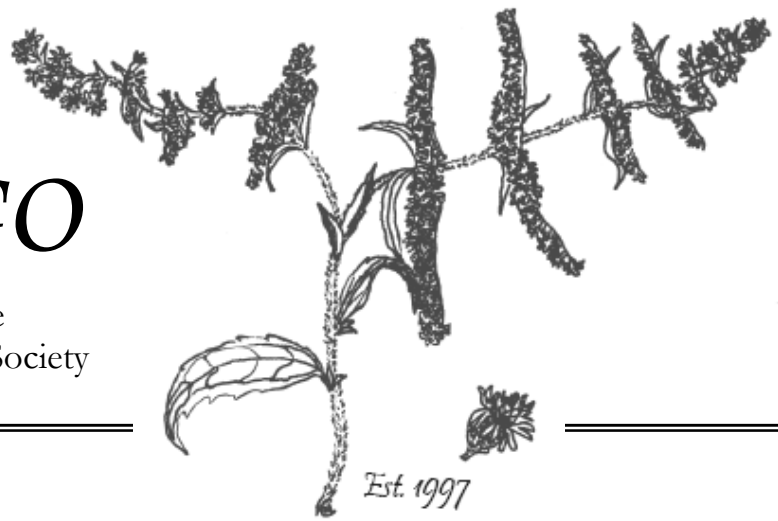


SOLIDAGO

The Newsletter of the
Finger Lakes Native Plant Society



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February 2008

Balsam Fir, *Usnea*, and Fun Times at Shindagin Hollow by David Werier

Along the edge of the creek that runs through Shindagin Hollow (Tompkins County, Town of Caroline, Shindagin Hollow State Forest) is a stand of balsam fir (*Abies balsamea*) that is quite interesting in a few respects. In this part of central New York, balsam fir is primarily restricted to very cool peat swamps, bogs, or fens. In these settings the fir often grows in

sparse patches or occasionally in small dense thickets of a few trees. The trees generally do not get too big. By contrast, the Shindagin Hollow population occurs in the floodplain of a small stream valley with mineral soils and the population is very large, continuous, and mostly very thick. The mature trees are quite large and there is abundant recruitment of new small

saplings. The population in Shindagin Hollow is more representative of how balsam fir grows further to the north (as in the Adirondacks) than in south-central New York. Given the above reasons Robert Wesley, botanist with Cornell Plantations Natural Areas Program (personal communication) and I have believed that this population is non-native in origin. Robert also

informed me that Peter Marks, professor emeritus of Cornell University, had independently come to this same conclusion. Recently, I was able to talk with an old timer, Henry "Hank" Krauss who was born around 1930 and grew up along Braley Hill Road in the Shindagin Hollow area. He remembers the Civilian Conservation Corp (CCC) camps that were planting conifers in the area and specifically remembers that the firs were planted by the CCC down along the creek. He believes they were planted between 1937 and 1939.

I have been by this fir population numerous times but it wasn't until this year that I finally decided I needed to investigate what lichens were growing on these trees. I was drawn to study the lichens here because balsam fir is an important substrate for certain epiphytic lichen species and in this part of New York (as mentioned above) fir is a fairly uncommon species that generally grows in small patches. I went out by myself on November 28, 2007 (my 40th birthday!) and with Nat Cleavitt, bryologist, lichenologist, and

plant ecologist of Cornell University, on January 8, 2008. I was extremely impressed with the lichen growth on the balsam fir. In particular, the overall biomass, size of thalli, and diversity of *Usnea* species (old man's



- FUN TIME WITH LICHENS -
Getting a voucher of a fertile *Evernia mesomorpha* ready for its packet

continued on page 7

Name that plant contest

The photo from last issue's name that plant contest (Solidago 8(4)) was of trout lily (*Erythronium americanum*). I had eight guesses and they were all correct. Contest winners were Nat Cleavitt, Nancy Reynolds, John Gregoire, Sue Gregoire, Kenneth Hull, Susanne Lorbeer, Rosemarie Parker, and Anna Stalter. Congratulations to all the winners. Now I know that there are people out there reading the newsletter.

This issue, I present perhaps a slightly more challenging plant but don't let that stop you from guessing. More than one guess is allowed. Please submit your answers to David Werier (email and address in box to the right). The photo was taken on August 18, 2007.



photo by David Werier

NEXT NEWSLETTER DEADLINE March 21st, 2008

In order to keep this newsletter lively, interesting, and informative we need your contributions. Thanks to all who have contributed so far. Please send your articles, stories, drawings, photos, trip reports, information on relevant upcoming events, letters to the editor, etc. to David Werier, editor (email and address noted in box above). The deadline for the next newsletter is **Friday March 21st, 2008**. Thanks for your help in making this newsletter possible.

THE FINGER LAKES NATIVE PLANT SOCIETY Steering Committee Members

Charlotte Acharya: [redacted] at large
Krissy Faust: [redacted]
Projects (chair)
Mark Inglis: [redacted] at large
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Dan Segal: [redacted] at
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Anna Stalter: [redacted]
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David Werier: [redacted]
Newsletter Editor
Bob Wesley: Outings and Education

Send all correspondence regarding the newsletter to: David Werier, Editor, 30 Banks Rd., Brooktondale, NY 14817 or email nakita@lightlink.com

Internship offered by Prospect Park Alliance - Natural Resources Crew - Summer 2008

Opportunity to join a diverse and dedicated crew managing 250 acres of woodlands and 62 acres of water bodies located within historic Prospect Park. The intern will have the opportunity to take part in a variety of projects including woodland restoration, lake/pond monitoring, vegetation monitoring, and a possibility for independent study.

Successful candidate should have an interest in ecology, aptitude for fieldwork, enjoy learning new concepts, and be prepared for physical work. Candidate should be a college or graduate student enrolled in a relevant field of study (i.e. ecology, natural resource management, biological sciences, forestry, etc.). Position normally runs June through August, can start mid-May, approximately 9 weeks, 35 hours/week, \$9.75/hr.

Send cover letter and resume to: John Jordan, Landscape Management Office, 95 Prospect Park West, Brooklyn, NY 11215 or via e-mail to: Job002@prospectpark.org. Questions? Contact John Jordan at 718-287-8450 x105. The Prospect Park Alliance is an equal opportunity employer.

THANKS

As always, big thanks to all the people who volunteer their time to make FLNPS an inspiring, exciting, and important organization.

Thanks to all of our walk and outing leaders including Nat Cleavitt (Epiphyte Epiphany), Anna Stalter (Winter Tree Walk, Woodland Walk), Susanne Lorbeer (Early Spring Wildflowers at Lick Brook, Spring at Ringwood, Monkey Run Natural Area Tour, Watkins Gorges, Moran-Smith Trail, Cascadilla Gorge), David Werier (Violets, Tongue Mountain Range Lake George), Carol & David Burnett (Spring at Ringwood), John & Sue Gregoire (Watkins Gorges), Norm Trigoboff (Hornwort Walk), Krissy Faust (Annual Seed Collecting Walk), and Ed Cope (Conifer Walk).

Thanks to all of our presenters for our monthly evening presentations including Lang Elliot (Singing Insects), Jim Engel (Restoration Techniques for Small Landowners), Peter Marks (Changes in the Cayuga Flora since the 19th Century), Doug Larson (Rock as Refuge: Plants in Extreme Conditions), Anna Stalter (Growing Native Plants in the Cayuga Lake Basin), Krissy Faust (Growing Native Plants in the Cayuga Lake Basin), James Reveal (Botanical Discoveries of Lewis & Clark), David Werier (Biodiversity, is it really a big deal? Lessons from Reznicek's sedge, Panel Discussion), Peter Marks (Panel Discussion), Vicki Nuzzo (Panel Discussion), Tim Fayhe (Panel Discussion), Dan Segal (Panel Discussion), Robert Wesley (Panel Discussion), and Robin Kimmerer (Gathering Moss: Lessons From the Small and Green).

Thanks also to all those who came out to or organized an invasive plant removal project including the *Microstegium* pulls at Six Mile Creek. Thanks also goes out to all those that helped with the 2007 solstice gathering, staffed tables at various events, helped with the spring plants sale, and more.

Possible summer position

There is a possibility that some funding will be available to hire someone for the summer in the Green Mountain & Finger Lakes National Forest's STEP (Student Temporary Employment Program). The work would involve monitoring rare plants in Vermont and doing some related GIS and database work. For more information contact:

MaryBeth Deller, Botanist & Non-native Invasive Species Coordinator / Green Mountain & Finger Lakes National Forest / Rochester Ranger District / 99 Ranger Road / Rochester, Vermont 05767 / 802-767-4261 ext. 524 / mdeller@fs.fed.us

Finger Lakes Band Together Against Invasive Species by Finger Lakes Partnerships for Regional Invasive Species Management (FL-PRISM)

More than 5,000 non-native species have established free-living populations in the U.S. Of these, about 15% are "invasive species", that is, plants, animals, insects or pathogens which have been transported – intentionally or unintentionally – into a geographic region outside their native ecosystem and which have caused (or have the potential to cause) significant harm to the environment, the economy, and/or to human health. Some well-known examples of invasive species are zebra mussels, purple loosestrife, the common reed (*Phragmites*), Eurasian watermilfoil, West Nile virus, Dutch elm disease and Chestnut blight.

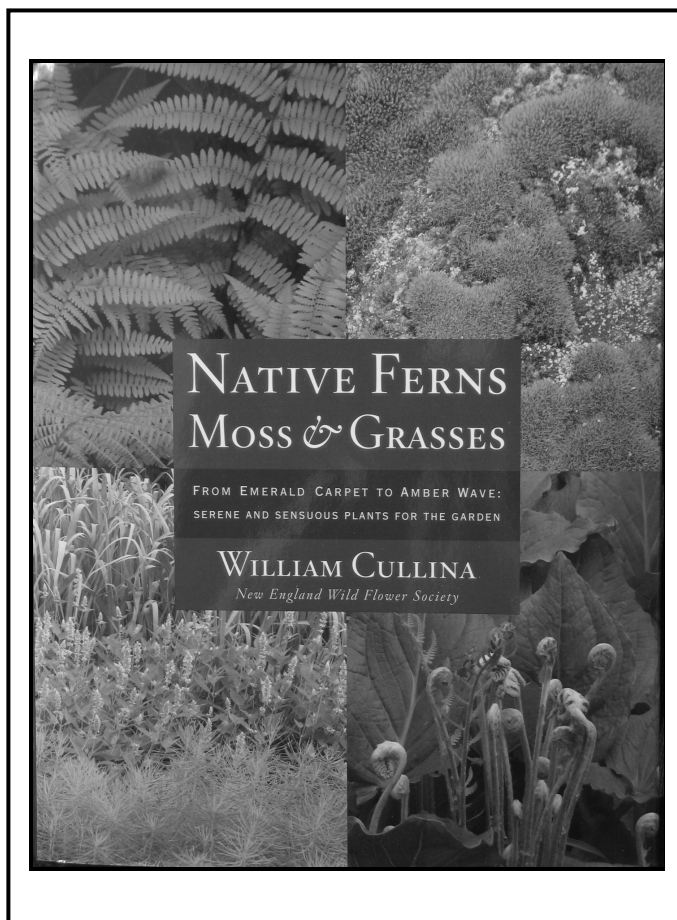
In response to the 2006 Report of the New York State Invasive Species Task Force, eight Partnerships for Regional Invasive Species Management (PRISM) are being formed statewide. In the Finger Lakes, central Lake Ontario, and Upper Susquehanna region, the Finger Lakes PRISM (FL-PRISM) has been formed to bring together the resources of a diverse range of organizations in an effort to prevent, detect, control and manage invasive species, ultimately reducing their proliferation and impacts. The Partnership includes representatives from universities, federal, state and local agencies, resource managers, the media, and business and industry, as well as private landowners.

The FL-PRISM will serve as a regional clearinghouse for information on existing invasive species, as well as new species that threaten to invade the region. It will also coordinate multi-tiered programs to educate residents of the region about the invasive species threat and how they can become partners in the battle against such organisms.

The FL-PRISM is still in the early stages of its establishment. Committee members and other partners are working collaboratively to identify target terrestrial, aquatic, and pathogenic invasive species of particular importance to the region. Participation by a wide range of organizations and the general public will be essential to the PRISM's success. Staff currently participating in FL-PRISM include Marion Balyszak as a member of the Interim Steering Committee, Sarah Meyer as the Interim Education/Outreach Subcommittee Coordinator, and Dr. Bin Zhu as a member of the Interim Technical Sub-Committee on Aquatic Invasive Species. Individuals interested in learning more about invasive species or about partnership opportunities with the PRISM are encouraged to contact the acting-chair, Gregg Sargis (gsargis@tnc.org) or log onto the FL-PRISM website at www.fingerlakesprism.org.

Book Review
by Rosemarie Parker with critical and
copious input from Anne Klingensmith,
Mark Inglis, and Krissy Faust

Native Ferns, Moss, & Grasses. From Emerald Carpet to Amber Wave: Serene and Sensuous Plants for the Garden by William Cullina of the New England Wildflower Society. Houghton Mifflin, NY, USA. 2008.



Cullina's previous books on wildflowers and trees, shrubs, and vines have become my first choice references for cultivation and propagation information of native plants. So I was really excited to see another in the series. Cullina states that the species covered in this volume are "functional, practical, not thrilling," but their "form and texture create spaces and give them tone and mood." Critical elements for a successful garden!

The extensive introductory sections make a real effort to address some of the difficult issues faced by

native plant gardeners, e.g. defining "native", local genotypes, ecotypes, and invasives. Unlike many horticulture books, Cullina's has incredibly informative sections on plant hardiness, light, soil structure and pH, habitat, hybridization, and propagation. These sections are very succinct - brief yet full of information that a gardener could use in thinking about the particular place that they are trying to grow plants.

"[Cullina] seems to recognize that acquiring a new plant with [just] a little information about growing it is often a recipe for failure. I think that he provides much needed information and for this alone, I would buy [the book]." - Anne Klingensmith

Cullina's prior books had some of the same background information (some identical, in fact), but I feel this effort flows better, is easier to read, and feels very timely. The New England Wildflower Society (NEWFS) statement on wild collecting is prominent in all three books along with continued encouragement to plant local genotypes and support nursery-propagated plants. A new essay on global warming is thought provoking, even if you disagree with his conclusions. He even discusses introduced worms, although Krissy would have preferred more emphasis on their negative impacts.

Some reviewers liked Cullina's anecdotal style; some found it a bit too much. His lists of plants for specific uses are fine. But his propagation sections are dynamite, giving collection, storage, seeding, potting up – everything – in a quick reference format. As in the prior two volumes, the bulk of the book is a great encyclopedia of plants.

Ferns & Allies: The background information on fern life cycles and propagation methods are very clear, and the discussion on hybridization and polyploidy is understandable. Clearly a volume covering North America will not include all the species that we could grow here, but Cullina does a good job of selecting ferns that will do well under garden conditions. He includes most common Finger Lakes species and some rarer ones that are easily spore grown if the right growing environment is available. There is one glaring exception – he includes rattlesnake fern (*Botrychium virginianum*) with the comments that it is "difficult to impossible by spore and division" and even in dire rescue situations suggests that a 12" ball with complete humus layer should be dug. And then it probably won't survive. So why include it? In a different section

Cullina states that he has tried to include facts on species that generate a lot of cultivation questions to the NEWFS, even if just to discourage most attempts. (But see below....)

Mixing the clubmosses and horsetails in among the ferns was a bit disconcerting; they would be easier to find if fern allies formed a separate section.

“I am ...disappointed at his inconsistency with regards to club mosses, plants that will be impossible for anyone to grow. He does state that collecting from the wild should not be done, and even ... states that many plant rescues are suspect.... He starts out the club moss section saying that they are difficult to grow, that there are not nursery propagated commercial sources, that no one knows how to grow them from spores, and then continues to give instructions for trying to grow them. I think that this guarantees that some macho gardeners will try, which means that they will be trying with plants collected from the wild. Too bad....” - Anne Klingensmith

I also think that the cultural requirements are a bit restrictive. For bulblet fern (*Cystopteris bulbifera*) he lists only moist soil, yet I have several tolerating pretty dry conditions now that they are settled. Maybe it is best to give only the most reliable conditions, but I do like to know if seasonal dryness or wetness is tolerated.

Mosses: The section on mosses was disappointingly slight, but there is some good information in there. Cullina has the most detailed explanation Mark has seen of the "moss milkshake" method, and a slightly different recipe that he is looking forward to trying next spring.

“It doesn't sound as if he has had any more success than I have had growing moss on rocks using that method, though, so I will also try another suggestion of his, using white glue to attach starter sprigs of moss to the rocks. His text gave me a few more ideas, not expressly suggested as propagation methods, which I will try also. He mentioned that mosses are being propagated in quantity in Europe for green roofs without saying how it was done except

that they were grown under a mist; a more detailed explanation would have been appreciated since the propagation methods he did explain would produce moss in small batches and moss is something you probably want to have in fairly large areas. All in all, I found the article helpful ... (but) probably not worth buying the book just for the mosses....” - Mark Inglis

Grasses: The grass section has another good introduction, clarifying grasses vs. sedges, warm vs. cool season grasses, and even C3 vs. C4 grasses. The descriptions and cultural information in the encyclopedia section are good. Cullina makes some distinctions between grasses that are good in beds and those that are best in meadows, and Krissy doesn't always agree with his choices. She feels that grasses offer so much structure and texture and great background that they can be well integrated in beds, even if they go dormant early.

Both Krissy and Mark were enthusiastic about a section on growing native lawns. Krissy thought Cullina gave a great introduction to the idea, with warnings. But she felt that he could have focused more on reducing lawn size (vs. replacing one turf species with another) by adding paths, shrubs, and trees – more practical for many gardeners. Also missing is a discussion of effective and aesthetic transitions from grassy meadows to more formal gardens with or without grasses. Krissy advocates cutting out sod instead of herbiciding large areas. Mark had been hoping for a good section on growing native lawns, as much of the current literature does not apply to our region. “[Cullina does] have a few suggestions of grasses and sedges which might work here, and from his text he has evidently tried them and succeeded with some, but there is no detailed ‘how-to.’”

I'm really glad that the NEWFS sent our newsletter editor David Werier, a review copy, and sooo happy that he asked me to review it. The biggest problem for most of us was giving the book up to the next reviewer!

This volume is scheduled to be published in mid-February, and is available now for pre-order on Amazon for \$26.40 (vs. the \$40 list price). I've already ordered mine!

.....



Elephant trees

When I was younger I marveled
at the elephant trees.
With bark like elephant skin, silver and smooth, and
they were large, but
gentle and lasting and musical.
Their flesh-colored leaves rustled
melodies
all winter.

The leaves are singing this winter, too,
but the elephants are blistered and sore.
The largest lie torn and broken, hopelessly sprouting,
like their banished cousin,
the chestnut.



Now it is true that the mosses and lichens seem to lick
beech wounds, but on the
whole,
The demise brings me into sadness.

Yet there are still years when the woods
are full of beechnuts, and mammals
rejoice
in the bounty to tide the winter.
I believe that the trees rejoice as well
to see their young in spring.



In the spring with their tender cotyledons,
the babies are even more of a temptation
to eat. And I did eat some, but mostly
I just watched and measured, wondering, hoping,

Maybe among this cohort of new beeches, just maybe,
some resistance and I would
live to set my fingers upon the skin of an elephant tree
again.

Photos and prose by Nat Cleavitt

Balsam Fir, Usnea, & ... at Shindagin Hollow

continued from page 1

beard lichens) is greater than at any other site I have seen in south-central New York. Nat Cleavitt has become our local *Usnea* expert so it was a treat to spend some time investigating the *Usnea* species with her. Nat and I determined that there are three species of *Usnea* (*U. hirta*, *U. subfloridana*, *U. filipendula*) growing on balsam fir in Shindagin Hollow.

The most common species present is *Usnea hirta*. *Usnea hirta* also seems to be the most common species in south-central New York. *Usnea hirta* is relatively easy to distinguish from other *Usnea* species. It has dense abundant isidiomorphs (isidia-like structures that are technically not true isidia) covering most of the thallus, no soralia, a shrubby (vs. pendulous) growth form, and a non-black base. *Usnea subfloridana* is perhaps the next most common species. It has punctiform soralia on the branches, especially towards their tips, that are clearly less than 1/2 the diameter of the branches. Arising from these soralia are isidiomorphs. *Usnea subfloridana* is a shrubby (vs. pendulous) species which has its branches spreading and therefore not parallel to each other. *Usnea filipendula* is a very fine species that when mature becomes pendulous (giving the true old man's beard look) with its main branches running parallel to each other. It also has punctiform soralia. On the lower parts of the main branches there are numerous fibrils (think short side branches) which are perpendicular to the axes of the main branches. This gives a "fish-bone" like appearance. Nat will be sending specimens of the *Usnea* we found at Shindagin to Philippe Clerc, a world expert of *Usnea*, to confirm our identification.

Some other interesting lichen finds during these two outings include: *Bryoria furcellata*, *Evernia mesomorpha* (fertile), *Parmeliopsis capitata*, *Tuckermanopsis americana* or *T. ciliaris*, *Leptogium cyanescens* (on *Tilia americana* or basswood), and *Physconia ? leucoleiptes* (on *Fraxinus americana* or white ash). Collections of all of these, except the *Leptogium*, were made and are currently held in my personal herbarium.

Usnea species seem to be having a hard time in our region of the world. In general, even in the best habitats, the *Usnea* currently found in south-central New York, are small and not very abundant. Some of

this may be due to air pollution. What the *Usnea* were like around this area in the past is unclear due to poor documentation in the past. Still, we have some information. For example, when I was at the Bailey Hortorium the other day, Bob Dirig pulled out some specimens of *Usnea angulata* (a gorgeous easily identified species) that were gathered by none other than Karl McKay Wiegand in 1898 from "Enfield". I have never encountered *U. angulata* live in nature and I hear it has become quite a rarity in New York let alone other parts of its range. The specimens collected by Wiegand

were amazing, some being over a foot and a half long. Apparently these have disappeared from our region. Bob and I were musing about how people who don't know a particular species occurred somewhere will never miss it if it disappears. This reminded me of my saying of late: "green is not green" in reference to the fact that a healthy

functioning (green) habitat is not equal to a disturbed, invaded (by non-native species) (green) habitat in terms of their significances in preserving species diversity.

So back to the balsam fir and the *Usnea* at Shindagin. Why is there so much *Usnea* on the firs in Shindagin Hollow? One hypothesis is that the fir in this particular situation has clearly created an amazing micro and macro habitat for the *Usnea*. This also appears to be true for other epiphytic lichens including another relatively sparse species in our area, *Bryoria furcellata* (burred horsehair lichen), which was found to be extremely common and with large thalli at Shindagin. Another lichen, *Evernia mesomorpha* (boreal oakmoss lichen), is more abundant and larger as well. In addition, patches of *E. mesomorpha*, which are usually not fertile (i.e. do not produce apothecia), were found with abundant apothecia. All of these observations point to how ideal the habitat in the firs at Shindagin is for numerous epiphytic lichen species. Perhaps, the habitat created here is more ideal, at least for certain epiphytic lichens, than any "native" habitat in the region. If pollution is responsible for the decline of *Usnea* in central New York then perhaps the fir at Shindagin have created such an ideal habitat that the decline has been buffered or off set by the exceptional conditions at Shindagin. Further investigations are clearly in order and keep an eye on the guy with the camera.



- balsam fir (*Abies balsamea*) at Shindagin Hollow -
photo by David Werier

Report on Conifer Walk by Susanne Lorbeer

On Saturday, January 19, 2008, a FLNPS walk on conifers was held at Cornell Plantations. We parked on Tower Road, and walked to the overlook where we gathered around Ed Cope, our leader. Conifers bear cones and they have needle-like or scaly leaves. Most of them retain their leaves for more than a year and appear green in winter, so these are called 'evergreen'. Their leaves are shed eventually, leaving distinct scars on their branches. *Larix* species are deciduous, shedding all their leaves every year, and thus have bare branches during the winter. Most living conifers are trees, but some are shrubs. All are woody plants.

Ed explained that there are two groups of pines: soft and hard pines. We saw two examples of soft pine: white pine, *Pinus strobus*, which is native here, and an introduced limber pine, *Pinus flexilis*, which is native in the Rocky Mountains. In young shoots, the needles are not in clusters, but as the plants mature, their needles are arranged in clusters called fascicles. Soft pines have five needles per fascicle, and lack a sheath at the base of their relatively soft and flexible needles (the sheath is early deciduous). Hard pines have two or three needles per fascicle and a sheath at the base of the needles (the sheath is persistent). Red pine, *Pinus resinosa*, which is native in the northeast, has 2 needles per fascicle, and they snap easily when bent. Austrian pine, *Pinus nigra*, which has been introduced from Europe, also has 2 needles in a fascicle but they bend easily without snapping. Our native pitch pine, *Pinus rigida*, has needles in sets of 3.

As we walked down a pathway, we saw a cultivar of Chinese juniper, *Juniperus chinense*, which has yellowish foliage. As with other junipers, it has two kinds of leaves. Juvenile leaves on young growth are wedge shaped needles with sharp points and borne in sets of two or three. Adult leaves are diamond shaped and arranged in four ranks overlapping flat on the twigs like fish scales. Male and female cones are located on separate plants (dioecious). The female cones are fleshy, light blue in color, and berrylike. Another *Juniperus* species, Eastern redcedar, *Juniperus virginiana*, is native to eastern and central North America. Two other species that are in the same family as junipers (the cypress or Cupressaceae family) are Atlantic white-cedar, *Chamaecyparis thyoides*, which is monoecious, (separate male and female cones on the same tree) and arborvitae or northern white-cedar, *Thuja occidentalis*, which has scale-like foliage arranged in a distinctly flattened and fan-like spray.

Spruce needles are sharp pointed and are produced singly. They are four-sided in cross section,

without a stalk, and remain on the tree for several years. Spruce cones hang down and the entire cone drops from the tree. We saw Colorado blue spruce, *Picea pungens*, which is introduced here and native to the Rocky Mountains, and white spruce, *Picea glauca*, which is native to northern North America (predominately Canada).

Fir trees, by contrast, bear upright cones that shed their scales, leaving the erect central stalk to which they were attached. Their needles are flat and blunt-tipped. We saw white fir, *Abies concolor*, a Rocky Mountain native. Its flat, blunt-tipped needles have two glaucous blue-green bands of stomata on the lower side. They curve upward on either side of the branch.

We stopped to look at two specimens of dawn redwood, *Metasequoia glyptostroboides*, and examined the small, rounded female cones. The tips of their scales look like little lips. The male cones are in sprays near the ends of the branches. Its needles are opposite in arrangement. The genus was first described from fossil records, in 1941. In 1944, an extant member of this genus was discovered in China. Trees grown from seed have been distributed to arboreta. Giant redwood, *Sequoiadendron giganteum*, is the world's largest tree in terms of volume. It is native to the Sierra Nevada Mountains. Coast redwood, *Sequoia sempervirens*, is the tallest living species on earth).

Nearby, we looked at bald-cypress, *Taxodium distichum* which has leaves arranged in two ranks (that is in exactly two rows, one on each side of the stem). This is called distichous, hence the epithet *distichum*. It is deciduous, and that's why it is called "bald" cypress.

European yew, *Taxus baccata*, was seen growing nearby. It bears a seed cone composed of a red, fleshy, non-toxic aril, which nearly covers a dark seed. The seeds and all other parts of the yew are toxic. The wood from this species has been used to make long bows. This species is native to Europe and northern Africa, but is grown as an ornamental in this country.

Eastern hemlock, *Tsuga canadensis*, has small cones and needles that are short, flat, and blunt. There is a row of very small needles appressed to the branch on the upper side, as well as the laterally arrayed larger needles. It is native to eastern North America.

Climbing up Comstock Knoll, we observed a specimen of Japanese umbrella pine, *Sciadopitys verticillata*, with its flat, blunt-tipped needles on reduced branch structures that appear to be in whorls. Each apparent needle is actually two leaves fused together. It is not really a pine and is more closely related to the redwoods.

Returning by way of the Winter Garden, we stopped to see a Douglas fir, *Pseudotsuga menziesii*. It has long, sharp buds, unlike any other conifer and its

cones have three pronged bracts emerging from beneath the scales. It is native to western North America.

The last tree we examined was an Austrian pine, *Pinus nigra*, with dark bark and a whitish bud. Its needles fold and do not break.

What a privilege it was to see so many interesting trees in the company of an expert taxonomist who shared his knowledge enthusiastically.

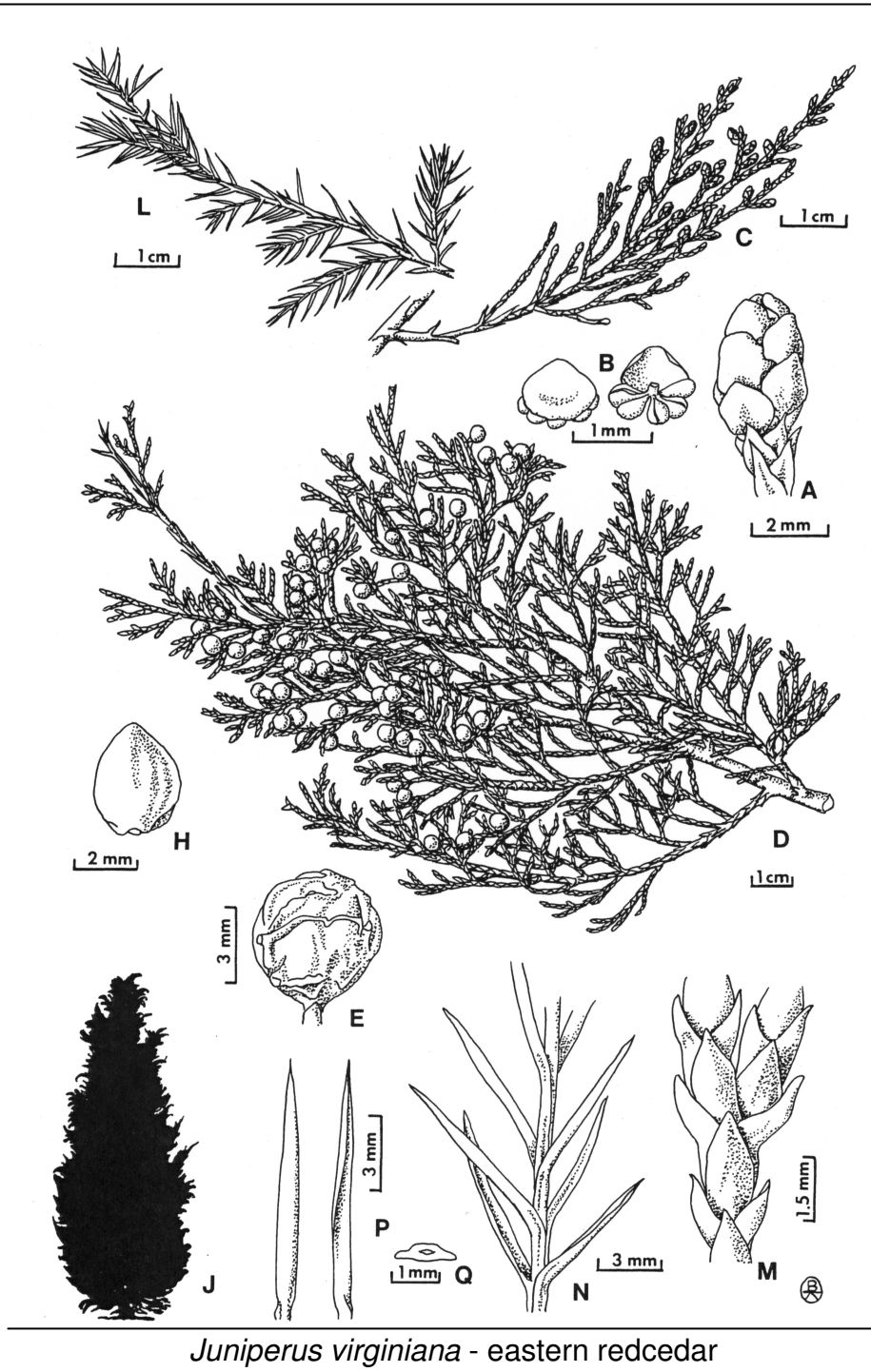


Illustration by Bente Starcke King

Reprinted from Cope, E.A. 1992. Pinophyta (Gymnosperms) of New York State. New York State Museum Bulletin No. 483. The State Education Department, Albany, NY. P. 49

List of species seen during the conifer walk

Scientific Name	Common Name	Select Identification Clues	Where Native/Range
<i>Abies concolor</i>	white fir	needles curved upward	Rocky Mountains, W USA
<i>Abies firma</i>	Japanese fir	needles sharp, notched	native to Japan
<i>Chamaecyparis thyoides</i>	Atlantic white-cedar	sharply pointed needles	native to E USA
<i>Juniperus virginiana</i>	eastern redcedar	scale and awl-like leaves	native E and C NA (North America)
<i>Metasequoia glyptostroboides</i>	dawn redwood	needles single, opposite	native to China
<i>Picea glauca</i>	white spruce	needles single, sharp	native to N NA
<i>Picea pungens</i>	Colorado blue spruce	needles single, sharp	native to SW USA
<i>Pinus banksiana</i>	Jack pine	2 needles per fascicle	native to N NA
<i>Pinus flexilis</i>	limber pine	5 needles per fascicle	native to Rocky Mountains
<i>Pinus nigra</i>	Austrian pine	2 needles per fascicle, needles flexible, bend	central and S Europe and N Africa
<i>Pinus ponderosa</i>	ponderosa pine	3 needles per fascicle	native western N America
<i>Pinus resinosa</i>	red pine	2 needles per fascicle, needles brittle, snap	native to N-central and NE NA
<i>Pinus rigida</i>	pitch pine	3 needles per fascicle	native E NA
<i>Pinus strobus</i>	white pine	5 needles per fascicle	native E NA
<i>Pinus sylvestris</i>	Scotch pine	2 needles per fascicle	native to Europe
<i>Pseudotsuga menziesii</i>	Douglas fir	a distinct species	native W NA
<i>Sciadopitys verticillata</i>	Japanese umbrella-pine	needles flat, blunt, whorled	native to Japan
<i>Taxodium distichum</i>	bald-cypress	alternate needles	native to se USA
<i>Taxus baccata</i>	European yew	aril, red, fleshy, 1 seed	native to Europe, n Africa
<i>Thuja occidentalis</i>	eastern arborvitae, northern white-cedar	scale-like overlapping leaves	native to NE N America
<i>Tsuga canadensis</i>	eastern hemlock	needles short, flat, blunt	native to E NA

**Report on Grassland management in the
Finger Lakes National Forest**
by Nat Cleavitt and Anna Stalter

In a follow-up to our letter written on behalf of FLNPS regarding management plans for control of invasive plants in the Finger Lakes National Forest (FLNF), we attended a meeting in Hector, NY at the forest headquarters on 5 December 2007. Key messages of the meeting were summarized in the meeting minutes and we reproduce them here verbatim:

Key Messages:

1. Goldenrod abundance in FL grasslands reduces forage quality & can cause pink-eye in cattle. It also reduces the biodiversity of these grasslands. It is an indication of unproductive lands.
2. "Early" (pre-August 15) mowing is a good tool for controlling goldenrod, and it would be acceptable to the group if there are mitigation measures incorporated to protect nesting birds.
3. Herbicides may work well in some situations, e.g., where there's a goldenrod monoculture, but there are still some concerns, e.g., regarding treating native plants with herbicides, and regarding broadcast vs. spot spraying.
4. Multi-species grazing should be investigated.
5. Economic viability of the grazing program is needed in order to keep cattle on these grasslands; keeping cattle on the grasslands is necessary in order to maintain them as open lands; open lands are needed by several wildlife species, including birds.
6. The group would like to be involved in more site-specific planning.
7. Don't try to come up w/ a "one solution fits all" plan. We need multiple treatment options. Also, don't limit number of acres treated.

During the meeting we upheld two main points from our 20 April 2007 letter (published in **Solidago 8(2): 6-7, 9**):

1. FLNPS would like to see separation of management plans for native and non-native plants of concern. (note: The main native plant of concern are members of the genus *Solidago*).
2. FLNPS is opposed to broadcast spraying of broadleaf herbicides, and the Dicamba suggested in

the scoping document is particularly troublesome as it targets mitochondrial functioning. FLNPS would support mowing to control goldenrod and spot spraying of accepted herbicides for control on non-native invasive plants.

We would like to acknowledge and thank other members of FLNPS in attendance at the meeting: Dawn Dybowski, John & Sue Gregoire, and Charlie Smith. The latter three people have been instrumental in understanding dynamics of

grassland birds in FLNF. In particular, Charlie was very strongly in favor of controlling goldenrod and he noted that early season mowing would be against the mandate of FLNF to manage for declining songbirds.

What are your thoughts on grassland management in the FLNF? Write in and let us know!



