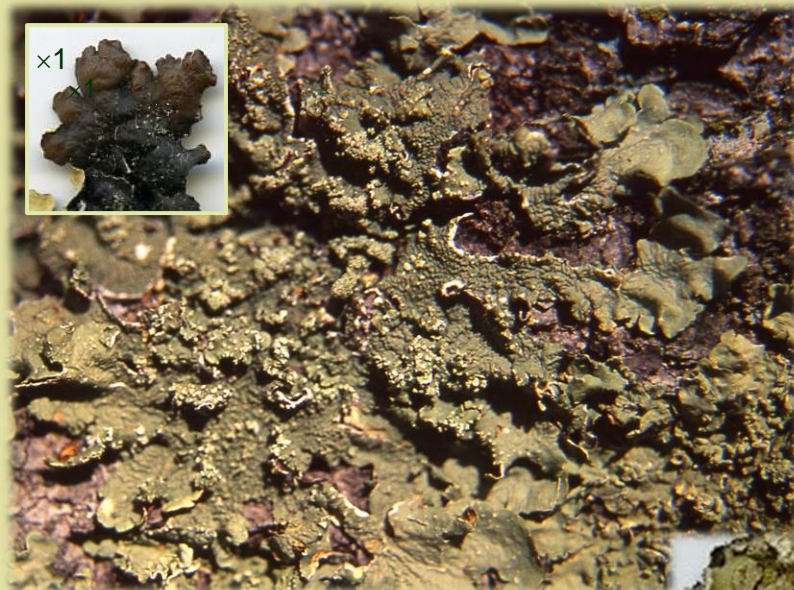
green algal layer at the top of the medulla

medulla, formed of loosely entwined hyphae. It often appears white when exposed.

lower cortex of dense hyphae, as in the top layer. **Rhizines** (not shown) often anchor the lichen to its substrate (usually trees or rocks).



Large

Speckled Greenshield (*Flavopunctelia flaventior*)

Large photo on left is $\times 2\frac{1}{2}$ life size, show the coarse surface texture.

Photo at right:

The white pores are the medulla showing through holes in the upper cortex.

Photo below shows marginal and laminal (on surface) soredia (red arrows).



This large foliose lichen is darker olive green than Common Greenshield, and has white pores on the upper surface (*top right*). It is not as common, occurring in moist wooded habitats, growing on tree trunks, sometimes into the canopy. The lower surface (*cortex*) is matte black with wide dark brown tips (*inset above*). It is also sorediate, but the soralia are marginal or in clumps on the upper surface (*right*). Find it locally in dappled shade on roadsides, in swamps and bogs, and in beaver meadows. *BCR*

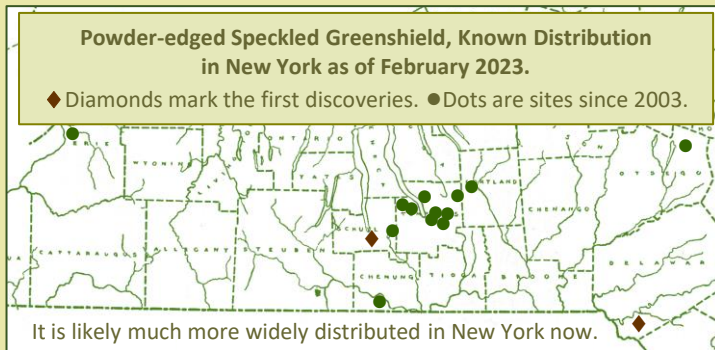
Small to Medium

Powder-edged Speckled Greenshield (*Flavopunctelia soredica*)

This lichen is a celebrity in the Finger Lakes Region, being the second record for the state, at Watkins Glen, in 2003 (the first was from the southern Catskills in 1978). It is much smaller than the Speckled Greenshield, and a paler green color. Soredia cluster on the edges of thallus lobes, as shown (*left*), but do not form on the upper surface itself. It is jet black with brown margin beneath [*inset*]. It is very tightly appressed to its bark substrate, and likes dappled shade with some full sun during the day, and can mass on tree trunks. Find it on roadsides, lawn and street trees, in parks, on large trees in open fields, and in bogs on branches of dead conifers; also on hilltops, and along lakeshores. Once known, it is easily recognized, and seems to be rapidly spreading in New York from the Midwest. The map on p. 12 shows its known distribution in the Region and nearby, since 2003. See *Solidago*, Vol. 11, No. 3, October 2010, pp. 1 & 4-5, for a review of its discovery in the Finger Lakes Region. *BCR*

Small to Medium

Powder-edged Speckled Greenshield, *continued:*



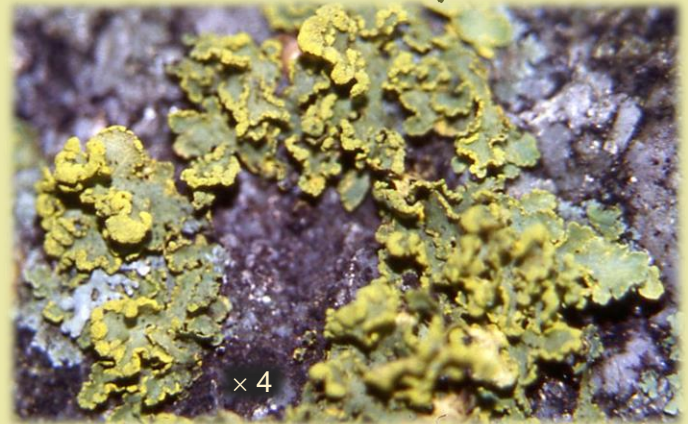
✂

The striking **Powdery Sunshine Lichen** grows in sphagnum bogs and in other damp, cool, boreal situations. It is especially noticeable in shrub thickets on bog moats (*top photo*), but also grows on tree branches and trunks. The upper surface is pale to rich yellow-green, with bright yellow, usually marginal soralia, deriving from the yellow medulla. The lower surface is beige. Common substrates include Highbush Blueberry, Hemlock, and White Pine. [The middle and bottom right photos were taken in Shingle Gully near North Cave (in an arc of cool *ice caves* in the Shawangunk Mountains of Ulster Co., N.Y.), growing on quartzite conglomerate.] ✂

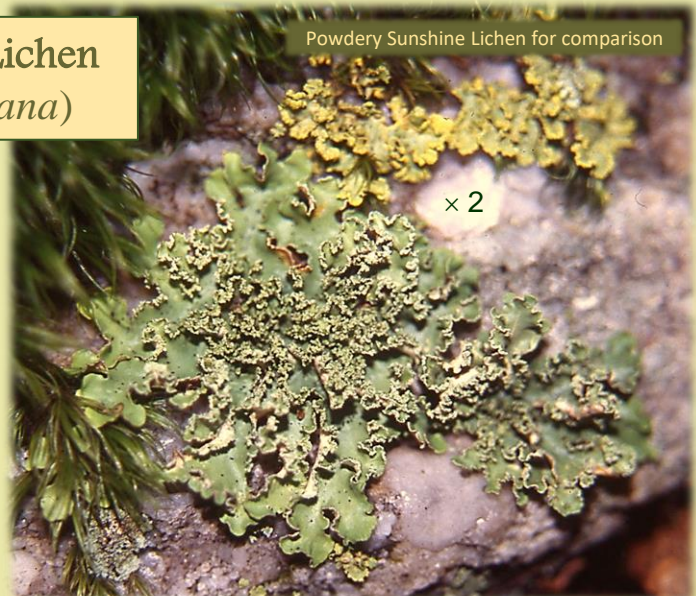
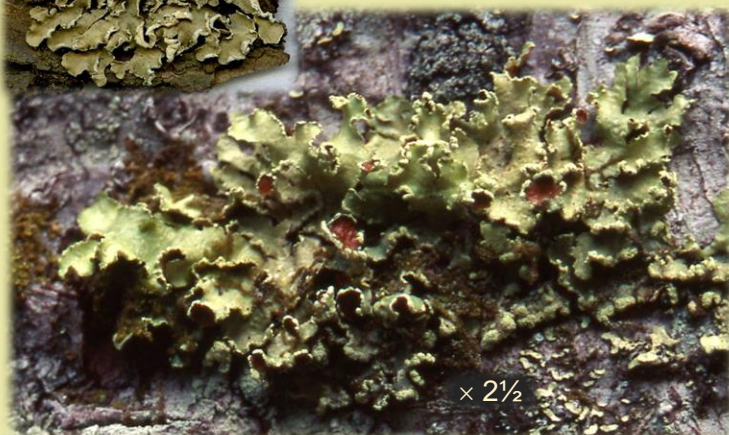
Powdery Sunshine Lichen (*Vulpicida pinastri*)



Small to Medium



Yellow-green Ribbon Lichen (*Usnocetraria oakesiana*)



Medium

This lovely lichen is common in cool swamps and boreal woodlands, growing on bark or rocks. Its upper surface is pale olive or yellow-green, the lower surface a pinkish-beige. Thallus branches have rippled edges bearing greenish-white soralia, and actually look like ribbons. The photo (*bottom right*) compares the Yellow-green Ribbon Lichen with the Powdery Sunshine Lichen. Chocolate *apothecia* (fruiting structures of the fungal partner) are rare in this species, occurring on the margins of lobes (*bottom left photo*, from an Adirondack bog). This pretty lichen may be seen locally in Ithaca-area gorges, bogs, and boreal swamps.

✂

Tiny

Powder-tipped Starburst Lichen (*Parmeliopsis capitata*)

This tiny lichen usually is found on conifer branches and lignum in sphagnum bogs and boreal forests. Specimen photos on the left are life-size. Enlargements show the *capitate* (head-like) soralia. Locally in bogs. [The **Gray Starburst Lichen** (*P. hyperoptera*) is similar in size, appearance, and habitat, but does not occur in the Finger Lakes Region.]

Medium to Large

Three similar species of *Xanthoparmelia* are known from the Finger Lakes Region, all growing on rocks:

Cumberland Rock Shield
(*Xanthoparmelia cumberlandia*)

This beautifully structured lichen is yellowish-green above, with large chocolate brown, green-rimmed apothecia clustered in the center, and a brown lower surface. The doily-like thallus is tightly affixed to rock surfaces by rhizines. This lichen is somewhat sparse in the Finger Lakes Region, recorded locally in rocky gorges, swamps, and along waterways in the Ithaca area.



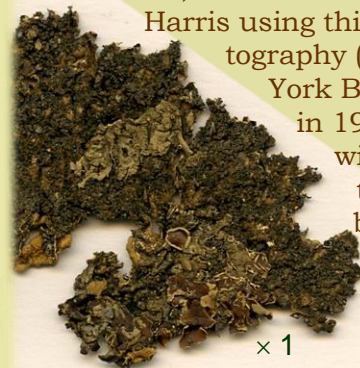
Cumberland Rock Shield on a Catskill stone wall (× 1)



Cumberland Rock Shield, upper (above) and lower (right) surfaces

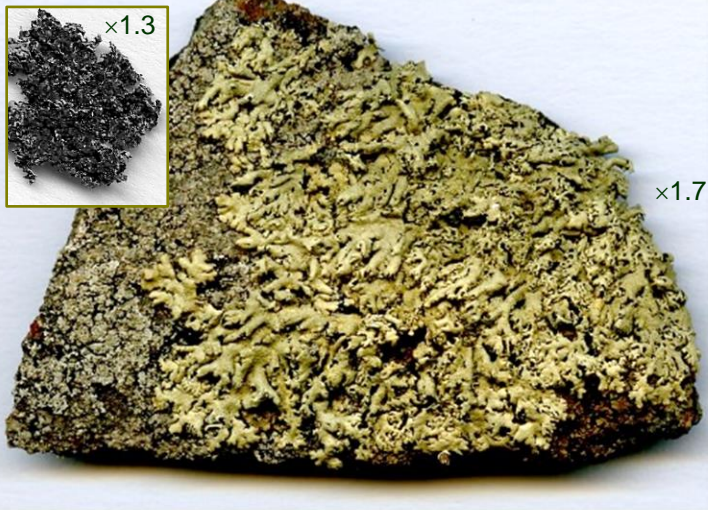
Courtesy of Cornell Plant Pathology Herbarium

This specimen was collected in Ithaca in 1894, and identified by Richard C. Harris using thin-layer chromatography (TLC) at the New York Botanical Garden in 1982. TLC is used with some lichens to identify them, based on unique chemicals produced by the lichen.



Medium to Large

Peppered Rock Shield (*Xanthoparmelia conspersa*)



Peppered Rock Shield, on a sunny ledge in open oak woods

J. Hinds & P. Hinds (2007, pp. 519-520) regarded this the “most common *Xanthoparmelia* of N[ew] E[ngland].” It is likely as widespread in New York. The cortical surfaces are yellow-green above (*left*) and black beneath (*inset*), usually lacking apothecia. The tiny **isidia** (see box below) are “minutely globular to cylindrical..., simple or branched” (H&H, *loc. cit.*). It grows in relatively sunny habitats.



ISIDIA are another kind of vegetative propagule in lichens. They are less common than soredia, and have a different structure. Whereas **soredia** are a few green algal cells entwined with fungal threads, **isidia** are minuscule growths from the upper cortex that contain a bit of the medullary layer which includes algal cells. They may be branched, or look like barrels, spikes, or coral, and are heavier than soredia, breaking off to disperse. Isidia require high magnification to see; circled area in the continuing *X. plittii* account on p. 15 provides a glimpse of them. The **Common Antler Lichen** (*Pseudevernia consocians*, *right & below*) has very large isidia that are more easily seen. They look like spikes or hairs edging the branches, and can reach 2 mm in length. *Xanthoparmelia* isidia are shorter and barrel-shaped, or sometimes branched. They are best studied under a microscope.



Plitt's Rock Shield (*Xanthoparmelia plittii*)

This Rock Shield seems to be common. The upper surface is yellow-green, isidiate (*right*), apotheciate (*below*), with a beige (*below*) or brown (*p. 15*) underside. It colonizes stone walls or other stone substrates in old fields, open oak woods, on cliffs, and gravestones in cemeteries. The isidia are 0.1-0.2 mm long, simple or branched (H&H, p. 521). See an enlarged view on the next page.

Plitt's Rock Shield, on a gray sandstone rock in an old pasture

Medium to Large

Plitt's Rock Shield, *continued*

Darker areas in the center of the thallus are covered with isidia (right).



LICHEN ECOLOGY

Xanthoparmelia frequently thrive on old stone walls, which often host a community of foliose and crustose lichens. The **Black-and-Yellow Lichen Moth** (*Lycomorpha pholus*) is often seen in association with this microhabitat, with one adult flight in August. Larvae of these lovely small moths feed on lichens in moist habitats adjacent to rocks. Their warning colors suggest distastefulness, which likely derives from stictic and norstictic acids produced in the medulla of *Xanthoparmelia* spp. (H&H 2007, pp. 519-521).



Plitt's Rock Shield from a gravestone. The yellow circles show an area of tiny, dense isidia. The inset (upper right) shows the darker brown lower surface of this individual (compare to p. 14 illustration).



A **Black-and-Yellow Lichen Moth** nectaring at goldenrod flowers near a rock wall.

The following two lichens are *bright green when living and wet*, but are *bluish-gray when dry*.

Medium



Common Chocolate Chip Lichen (*Solorina saccata*)

This rare boreal lichen is found on limy soils in cool, wet situations. The thallus is lobed, with sunken brown apothecia, and pinkish-beige beneath. J. A. MOORE described the thallus as "apple green" when finding it in the bottom of Buttermilk Glen in 1933. RICHARD C. HARRIS also rediscovered it there in 1982. Other historical records are from the Enfield Ravine (1893-1894, 1926) and Coy Glen (1894). See the Hinds' book for photos of the wet (green) and dry thallus on p. 447. Please watch for this rarity as you hike through the gorges near Ithaca, Watkins Glen, and other nearby Finger Lakes.

Courtesy of Cornell Plant Pathology Herbarium

Lungwort (*Lobaria pulmonaria*)

Huge
in pristine
habitats
(now Medium
in the Finger
Lakes)

This *megalichen* of the Finger Lakes (and the Northeast) is bright yellow-green when wet (*top left*, Maine), but bluish gray when dry (*middle left*, N.H.), with a mottled brown and white undersurface. The living lichen suggests a male Moose's antlers! It occurred full-size, locally, in old-growth habitats in the early years of exploring for lichens around Ithaca and Truxton, N.Y., in 1893-1894 (*right photo*), but has severely declined in recent decades, due to air pollution. It was found by Babette Brown and W. C. Muenscher in 1944 in a bog near Cortland, still exhibiting large size; but a recent sighting on Bald Mountain in the Town of Caroline, Tompkins Co., in 1988 was very depauperate (*bottom left*). Please watch for Lungwort in the Finger Lakes Region in damp, cool sites, and photograph it if you find it.



×1/3



×1/3



×1, 1988



×1
Enfield,
1893

Courtesy of Cornell Plant
Pathology Herbarium

In your daily to-and-fro, and when in boreal wetlands, please watch for these lichens. Once you recognize them, they become far less subtle, beautifying the view — new friends that you will greet with joy when you notice them again!

For further reading and more details, please consult James Hinds' and Patricia Hinds' wonderful, richly illustrated guide to The Macrolichens of New England, the best book on lichens of the Northeast, including New York. It is available from the New York Botanical Garden at

<https://nybgshop.org/the-macrolichens-of-new-england-mem-96/>

Until next time, Happy Lichening!

— Dr. Usnea